

April - 2021

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POLITY

Functioning of the Indian Judiciary

1. Virtual hearing in Supreme Court

- » Prelims: Constitutional provisions regarding the seat of SC
- » Mains: Concerns associated with the Supreme Court assembling exclusively in Delhi

Background:

Virtual hearing during the pandemic:

- With the pandemic necessitating social distancing and the need to keep access to judiciary open, the Supreme Court had allowed for virtual hearings.

Location of Supreme Court:

- Geographical access to the Supreme Court has been flagged as a concern even during the constituent assembly debates. However the Drafting Committee was of the view that the Court must have a specified place of sitting to ensure that the litigants know where to go for an appeal.
- The framers of the Constitution also agreed that the volume of litigation from different parts of the country may require the Supreme Court to increase its reach and hold court elsewhere. Accordingly, in recognition of the same, the Constitution empowered the Chief Justice to hold sittings of the Supreme Court through Circuit Benches in places other than Delhi as well.
- However, despite an increasing caseload and repeated pleas by litigants and governments, successive Chief Justices have refused to invoke this constitutional power.
- More than one Law Commission and Parliamentary Committee have recommended Circuit Benches of the Supreme Court to be set up around the country.

Concerns associated with the Supreme Court assembling exclusively in Delhi:

Limited access to Supreme Court:

- In India, given the unified, single-pyramidal structure of the judicial system, all types of cases can potentially make their way to the Supreme Court, irrespective of the place or forum of the original institution.
- The right to fair and equal access to the Supreme Court for all citizens of India is curtailed by the Supreme Court assembling exclusively in Delhi.
 - * Several studies have pointed out the fact that a disproportionately high number of

cases filed in the Supreme Court originated in High Courts closer to Delhi pointing out to geographical constraints posed by the location of Supreme Court.

Cost of access:

- Geographical constraints have also meant that appearing before the Supreme Court has inescapably become the domain of a select few lawyers in and around Delhi.
- Such implied exclusivity consequently translates into steep and often prohibitive monetary costs for litigants.
- The litigants are forced to choose from what the Bar in Delhi offers, both in terms of quality and costs.

Significance of virtual hearing:

- The virtual hearing provision opened new vistas for litigants and lawyers across India to approach, through technology, the country's highest court with relative ease. Access to the Supreme Court has been made easier with virtual hearings.
- The virtual hearings provision has helped open up avenues for advocates from all over India.
- Litigants now have the option to engage a local lawyer of their own choice and convenience, including the same lawyer who argued their case before the lower court.

Conclusion:

- There have been demands for return to physical hearings by the Bar in Delhi even as there have been calls for virtual access to the Supreme Court to continue.
- Although, virtual hearings may not be the perfect alternative, the imperfections associated with virtual hearings must be preferred over a denial of the right to access justice itself. It is very important to acknowledge the significance of fair and equal access to the Supreme Court for all citizens of India.

Functioning of the Indian Judiciary

2. Judges pro tem

- » Prelims: Article 224A; MoP
- » Mains: Issues of large backlogs in Judiciary; significance of ad hoc judges appointments; recommendations

Context:

- Under Article 224A of the Constitution, the Supreme Court has cleared the way for the appointment of retired judges as ad-hoc judges in High Courts to deal with the mounting backlog of cases.
- The Court has clarified that this is a “transitory methodology” and does not constrain the regular appointment process.

Background:**Constitutional Provisions:**

- 224A- Appointment of retired Judges at sittings of High Courts
 - * The Chief Justice of a High Court for any State, may with the previous consent of the President, request any person who has held the office of a Judge of that Court or of any other High Court to sit and act as a Judge of the High Court for that State, and every such person so requested shall, while so sitting and acting, be entitled to such allowances as the President may by order determine and have all the jurisdiction, powers, and privileges of, but shall not otherwise be deemed to be, a Judge of that High Court
- The appointment of the judges to the high courts is governed by Article 217 of the Constitution.

Memorandum of Procedure (MoP):

- In addition to the constitutional provisions, the process of appointments is outlined in the Memorandum of Procedure (MoP).
- It is initiated by the Chief Justice of the concerned high court who recommends the nominees to the state government. Ideally, this process should begin six months prior to the occurrence of the vacancy.
- The state government then sends the recommendation to the Union Law Ministry, which then sends it to the Supreme Court Collegium.
- It is a cumbersome procedure and while timelines for certain stages are contemplated in the MoP, they are rarely adhered to in the absence of an overall time limit for the completion of the process.

A look at numbers – Pendency and Vacancy:

- High courts currently have a sanctioned strength of 1,080 judges and are working with only 661 judges, leaving 419 posts vacant. This approximates to a 39 per cent vacancy.
- An estimated 57 lakh cases are pending in the 25 high courts across the country.

Details:

Supreme Court guidelines for the appointment of ad-hoc judges in High Courts:

- The Court has made a beginning by directing that the trigger point for such an appointment will be when-
 - * The vacancies are more than 20% of the sanctioned strength.
 - * The cases in a particular category are pending for over five years.
 - * More than 10% of the backlog of pending cases are over five years old.
 - * The rate of disposal is slower than the rate of the institution of fresh cases.

Pre-recommendation process:

- Past performance of recommendees in both quality and quantum of disposal of cases should be factored in for selection as the objective is to clear the backlog.

Tenure of Appointment:

- The tenure for which an ad hoc Judge is appointed may vary on the basis of the need but suffice to say that in order to give an element of certainty and looking at the purpose for which they are appointed, generally, the appointment should be for a period between two to three years.

Emoluments and Allowances:

- The emoluments and allowances of an ad hoc Judge should be at par with a permanent Judge of that Court at the relevant stage of time minus the pension.
- Emoluments to be paid would be a charge on the Consolidated Fund of India consisting of salary and allowances.

Way forward:

- As for the judiciary, it should ensure that only retired judges with experience and expertise are offered temporary positions, and there is no hint of favouritism.
- The judiciary and executive should work together to address the shortage of judges and the mounting backlog of cases.

Functioning of the Indian Judiciary**3. A case for judicial federalism**

- » Prelims: Related constitutional articles
- » Mains: Arguments in favour of more autonomy and powers to the High Courts.

Introduction:

- The doctrine of separation of powers implies that each pillar of democracy – the executive, legislature and the judiciary – perform separate functions and act as separate entities. The

executive is vested with the power to make policy decisions and implement laws. The legislature is empowered to issue enactments. The judiciary is responsible for adjudicating disputes.

- The Judiciary in comparison to the other two organs of the State has restricted powers to bring changes on the Socio-economic front.
 - * Courts cannot build better health infrastructure or directly supply oxygen; neither are they functionally bound to.
 - * Courts often lack the expertise and resources to decide social rights issues.

What Judiciary can do?

- It can ask tough questions to the executive and hold the executive accountable in various aspects of healthcare allocation.

Parmanand Katara v. Union of India (1989):

- The Supreme Court underlined the value of human lives and said that the right to emergency medical treatment is part of the citizen's fundamental rights.
- Protection of life was held to be a sacred duty of the State.
- It held that the right to health forms an indispensable part of the fundamental right to life under Article 21.

Judiciary's role during Pandemic:

- In the face of the COVID-19 health emergency, the High Courts of Delhi, Gujarat, Madras and Bombay, among others, have questioned and issued directives to the executive.

Examples:

- The Gujarat High Court issued a series of directions, including for laboratory testing and procurement of oxygen.
- The Nagpur Bench of the Bombay High Court was constrained to hold night sittings to consider the issue of oxygen supply. It directed immediate restoration of oxygen supply that had been reduced from the Bhilai steel plant in Chhattisgarh.
- The Delhi High Court directed the Central government to ensure adequate measures for the supply of oxygen. It cautioned that we might lose thousands of lives due to lack of oxygen.

Transfer of cases:

139A. Transfer of certain cases

- Where cases involving the same or substantially the same questions of law are pending before the Supreme Court and one or more High Courts or before two or more High Courts and the Supreme Court is satisfied on its own motion or an application made by the Attorney General of India or by a party to any such case that such questions are substantial questions of general

importance, the Supreme Court may withdraw the case or cases pending before the High Court or the High Courts and dispose of all the cases.

Issues with the transfer in the current scenario

- One, the court has been unmoved to the actions and inactions of the executive even in cases where interference was warranted, such as the Internet ban in Kashmir.
- Two, where effective remedies were sought, when activists and journalists were arrested and detained, the court categorically stayed aloof. It acted as if its hands were tied.
- Three, in the top court the judges sit in Benches of two or more. The objective is to increase the discussions and deliberations between the judges to ensure deliberative justice.
- In recent years, a pattern has been unfolding which depicts a lack of dissent in multiple cases amongst the judges and judgments are passed without disagreement. The judgments passed were issues that had serious political ramifications.
- These features, coupled with the unhealthy characteristics of an executive judiciary, makes the court's indication for a takeover disturbing.

Judicial federalism in India:

- Many from different High Court Bar Associations spoke up against the move to transfer the cases from the High Courts to the Supreme Court. It underlines the re-emergence of internal democracy within the Bar.
- According to the Seventh Schedule of the Constitution, public health and hospitals come under the State List as Item No. 6. There could be related subjects coming under the Union List or Concurrent List. Also, there may be areas of inter-State conflicts. But as of now, the respective High Courts have been dealing with specific challenges at the regional level, the resolution of which does not warrant the top court's interference.
- In Chandra Kumar v. Union of India (1997), the Supreme Court itself said that the High Courts are "institutions endowed with glorious judicial traditions" since they "had been in existence since the 19th century and were possessed of a hoary past enabling them to win the confidence of the people".
- The power of the High Court under Article 226 is wider than the Supreme Court's under Article 32, for, in the former, a writ can be issued not only in cases of violation of fundamental rights but also "for any other purpose". This position was reiterated by the court in State of Orissa v. Madan Gopal Rungta (1951).

Conclusion:

- The need for a uniform judicial order across India is warranted only when it is unavoidable — for example, in cases of an apparent conflict of laws or judgments on legal interpretation.
- Otherwise, autonomy, not uniformity, is the rule. Decentralisation, not centrism, is the principle.
- In the COVID-19-related cases, High Courts across the country have acted with an immense sense of judicial responsibility. This is a legal landscape that deserves to be encouraged. To do this, the Supreme Court must simply stay away.

Quasi Judicial Bodies**4. Lok Adalats**

- » Prelims: Lok adalats; Related statutes and associated constitutional articles
- » Mains: Significance and associated concerns

Context

- The first National Lok Adalat (NLA) of 2021 will be held on April 10.

Background:

Evolution of Lok adalats:

- Lok Adalats had existed even before they received explicit statutory recognition. In 1949, Harivallabh Parikh, a disciple of Mahatma Gandhi, popularised Lok adalats in Rangpur, Gujarat.
- The Constitution (42nd Amendment) Act, 1976, inserted Article 39A to ensure “equal justice and free legal aid”.
- The Legal Services Authorities Act, 1987, was enacted by Parliament and it came into force in 1995 “to provide free and competent legal services to weaker sections of the society” and to “organise Lok Adalats to secure that the operation of the legal system promotes justice on a basis of equal opportunity”.

Functioning:

- The Lok Adalats function as an alternative dispute resolution tool.
- Motor-accident claims, disputes related to public-utility services, cases related to dishonour of cheques, and land, labour and matrimonial disputes (except divorce) are usually taken up by Lok Adalats.
- They are regularly organised to help parties reach a compromise.

Significance:

Easing the case burden of judiciary:

- The Indian judicial system is plagued by endemic delays and excessive backlogs. Justice delayed is justice denied.

* As per the National Judicial Data Grid, 16.9% of all cases in district and taluka courts are three to five years old; for High Courts, 20.4% of all cases are five to 10 years old, and over 17% are 10-20 years old.

* Over 66,000 cases are pending before the Supreme Court, over 57 lakh cases before various HCs, and over 3 crore cases are pending before various district and subordinate courts.

- Data from the National Legal Services Authority (NALSA) show that Lok Adalats organised across the country from 2016 to 2020 disposed of 52,46,415 cases. Similarly, National Lok Adalats (NLAs) organised under the aegis of NALSA settle a huge number of cases across the country in a single day. From 2016 to 2020, NLAs have disposed of a total of 2,93,19,675 cases.
- Hence Lok Adalats as a forum have been able to address the problems of high backlog cases in the judiciary.

Ease of dispute settlement:

Speed of settlement:

- When compared to litigation, and even other dispute resolution devices, such as arbitration and mediation, Lok Adalats offer parties speed of settlement, as cases are disposed of in a single day.

Part driven process:

- Lok Adalats involves mainly party-driven process, allowing the parties involved to reach an amicable settlement.

Procedural flexibility:

- Under the Lok Adalat system there is no strict application of procedural laws such as the Code of Civil Procedure, 1908, and the Indian Evidence Act, 1872 etc.

Economic affordability:

- There are no court fees for placing matters before the Lok Adalat

Finality of awards:

- The order by the Lok Adalats are final and binding and as no further appeal is allowed against such orders. This prevents delays in settlement of disputes.
 - * The award issued by a Lok Adalat, after the filing of a joint compromise petition, has the status of a civil court decree.

Increased access to justice:

- Access to justice for the poor is a constitutional mandate to ensure fair treatment under our legal system.
- Lok Adalats have been successful in making justice accessible and affordable to all.

Concerns:

- The discontinuance of the subject matter-specific NLAs from 2017, has led to a significant drop in the number of cases settled.
- The e-Lok Adalats organized to overcome the challenges posed by the COVID-19 pandemic, have been less efficient than physical National Lok Adalats organised in 2017, 2018, and 2019.
- There is a growing concern with Lok Adalats that in the endeavour for speedy disposal of cases, Lok Adalats undermines the idea of justice. The system seems to be trading justice off for high settlement numbers and speed, ignoring the old dictum that justice hurried is justice buried.
 - * In a majority of cases, litigants are pitted against entities with deep pockets, such as insurance companies, banks, electricity boards, among others. In many cases, compromises are imposed on the poor who often have no choice but to accept them.
 - * Similarly, poor women under the so-called 'harmony ideology' of the state are virtually dictated by family courts to compromise matrimonial disputes.
- The Lok adalat system instead of empowering the poor may be coercing them to accept unjust compromises.
- The Lok Adalat system seems to have given rise to a dual system of justice dispensation, where the formal legal system, i.e., the court, is meant only for the rich and powerful and the poor given the ease of procedure often resort to dispute resolution under the Lok adalat system. This view has been expressed by even former Chief Justice of India Ranjan Gogoi.

Conclusion:

- The system must look beyond swift disposal of cases and focus on just and fair outcomes. A just outcome of a legal process is far more important than expeditious disposal. Besides efficiency and speed, Lok Adalats should also focus on the quality of justice delivered.
- The Judiciary must take concrete and innovative steps in improving the quality of justice rendered by National Lok Adalats.

Quasi Judicial Bodies**5. The abolition of FCAT**

- » Prelims: Tribunals- related provisions
- » Mains: Concerns with the abolition of FCAT

Context

- The Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, issued by the Ministry of Law and Justice.

Background:

Film certification:

- Films meant for distribution in theatres require to be certified as 'U' (unrestricted public exhibition), 'UA' (unrestricted public exhibition subject to parental guidance for children below the age of 12), 'A' (restricted to adult audiences) or 'S' (restricted to specialised audiences such as doctors or scientists) by the Central Board of Film Certification (CBFC).

Concerns with the process:

- According to observers, the CBFC was increasingly getting stacked with people close to the ruling dispensation. Of late, the body has been headed by chairpersons who have ruled with a heavy hand and ordered cuts to films critical of the government.
- The clash between the film fraternity and the certification body became more pronounced over the years. Such moves have been criticized for being against the constitutional right of freedom of express

Film Certificate Appellate Tribunal:

- The Film Certificate Appellate Tribunal (FCAT) was established in 1983 as a statutory body under The Cinematograph Act.
- FCAT had been set up to hear appeals of filmmakers against decisions of the Central Board of Film Certification.

Significance:

- The FCAT has been envisaged as a buffer for filmmakers. Before the FCAT, filmmakers had no option but to approach the court to seek redressal against CBFC certifications or suggested cuts.
- The FCAT has often stepped in to sort out disputes between the CBFC and the filmmakers.
- Though the decisions taken by the FCAT were not beyond reproach, the FCAT could be credited with taking quick decisions.
- Among other objectives, the rationale for setting up the FCAT was to reduce the burden on courts by functioning as an appellate body.

Details:

- The ordinance scraps the Film Certification Appellate Tribunal (FCAT), a statutory body that had been set up to hear appeals of filmmakers against decisions of the Central Board of Film Certification (CBFC), and transfers its function to other existing judicial bodies.
 - * The ordinance has amended The Cinematograph Act, 1952, and replaced the word 'Tribunal' with 'High Court'.
- Eight other appellate authorities have also been disbanded with immediate effect.

Reasons for the ordinance:

- The move to abolish the FCAT along with other tribunals follows a Supreme Court order in *Madras Bar Association vs. Union of India*.
- The two-member Bench had directed the government to constitute a National Tribunals Commission.
 - * The National Tribunals Commission was envisaged to act as an independent body to supervise the appointments and functioning of Tribunals, as well as to conduct disciplinary proceedings against members of Tribunals and to take care of administrative and infrastructural needs of the Tribunals, in an appropriate manner.
- The Supreme Court's recommendations were intended to strengthen the functioning of the tribunals by addressing the issue of dependence of tribunals on the executive for administrative requirements.

Concerns:

Against expert committee recommendations:

- The move to abolish the FCAT is surprising as it comes in the backdrop of the recommendations of two influential panels — the Mudgal Committee and the Benegal Committee — both of which suggested an expansion of the body's jurisdiction.
- Neither the Mukul Mudgal committee nor the Shyam Benegal committee had recommended that the FCAT be scrapped.
 - * The Justice Mukul Mudgal Committee had examined the certification process and suggested recommendations.

Over burdening the judiciary:

- With the disbanding of the FCAT, it will be left to the already overburdened courts to adjudicate on appeals against the CBFC orders.
- The role played by the FCAT will now have to be performed by courts.
- With the government tightening its control on over-the-top (OTT) content and ordering players in this area to set up a grievance redressal body to address the concerns of the viewers, many observers point out that the courts will have to play a greater role as an avenue of appeal.

Impact on the filmmakers:

- The recent ordinance will impact filmmakers seeking redressal on certification and cuts.
- The expected delays in the appeal process would only dis-incentivize the filmmaking fraternity to take up emotive or controversial topics as film subjects, thus placing an indirect restriction on right of freedom of expression.

Election Related Issues

6. Election Commission of India

- » Prelims: ECI- associated articles and acts; Model Code of Conduct
- » Mains: Unresolved questions with respect to ECI

Context:

- The ongoing state assembly elections have brought the focus on the functioning of the Election Commission of India.

Background:

Election Commission of India:

- Election Commission of India (ECI) is a constitutional body that superintends, directs and controls the conduct of elections. It is the constitutional duty of the ECI to ensure that the elections held are free and fair.
- The ECI administers elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies, State Legislative Councils and the offices of the President and Vice President of the country.
- The Election Commission operates under the authority of Constitution as per Article 324 and subsequently enacted Representation of the People Act.

Details:

Powers enjoyed by the Election Commission of India:

- The ECI enjoys wide powers mainly derived from Article 324 of the Constitution.
- The Supreme Court in the *Mohinder Singh Gill vs Chief Election Commissioner* case held that Article 324 contains plenary powers to ensure free and fair elections and these are vested in the ECI which can take all necessary steps to achieve this constitutional object. All subsequent decisions of the Supreme Court have reaffirmed the judgment in the *Mohinder Singh Gill vs Chief Election Commissioner* case.
- Besides the model code of conduct, the ECI also issues from time to time directions, instructions and clarifications on a host of issues which crop up in the course of an election.

The model code of conduct:

- The model code of conduct issued by the ECI is a set of guidelines meant for political parties, candidates and governments to adhere to during an election.
- This code is based on consensus among political parties. The model code is observed by all stakeholders for fear of action by the ECI.
- The code has been issued in exercise of the ECI's powers under Article 324.

- Since it is a code of conduct framed on the basis of a consensus among political parties, it has not been given any legal backing.
 - * The ECI's opposition to give a legal backing to the model code of conduct is based on the fact that once it becomes a part of law all matters connected with the enforcement of the code will be taken to court, which would delay elections.

Unresolved questions over ECI:

- There exists a considerable amount of confusion about the extent and nature of the powers which are available to the ECI in enforcing the model code of conduct as well as its other decisions in relation to an election.

Enforceability of the model code of conduct:

- Paragraph 16A of the Election Symbols (Reservation and Allotment) Order, 1968 says that the commission may suspend or withdraw recognition of a recognised political party if it refuses to observe the model code of conduct.
- The article expresses doubts on the legal sustainability of this above provision
- The reason is that withdrawal of the recognition of a party recognised under these orders seriously affects the functioning of political parties. Given the fact that the model code of conduct is itself not legally enforceable, the ECI may not be allowed to resort to a punitive action such as withdrawal of recognition.

Transfer of officials:

- The ECI can transfer officials working under State governments if it receives a report from the observers of the ECI about the conduct of certain officials of the States that could adversely affect the free and fair election in that State.
- Given the fact that transfer of an official is within the exclusive jurisdiction of the government, it is actually not clear whether the ECI can transfer a State government official in exercise of the general powers under Article 324 or under the model code.
- The article further argues that unbridled power to the ECI to transfer officials without the concurrence of the State governments could bring to a halt the whole state administration.
- In Mohinder Singh Gill's case, the Court had made it abundantly clear that the ECI can draw power from Article 324 only when no law exists which governs a particular matter. It means that the ECI is bound to act in accordance with the law in force. Transfer of officials, etc is governed by rules made under Article 309 of the Constitution which cannot be bypassed by the ECI under the purported exercise of power conferred by Article 324.

Interference in administrative moves:

- According to the model code, Ministers cannot announce any financial grants in any form, make any promise of construction of roads, provision of drinking water facilities, etc or make any ad hoc appointments in the government departments or public undertakings.
- The government is not allowed by the ECI to take any action, administrative or otherwise, if the ECI believes that such actions or decisions will affect free and fair elections.
- This allows the ECI unbridled powers in intervening in the administrative decisions of a State government or even the union government.
- This power has been used by the ECI to stop the Government of Kerala from continuing to supply kits containing rice, pulses, cooking oil, etc. The article argues against such a move based on the following aspects.
 - * This step could adversely impact the poor and marginalized people's ability to access food especially in the post pandemic phase.
 - * The Supreme Court in S. Subramaniam Balaji vs Govt. of T. Nadu & Ors (2013) held that the distribution of colour TVs, computers, cycles, goats, cows, etc, done or promised by the government is in the nature of welfare measures and is in accordance with the directive principles of state policy, and therefore it is permissible during an election.
 - * Section 123 (2)(b) of the Representation of the People Act, 1951 says that declaration of a public policy or the exercise of a legal right will not be regarded as interfering with the free exercise of the electoral right.

Conclusion:

- The ECI, through the conduct of free and fair elections in an extremely complex country like India has helped maintain the integrity and independence of the electoral process, considered indispensable to the democratic system.
- However, the unlimited and arbitrary powers enjoyed by the ECI needs to be addressed given the dangers associated with such a scenario.

Election Related Issues

7. Opinion Polls and Exit Polls

- » Prelims: Difference between opinion polls and exit polls
- » Mains: need for regulation

Opinion Polls:

- An opinion poll is an inquiry into public opinion conducted by interviewing a random sample of people before actual Election Day.

Exit Polls:

- An exit poll is a poll of voters taken soon after a voter walks out after casting his or her vote. It is considered an indicator of which party forms the government.

Regulation:

- Restrictions are imposed on exit polls through Section 126(A) in the Representation of the People's Act, 1951.
- The Election Commission advises electronic and print media not to publish or publicise any article or programme related to the dissemination of results of exit polls during the prohibited period.
- RP Act puts a ban on exit polls from the period between the commencements of the poll until half an hour after the closing of the final phase of the poll.
- However, there are no similar restrictions placed on opinion polls under RPA. But, it cannot be published during the period of Election Silence, i.e, 48 hours before the close of voting.

Election Related Issues**8. NOTA: None of the Above**

- » Prelims: NOTA provisions
- » Mains: Significance of the NOTA provision; electoral reforms
- The option of NOTA for Lok Sabha and assembly elections was prescribed by the SC in 2013. Thereby, India became the 14th country to institute negative voting.
- Allowing a PIL in 2013, the Supreme Court ordered the Election Commission to provide the voter with a 'right to reject' option.
- NOTA in India does not provide for a 'right to reject'. The candidate with the maximum votes wins the election irrespective of the number of NOTA votes polled.
- Unfortunately, before and after NOTA came into existence, political parties or governments did nothing to strengthen the provision. The button is of no use now, other than for filing a vote count.
- Election Commission currently has no power to call a fresh election even if NOTA secures the highest votes.

Note:

- The Supreme Court has asked the Centre and the Election Commission of India to respond to

a plea that fresh elections should be conducted in constituencies where the highest number of votes polled are NOTA (None Of The Above).

Important legislations in news**9. Personal Data Protection Bill**

- » Mains: Lacunae in existing laws; significance and concerns associated with Personal Data Protection Bill, 2019

Context:

- The scrutiny of the Personal Data Protection Bill, 2019 by a Joint Parliamentary Committee.
 - * The Joint Parliamentary Committee has proposed 86 amendments and one new clause to the Bill. The Committee is expected to submit its final report in the Monsoon Session of Parliament in 2021.

Background:

Rising threat of data breach:

- While the number of people participating in the digital economy has increased exponentially over the years, there has also been a proportionate increase in the number of personal data breaches from major digital service providers.
 - * The recent alleged data breach at MobiKwik could stand to be India's biggest breach with the data of 9.9 crore users at risk.
- Robust data protection regimes are necessary to prevent such events and protect users' interests.

Lacunae in existing data protection regime:

- How different entities collect and process users' personal data in India is mainly governed by the Information Technology Act, 2000, and various other sectoral regulations.
- However, this data protection regime falls short of providing effective protection to users and their personal data based on the following aspects.

Avenue for over-riding of protection provisions:

- Under the current system, entities could override the protections in the regime by taking users' consent to processing personal data under broad terms and conditions. This is liable to misuse by the entities, given that users might not understand the terms and conditions or the implications of giving consent.

Data security over data privacy:

- The existing framework emphasise data security but do not place enough emphasis on data privacy. This result in entities only focussing on employing technical measures to protect personal data and result in weaker obligations

on the entities with regard to respecting users' preferences in how their personal data can be processed. This could allow the entities to use the data for purposes different to those that the user consented to.

Exclusion of government agencies:

- The data protection provisions under the IT Act do not apply to government agencies. This creates a large vacuum for data protection when governments are collecting and processing large amounts of personal data.

Emerging risks:

- The existing regime seems to have become antiquated and inadequate in addressing risks emerging from new developments in data processing technology.

Personal Data Protection Bill, 2019:

Evolution of the bill:

K.S. Puttaswamy case:

- The need for a more robust data protection legislation came to the fore in 2017 post the Supreme Court's landmark judgment in Justice K.S. Puttaswamy (Retd) v. Union of India that established the right to privacy as a fundamental right.
- In the judgment, the Court called for a data protection law that can effectively protect users' privacy over their personal data.

B.N. SriKrishna committee:

- Consequently, the Ministry of Electronics and Information Technology formed a Committee of Experts under the Chairmanship of Justice (Retd) B.N. Srikrishna to suggest a draft data protection law.
- The Bill, in its current form, is a revised version of the draft legislative document proposed by the Committee.

Significance:

- The proposed regime under the Bill would be different from the existing regime in the following ways.

All encompassing regime:

- The Bill seeks to apply the data protection regime to both government and private entities across all sectors.

Equal emphasis on both data security and privacy:

- The Bill seeks to emphasise both data security and data privacy. This will require the entities to not only maintain security safeguards to protect personal data, but will also require them to fulfill a set of data protection obligations and transparency and accountability measures that govern how entities can process personal data to uphold users' privacy and interests.

Rights of the users:

- The Bill seeks to give users a set of rights over their personal data and means to exercise those rights. The bill will empower the user to obtain information about the different kinds of personal data that an entity has about them and how the entity is processing that data.

Data Protection Authority:

- The Bill seeks to create an independent and powerful regulator known as the Data Protection Authority (DPA).
- The DPA will monitor and regulate data processing activities to ensure their compliance with the regime. Also the DPA will give users a channel to seek redress when entities do not comply with their obligations under the regime.

Concerns:

- Some provisions in the Bill create cause for concern about the regime's effectiveness.

Wide exemptions to government agencies:

- The Bill provides wide exemptions to government agencies.
- Under clause 35, the Central government can exempt any government agency from complying with the Bill. Government agencies will then be able to process personal data without following any safeguard under the Bill, thus diluting user protection safeguards.. This could create severe privacy risks for users.

Constraints on withdrawal of consent:

- The Bill threatens legal consequences for users who withdraw their consent for a data processing activity. This could discourage users from withdrawing consent for processing activities they want to opt out of.
- This would become an impediment in enforcing the rights of the users as envisaged in the bill.

Conclusion:

- India needs to have a robust data protection regime.
- The Personal Data Protection Bill, 2019 could play a big role in providing robust protections to users and their personal data.
- However there is the need to make some changes in the Bill targeted towards addressing various concerns in it to ensure a stronger and more effective data protection regime.

Functioning of the Executive

10. The ordinance route is bad, repromulgation worse

- » Prelims: Ordinances- associated articles and provisions
- » Mains: Concerns with respect to repeated repromulgations of ordinances

Context:

- The central government has repromulgated the ordinance that establishes a commission for air quality management in the National Capital Region, called the Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance, 2020.
- This has raised questions about the practice of issuing ordinances to make law, and that of re-issuing ordinances without getting them ratified by Parliament.

Ordinance:

- The Constitution permits the central and state governments to make laws when Parliament (or the State Legislature) is not in session.
- As lawmaking is a legislative function, this power is provided for urgent requirements, and the law thus made has an automatic expiry date.
 - * The Constitution states that the ordinance will lapse at the end of six weeks from the time Parliament (or the State Legislature) next meets.

Concerns:

Repeated usage:

- While an ordinance was originally conceived as an emergency provision, it was used fairly regularly. State governments have also used this provision very often.
 - * In 2020, Kerala issued 81 ordinances, while Karnataka issued 24 and Maharashtra 21.
- In the 1950s, central ordinances were issued at an average of 7.1 per year. The last couple of years has seen a spike, 16 in 2019, 15 in 2020, and four so far in 2021.

Overlooking judgements:

- The issue was brought up in the Supreme Court through a writ petition by D.C. Wadhwa. In 1986, a five-judge Constitution Bench of the Supreme Court ruled that repromulgation of ordinances was contrary to the constitutional scheme. It said that it would be a colourable exercise of power for the Government to ignore the Legislature and to repromulgate the Ordinance. Such a scheme would be repugnant to the constitutional scheme as it would enable the executive to transgress its constitutional limitation in the matter of lawmaking and to covertly and indirectly take on the law-making function of the Legislature. However, the judgment did not stop the practice of repeated repromulgation of ordinances
- In 2017, a seven-judge Constitution Bench declared this practice to be unconstitutional. Even this judgment has been ignored.

Conclusion:

- The legal position is clear, and has been elucidated by constitution benches of the Supreme Court.

- Ordinances are to tackle exigencies when the legislature is not in session, and expire at the end of six weeks of the next meeting of the legislature. This time period is given for the legislature to decide whether such a law is warranted.
- Repromulgation is not permitted as that would be a usurpation of legislative power by the executive.
- The legislatures and the courts should check the practice. That is what separation of powers and the concept of checks and balances means. By not checking this practice, the other two organs are also abdicating their responsibility to the Constitution.

Devolution of powers and finances up to the local levels**11. Financial empowerment of the third tier**

- » Prelims: Finance commission – associated article and mandate
- » Mains: Important recommendations of 15th FC

Context:

- The recommendations of the Fifteenth Finance Commission with regard to local governments.

Union Finance Commission:

- The Finance Commission is constituted by the President under Article 280 of the Constitution, mainly to give its recommendations on the distribution of tax revenues between the Union and the States and amongst the States themselves.
- After the passing of the 73rd and 74th Constitutional Amendments, the Finance Commission has allocated resources from the central divisible tax pool to local governments.

Recommendations of the Fifteenth Finance Commission:

Higher vertical devolution:

- The vertical devolution recommended to local governments was raised remarkably high. From a meagre share of 0.78% of the divisible pool with an absolute sum of Rs. 10,000 crore by the Eleventh Commission, the Fifteenth Finance Commission raised it to 4.23% with a reasonably estimated amount of Rs. 4,36,361 crore.
- Compared with the Fourteenth Finance Commission there is a 52% increase in the vertical share.

The 15th Finance Commission has recommended two types of grants – basic and tied:

- Basic grants are untied and can be used by the local bodies for location-specific felt needs except for salary or other establishment expenditure.

- The tied grants can be used for the basic services of (a) sanitation and maintenance of open defecation free (ODF) status and (b) supply of drinking water, rainwater harvesting and water recycling.
 - * Previously the finance commissions like the 11th FC have tied specific items of expenditure to local grants and now the Fifteenth Finance Commission has raised this share to 60% and linked them to drinking water, rainwater harvesting, sanitation and other national priorities in the spirit of cooperative federalism.
 - * However, it reduced the performance-based grant to just ₹8,000 crore — and that too for building new cities, leaving out the Panchayati Raj Institutions (PRIs) altogether.

Performance-Based Grants (PBGs):

- Performance-Based Grants (PBGs) link performance in pre-determined areas with access to and size of funding, applying clear and transparent allocation formulas.
- An important recommendation of the Fifteenth Finance Commission is the entry-level criterion to avail the union local grant (except health grant) by local governments which is performance-linked.
- For panchayats, the condition is online submission of annual accounts for the previous year and audited accounts for the year before.
- For urban local governments, two more conditions are specified: after 2021-22, fixation of the minimum floor for property tax rates by the relevant State followed by consistent improvement in the collection of property taxes in tandem with the State's own Gross State Domestic Product.

Entry-level criteria:

- The Eleventh to the Fourteenth finance commissions had recommended measures to standardize the accounting system and update the auditing of accounts, but there was limited progress.
- Therefore, the entry-level criteria of the Fifteenth Finance Commission are timely.

Concerns:

- The Fifteenth Finance Commission nor the earlier finance commissions have examined how and where the financial reporting system has failed.
 - * Without reliable data ensuring good governance would not be successful.
 - * The Fifteenth Finance Commission claims that it seeks to achieve the "desirable objective of evenly balancing the union and the states". Recognition is not awarded to the third tier in this balancing act.

- * Although the Fifteenth Finance Commission outlines nine guiding principles as the basis of its recommendation to local governments, there is no integrated approach (in contrast to the recommendations of the Thirteenth Finance Commission). It is forgotten that public finance is an integrated whole.
- * The Fifteenth Finance Commission though stresses the need to implement the equalisation principle, it is virtually silent when it comes to the local governments.
- * In the criteria used by the Fifteenth Finance Commission for determining the distribution of grants to States for local governments, it employed population (2011 Census) 90% and area 10% weightage, the same criteria followed by the Fourteenth Finance Commission. While this ensures continuity, equity and efficiency criteria are sidelined.

Conclusion:

- If decentralization is meant to empower local people, the primary task is to fiscally empower local governments to deliver territorial equity.

Devolution of powers and finances up to the local levels

12. The third layer of governance

- » Prelims: 73rd Constitutional amendment-provisions
- » Mains: Concerns associated with the functioning of the third tier of governance; recommendations

Context:

- The article discusses the need for strong local bodies for the good governance of the villages in India.

The journey of Panchayati raj:

Under British rule:

- The origin of decentralised – local self-government under British Rule can be traced to the constitution of district road funds in 1854.
- 1866 saw the Madras District Road Cess Act wherein Government was authorised to collect a road cess on land revenue. The aim of such a cess was to construct, repair and maintain district roads.
- The British, in 1884, passed the Madras Local Boards Act for the seamless administration which heralded the three-tier local self-government.

Mahatma Gandhi:

- "The voice of the people is the voice of god; the voice of the Panchayat is the voice of the people,"- Mahatma Gandhi

- He advocated Panchayati Raj, a decentralized form of Government where each village is responsible for its own affairs, as the foundation of India's political system. His term for such a vision was "Gram Swaraj" or Village Self-governance.
- According to Gandhi the vehicle that was most ideal to initiate both political and economic democracy at the grassroots level was the Panchayat Raj system.

73rd Amendment:

- It brought about a massive turning point in the Panchayati Raj.
 - * It led to the formation of a three-tier Panchayati raj methodology of governance,
 - * reservation for the downtrodden and women,
 - * consistency in economic development,
 - * local body elections once in five years,
 - * The formation of the State Election Commission, Finance Commission, and the power to draft the rules and responsibilities of the Panchayat.

Issues and concerns:

- The decisions taken during a gram sabha meeting and the proposed solutions with a feasible deadline are not being executed.
- In projects where people might face significant impact, their opinions were not considered.
- Even if meetings were held they were marked by poor attendance.
- The government has continued with the projects in spite of poor representation from the people.
- Women do not find themselves in major administrative roles in the local bodies, though, on paper, women are shown to be a considerable force.
- If the state is headed by one Political Party and the Mayor is from another political party at the municipal level, it could result in an impasse, further deteriorating development.
- The Constitution is clear in stating that local body elections must be conducted once in five years. But the ruling party keeps postponing the holding of local body elections, which is a breach of the Constitution.

Way forward:

- To ensure efficiency, we need to strengthen our grama sabhas, hold area sabhas in cities, form ward committees, hold online Panchayat meetings, ensure decent remuneration to Panchayat chiefs and councillors and also bestow the grama sabha with the power to revoke appointed members and representatives.

Salient provisions of Indian Constitution

13. SC hears plea to decriminalise begging

- » Prelims: Article 21- Right to life; DPSP-socialist principles

Context:

- The Supreme Court has asked the Centre and four States to file their response on a plea seeking a direction to repeal the provisions criminalising begging.

Plea in the Supreme Court:

- A plea was filed in the Supreme Court against the provisions of the statute criminalising begging.
- The Supreme Court in February 2021 had sought a response from the Centre, and five States on the plea.
- Despite the notice issued to Maharashtra, Gujarat, Punjab, Haryana and Bihar on the plea, only Bihar had so far filed its response.

Arguments by the petitioner:

Provisions violative of constitutional rights:

- The plea claimed that the sections of the statute criminalising begging were violative of constitutional rights.
- The criminalising of begging had put people in a situation to make an unreasonable choice between committing a crime or not committing one and starving, which goes against the very spirit of the Constitution and violates Article 21 i.e. Right to Life.
 - * As per the 2011 Census 2011, the total number of beggars in India is 4,13,670 and the current number would have only increased from the last census.
- The plea argues that a person, who is compelled to beg due to certain circumstances, cannot be faulted for his actions.

Against socialistic principles:

- The government has the mandate to provide social security to everyone and ensure that all had basic facilities, as embedded in the Directive Principles of State Policy in the Constitution. The presence of beggars is indicative of the failure of the state to provide basic facilities to all its citizens.
- Criminalising the act of beggary goes against the approach of a socialist nation as embedded in the preamble of the Indian Constitution.

Judicial precedent:

- The plea had referred to the August 2018 verdict of the Delhi High Court which had decriminalised begging in the national capital holding that provisions of the Bombay Prevention of Begging Act, 1959, which treats begging as an offence cannot sustain constitutional scrutiny.

Salient provisions of Indian Constitution

14. People are free to choose religion: SC

» Prelims: Article 25- Right to freedom of religion

Background:

- A public interest petition filed in the Supreme Court claimed that there is mass religious conversion happening across India.
- The petitioner urged the court to direct the Centre and the States to control religious conversion being done through threats, intimidation or bribes.

Details:

- The bench, led by Justice Rohinton F. Nariman, said people have a right under the Constitution to profess, practise and propagate religion.
- Justice Nariman said every person is the final judge of his/her choice of religion or who their life partner should be. Courts cannot sit in judgment of a person's choice of religion or life partner.
- Religious faith is a part of the fundamental right to privacy.
 - * And a Constitution Bench in its judgment had upheld the inviolability of the right to privacy, equating it with the rights to life, of dignity and liberty.

Article 25:

- Fundamental right under Article 25 of the Constitution guarantees the freedom of conscience and free profession, practice and propagation of religion, subject to public order, morality and health.
- It further provides that this article shall not affect any existing law and shall not prevent the state from making any law relating to:
 - * Regulation or restriction of any economic, financial, political, or any secular activity associated with religious practice.
 - * Providing social welfare and reform.
 - * Opening of Hindu religious institutions of public character for all the classes and sections of the Hindus. (The term 'Hindus' includes individuals who profess Sikh, Jain or Buddhist religion).

Miscellaneous

15. Doctrine of casus omissus

Background:

- A "Statute" is the will of the sovereign legislature according to which the governments function.
- The executive must act and the judiciary in the course of administration of justice must apply

the law as laid down by the said legislative will.

- Very often occasions will arise where the courts will be called upon to interpret the words, phrases and expressions used in the statute. In the course of such interpretation, the courts have, over the centuries, laid down certain guidelines which have come to be known as "Rules of Interpretation of Statutes".

Interpretation and construction:

- Interpretation is the method by which the true sense or the meaning of the word is understood.
- According to Cooley, "interpretation differs from construction in that the former is the art of finding out the true sense of any form of words; construction, on the other hand, is the drawing of conclusions respecting the subjects that are beyond the direct expression of the text".
- The term 'construction' has been explained in CWT vs. Hashmatunnisa Begum to mean that something more is being got out in the elucidation of the subject matter than can be got by the strict interpretation of the words used. Judges have set themselves in this branch of the law to try to frame the law as they would like to have it.

Meaning:

- The term 'omissus' means "cases of omission".
- Omission in a statute cannot be supplied by construction.
- A matter which should have been provided in a statute cannot be supplied by the courts.
- A casus omissus cannot be supplied by courts by judicial interpretative process except in the case of clear necessity and when the reason for it's found in the four corners of the statute itself.
- The first and primary rule of the construction is that the intention of the legislature must be found in the word used by the legislature itself.

Inference:

- There is no scope for importing into the statute words which are not there. Such importation would be, not to construe, but to amend the statute. Even if there be a casus omissus, the defect can be remedied only by legislation and not by judicial interpretation.
- It is certainly not the duty of the court to stretch the words used by the legislature to fill the gaps or omissions in the provisions of an Act, as given in Hiradevi v District Board.

Recent Legislative Measures

16. Medical Termination of Pregnancy (Amendment) Act 2021

» Prelims: MTP act amendment- provisions

- » Mains: Concerns associated with the recent amendments

Background:

Medical Termination of Pregnancy Act, 1971:

- The Medical Termination of Pregnancy Act, 1971 (MTP) was a progressive act at that time considering that concerned provisions in the Indian Penal Code were traditional in their outlook. Abortions were a crime and the woman concerned and her doctor would invariably land up in jail.
- The Medical Termination of Pregnancy Act, 1971 (MTP) allows for legal abortions in India with some restrictions.
- Section 3 of the Medical Termination of Pregnancy Act, 1971 put an outer limit of 20 weeks on the length of the pregnancy and required two doctors to certify that the continuation of the pregnancy would involve a risk to the life of the woman or grave injury to her physical or mental health or that there was a substantial risk that the child born would suffer from such physical or mental abnormalities as to be seriously handicapped.
 - * Rape cases, pregnancies occurring as a result of failure of contraception have also been considered as valid reasons for abortion over the years.
- Section 5 created an exception to the 20 week limit whenever such an abortion was immediately necessary to save the life of the pregnant woman.

Medical Termination of Pregnancy (Amendment) Act 2021:

- The amendment increases the time period within which an abortion may be carried out.
- Women would need a nod from a medical board in the case of pregnancies beyond 24 weeks.
 - * Currently, abortion requires the opinion of one doctor if it is done within 12 weeks of conception, and two doctors if it is done between 12 and 20 weeks.
- The Bill allows abortion to be done on the advice of one doctor up to 20 weeks, and two doctors in the case of certain categories of women, between 20 and 24 weeks.
- For a pregnancy to be terminated after 24 weeks in case of substantial foetal abnormalities, the opinion of the State-level medical board is essential.

Concerns:

- The Medical Termination of Pregnancy (Amendment) Act 2021 even though extends the time period within which an abortion can be carried out, fails miserably on the following counts.

Undermining women rights:

- The amendment to the abortion laws is based on the traditional notion that the state can and must intervene and decide for women as to when and in what circumstances abortions may be carried out undermining woman's absolute right over her reproductive choices.
- This also undermines a woman's right over her own body.

Unsafe abortions:

- The regulation of abortions in India seems to have pushed women seeking abortions underground where terminations are carried out in unhygienic settings. Even today about 800,000 illegal and unsafe abortions are performed every year in India, many of them resulting in morbidities and death.

Limit not based on scientific advancement:

- 24 weeks is not a rational limit given today's technology.
- The phenomenal improvement in technology and processes render it possible to carry out abortions safely right up to full term. Thus the excuse of "safety of the woman" is no longer tenable to be used for restricting women's rights.

State regulation:

- Even though the limit has been pushed back from 20 to 24 weeks, this comes with the same state conditionalities as before.
- Indigent women in difficult circumstances trying to have abortions have been stonewalled by government officials and prosecutors.

Medical boards as obstacles:

- Section 3(2B) of the act requires the pregnant woman to approach a medical board in cases of substantial foetal abnormalities and where she has crossed the 24 week limit.
- These boards impose insurmountable obstacles to the woman seeking late abortions.
 - * The proposed provision of a board of a minimum of three doctors seems unnecessary and marks a breach of privacy of the concerned woman.
 - * The Act provides in section 3(2C) for a single board for a State. Given the millions of abortions taking place in India past the deadline, it is impossible for one board to handle all cases.
 - * No State has the finances or the human resources to maintain the operation and functioning of these boards.

ECONOMY

Indian Economy and issues relating to growth and development

1. 'India's public debt level among highest in emerging economies'

- » Prelims: Difference between public debt and budget deficit; N K Singh committee recommendations on FRBM debt levels
- » Mains: Significance of public debt management.

Context:

- Moody's take on India's public debt

Background:

Public Debt:

- Government debt or public debt is the total amount of debt owed at a point in time by a government to lenders. Government debt can be owed to lenders within the country or owed to foreign lenders.
- Government debt contrasts to the annual government budget deficit, which is a flow variable that equals the difference between government receipts and spending in a single year.
- Public debt is the total liabilities of the central government contracted against the Consolidated Fund of India.
- It excludes liabilities contracted against Public Account.

Debt-to-GDP Ratio:

- The debt-to-GDP ratio indicates how likely the country can pay off its debt.
- Investors often look at the debt-to-GDP metric to assess the government's ability to finance its debt.
- The NK Singh Committee on FRBM had envisaged a debt-to-GDP ratio of 40 per cent for the central government and 20 per cent for states aiming for a total of 60 per cent general government debt-to-GDP.

Details:

- Moody's Investors Service has said that India's public debt level is among the highest in emerging economies with a quantitative easing programme underway, while its debt affordability is among the weakest.
 - * India's debt affordability rated Baa3 negative is among the weakest.

Public Debt Management:

- It is the process of establishing and executing a strategy for managing the government's debt in order to raise the required amount of funding, achieve its risk and cost objectives, and to meet any other debt management goals of the government.
- The governments should seek to ensure that both the level and rate of growth in their public debt is fundamentally sustainable, and can be serviced under a wide range of circumstances while meeting cost and risk objectives.

Why is Public Debt Management important?

- Poorly structured debt in terms of maturity, currency, or interest rate composition and large and unfunded contingent liabilities have induced economic crises in many countries.
 - * The European debt crisis was a result of excessive debt piled up on government books which became unsustainable.
- This highlights the importance of sound debt management practices and the need for an efficient and sound capital market.

Indian Economy and issues relating to growth and development

2. Global corporate minimum tax

- » Prelims: BEPS; Equalisation Levy
- » Mains: Advantages of a global minimum tax rate; associated challenges and concerns; impact on India

Context:

- U.S. Treasury Secretary Janet Yellen has thrown the weight of the U.S. government behind a push for a global corporate minimum tax rate.

Why a global minimum tax?

- Major economies are aiming to discourage multinational companies from shifting profits – and tax revenues – to low-tax countries regardless of where their sales are made.
- Increasingly, income from intangible sources such as drug patents, software and royalties on intellectual property has migrated to these jurisdictions, allowing companies to avoid paying higher taxes in their traditional home countries.
- With a broadly agreed global minimum tax, the Biden administration hopes to reduce such tax base erosion without putting American firms at a financial disadvantage, allowing them to

compete on innovation, infrastructure and other attributes.

The targets:

- The proposal for a minimum corporate tax is tailored to address the low effective rates of tax shelled out by some of the world's biggest corporations, including digital giants such as Apple, Alphabet and Facebook, as well as major corporations such as Nike and Starbucks.
 - * These companies typically rely on complex webs of subsidiaries to Hoover profits out of major markets into low-tax countries such as Ireland or the Caribbean nations such as the British Virgin Islands or the Bahamas, or to central American nations such as Panama.

Global minimum corporate tax rate:

- It is setting a minimum rate for corporations all over the world to pay regardless of which jurisdiction they are registered in.
- A global minimum rate would ensure that companies would have to pay wherever they were registered, with revenues being apportioned according to the extent of their activity in the respective countries.
- This is a move designed to tackle a worldwide phenomenon known as Base Erosion and Profit Shifting (BEPS), wherein large corporations register in low-tax jurisdictions to avoid paying higher rates of corporate tax prevalent in the countries they actually operate in.

Previous efforts:

- The Paris-based Organization for Economic Cooperation and Development has been coordinating tax negotiations among 140 countries for years on two major efforts:
 - * Setting rules for taxing cross-border digital services and
 - * Curbing tax base erosion, with a global corporate minimum tax part of the latter.

How would a global minimum tax work?

- The global minimum tax rate would apply to companies' overseas profits.
- Therefore, if countries agree on a global minimum, governments could still set whatever local corporate tax rate they want.
- But if companies pay lower rates in a particular country, their home governments could "top-up" their taxes to the agreed minimum rate, eliminating the advantage of shifting profits to a tax haven.

The problems:

- Apart from the challenges of getting all major nations on the same page, especially since this impinges on the right of the sovereign to decide a nation's tax policy, the proposal has other pitfalls.

- A global minimum rate would essentially take away a tool that countries use to push policies that suit them.

- * Nations have used their freedom to set corporation tax rates as a way to attract such businesses. Smaller countries such as Ireland, the Netherlands and Singapore have attracted footloose businesses by offering low corporate tax rates.
- * The global minimum tax rate will finish off every opportunity for such countries whose only weapon to attract these companies is lower taxes.
- * A lower tax rate is a tool they can use to alternatively push economic activity.
- In a world where there are income inequalities across geographies, a minimum global corporation tax rate could crowd out investment opportunities.

Impact on India:

- India has already been proactively engaging with foreign governments in double taxation avoidance agreements, tax information exchange agreements, and multilateral conventions to plug loopholes. This proposal of a common tax rate, thereby, adds no further benefits to India.
- To address "the challenges posed by the enterprises who conduct their business through digital means and carry out activities in the country remotely", the government had introduced the 'Equalisation Levy' in 2016.
- A lower tax rate is a tool for India to alternatively push economic activity.

Indian Economy and issues relating to growth and development

3. ADB's forecast for India

- » Prelims: Asian Development Bank; Recession definition
- » Mains: Challenges for the Indian economy

Context

- The Asian Development Bank has raised its forecast for India's growth in 2021-22 to 11%, from 8% earlier.

Details:

- ADB said that more targeted containment measures compared with large-scale national lockdown would prove less costly to the economy, which had seen a strong rebound in recent months' economic indicators after last year's 'big recession'.
- It said government capex and accommodative financial policies, along with the vaccine roll-out programme would help.

- Inflation is projected to moderate as good harvests and supply chain recovery contain domestic food inflation even as global food prices rise, though oil prices may exert some inflationary pressure.

Concerns:

- ADB has warned that failure to control the resurgence of COVID-19 cases poses a considerable downside risk to the recovery.
- Tightening of global financial conditions would apply pressure on India's market interest rates and could affect economic normalisation.
- Likely pick-up in private investment could be dented as rising bad loans could discourage India's banks from undertaking fresh lending.

Indian Economy and issues relating to growth and development - Financial sector

4. RBI to issue cyber security norms for payment services

- » Prelims: UPI
- » Mains: Significance of fin tech in India's growth and development; Cyber security concerns associated with fin tech; governmental efforts

Context

- The Reserve Bank of India (RBI) will soon issue cybersecurity norms for payment service providers (PSPs).

Background:

Increasing traction of digital payment system:

- As digitisation increases in any sphere, payments or otherwise, people would be involved in more and more digital transactions.
- Digital transactions are bound to gain further traction over the coming years.

Cyber security concerns:

- There have been a series of data breaches faced by operators including Mobikwik and payment aggregator JusPay.

Governmental efforts:

- Given the increasing risk posed by cyber frauds, Reserve Bank of India has issued very recently basic guidelines on cyber hygiene and cybersecurity for banks and certain NBFCs.

Details:

- The RBI would soon also be issuing cybersecurity norms for payment service providers (PSPs).
- While the standards for fintech-driven payment services providers will be similar to cyber hygiene norms issued recently for banks and non-banking finance companies, the RBI is quite clear that firms will have to do more than

observe the minimum standards to ensure safety with respect to digital transactions.

Other concern in payment services segment:

Concentration of segment share:

- Experts have also raised concerns about the domination of two or three players in the fintech-backed retail payments space.
 - * Two apps provide about 70% of third-party services in the UPI system.
- The concentration of two or three third-party providers in this retail payments space could give rise to competitive weaknesses.

Counterview:

- Given the fact that the two or big tech companies in the segment are not payment system providers as such, but act as just the front-end of the system and just on board customers and have no control on the entire UPI itself, in that sense, there is not so much a concern on antitrust or monopolistic tendencies.
- Given the rising popularity of UPI, the government will have to think twice about stepping in and controlling the market share of two or three popular apps because that could actually hurt absorption of this tech in the population.

Conclusion:

Over the next decade, the critical challenge for regulators would be to speed up the absorption of fintech without undermining the financial system's integrity or stability by addressing the issue of cyber security and monopolistic tendencies.

Indian Economy and issues relating to growth and development-Financial sector

5. Reforms in the National Pension System

- » Prelims: NPS; PFRDA; Atal pension yojana
- » Mains: Changes proposed for the NPS and their significance

Context:

- Changes proposed by the Pension Fund Regulatory and Development Authority (PFRDA) to the National Pension System (NPS).

Background:

National Pension System:

- The National Pension System (NPS) is a pension and investment scheme developed by the Government of India to provide citizens of India with long-term financial security. It offers a long-term saving option for appropriately planning one's retirement through market-linked returns.
- The National Pension System (NPS) started out as the New Pension Scheme for government

employees in 2004 under a new regulator called the Pension Fund Regulatory and Development Authority (PFRDA). It has since been opened for individuals from all walks of life to participate.

- The NPS has been growing in size and now manages ₹5.78 lakh crore of savings and 4.24 crore accounts in multiple savings schemes.
 - * It includes over 3.02 crore accounts as part of the Atal Pension Yojana (APY), a government-backed scheme for workers in the unorganised sector that assures a fixed pension payout after retirement.
 - * The rest of the corpus constitutes voluntary savings from private sector employees and self-employed individuals.

Changes being proposed to the NPS:

Entry and exit age limit to be modified:

- Individuals between the age group of 18 and 65 can currently enter the NPS. The regulator is planning to hike the limit to 70 years. The proposed exit age of 70 years may be increased to 75 years.
- With the longevity increasing, it makes sense to hike the maximum entry and exit age to 70 years and 75 years, respectively.

PFRDA planning to issue minimum assured return:

- While different schemes under the NPS have given reasonable returns at a low fund-management cost so far, there has been a clamour for a guaranteed return product for large sections of potential investors with a high aversion to risk.
- To lure more subscribers, the PFRDA is working on strategies to launch new retirement benefit options, such as one that has a minimum assured return.
- The moment pension fund managers start giving guarantee on products, it could help popularize pension schemes.

Exit option to be hiked:

- NPS contributors can withdraw 60% of their contribution after retirement, while the remaining 40% must be maintained to purchase annuity.
- Those who accumulate only up to Rs 2 lakh by the time they reach retirement age, on the other hand, are entitled to withdraw the entire amount.
- The PFRDA is planning to hike the limit to Rs 5 lakh.
- The reason for this change is that if a subscriber has a corpus of Rs 2 lakh or less at the time of retirement, the amount provided as a monthly pension is very low.

Payout options to be flexible:

- Currently subscribers must deposit 40% of their NPS deposits with one of the 12 insurance companies that the NPS has partnered with. The regulator is planning to introduce more flexibility in this regard.
 - * Annuity rates have dropped to ranges between 5% and 6%. Since annuities are taxable, when one factor in taxes and inflation, the investors will end up with a poor return, in some cases even yielding negative returns to the investors.
- The regulator has now proposed to give members a choice to retain 40% of their corpus with the NPS fund managers even after retirement. This, the PFRDA chief believes, will allow them to get better returns, and these savings can be paid out to members over 15 years through something like the systematic withdrawal plan offered by mutual funds.
- Separately, the regulator has decided that the annuity purchase stipulation for 40% of members' retirement corpus should be dropped altogether.

Conclusion:

- The changes proposed by the pension regulator would make the National Pension Scheme more appealing and help broaden its scope across India.

Indian Economy and issues relating to growth and development - Financial sector

6. Govt. amends IBC for MSME resolution

» Prelims: IBC- provisions

Context:

- An ordinance was promulgated to amend the Insolvency and Bankruptcy Code (IBC).

Details:

- The government has amended the insolvency law to provide for a pre-packaged resolution process for micro, small and medium enterprises.
- The amendment allows the Centre to notify the minimum amount of default value, not more than Rs 1 crore, for pre-packaged insolvency resolution process.
- As per the ordinance, it is considered expedient to provide an alternative resolution process to ensure quicker and value-maximising outcomes for all stakeholders, in a manner least disruptive to the continuity of their businesses and which preserves jobs.
- The Ordinance said MSMEs are critical for India's economy as they contribute significantly to its gross domestic product and provide employment to a sizeable population, and it is

considered necessary to urgently address the specific requirements of MSMEs relating to the resolution of their insolvency.

Note:

- The government had suspended fresh insolvency proceedings for six months from March 25, 2020, when a nationwide lockdown was imposed to curb the spread of coronavirus infections.
- The suspension was extended till March 24, 2021.

Indian Economy and issues relating to growth and development - Financial sector

7. RBI's first purchase under G-SAP 1.0

- » Prelims: G-sec Acquisition Programme (G-SAP 1.0)

Context:

- The Reserve Bank of India recently announced the introduction of the G-sec Acquisition Programme (G-SAP 1.0).

Details:

- RBI has now announced the Open Market Purchase of Government of India Securities under the programme.
- The Reserve Bank will conduct the open market purchase of government securities of ₹1 lakh crore under the G-sec Acquisition Programme (G-SAP 1.0) in Q1 2021-22.
- It will purchase five types of government securities via a multi-security auction using multiple price methods.

Significance:

- In the backdrop of the government's elevated borrowing for this year, which the RBI has to ensure goes through without causing disruption, G-SAP aims to provide more comfort to the bond market.
- G-SAP 1.0 is being carried out with a view to enabling a stable and orderly evolution of the yield curve.
- In addition, RBI sought to quell the concerns of market participants over rising bond yields by keeping the policy rates unchanged.
- Since liquidity is already in a large surplus, RBI will continue with variable rate reverse repos at the short end.
- With liquidity being withdrawn at the short end and injected at the long end, this should effectively normalise the curve.

Indian Economy and issues relating to growth and development - Financial sector

8. RBI sets up committee to review working of ARCs

- » Prelims: ARCs- functioning; IBC; SARFAESI Act, 2002
- » Mains: NPA challenge in India; benefits of ARCs

Context:

- The RBI has set up a committee to review the working of Asset Reconstruction Companies (ARC).

Details:

- The six-member committee will be headed by Sudarshan Sen, former executive director, Reserve Bank of India (RBI).
- It has been set up to undertake a comprehensive review of the working of ARCs in the financial sector ecosystem and recommend suitable measures for enabling them to meet the growing requirements.

Terms of Reference of the Committee:

- The panel will review the existing legal and regulatory framework applicable to ARCs.
- It will recommend measures to improve the efficacy of ARCs.
- It will also review the role of ARCs in the resolution of stressed assets, including under the Insolvency and Bankruptcy Code (IBC), and give suggestions for improving liquidity and trading of security receipts.
- It will also review the business models of ARCs.

Asset Reconstruction Companies (ARC):

- An ARC is a specialized financial institution that buys the Non-Performing Assets or bad assets from banks and financial institutions so that the latter can clean up their balance sheets.
- In a nutshell, ARCs are in the business of buying bad loans from banks.
- Banks can sell the bad assets to the ARCs at a mutually agreed value and concentrate on normal banking activities.
- The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 provides the legal basis for setting up ARCs in India.

Indian Economy - Agriculture related

9. Role of government in agricultural sector

- » Prelims: Commission for Agricultural Costs and Prices; PDS
- » Mains: Concerns associated with agricultural sector in India; recommendations

Introduction:

- In the last four decades, there is a general presumption that a progressively reduced role of the state would automatically deliver greater economic growth and welfare to the people.
- Contrary to this popular opinion evidence indicates that it is the state that has played the leading role in provisioning the most critical aspects of life: water, sanitation, education, health, food and nutrition.
- Given the unique characteristics attributed to Indian agriculture and the share of employment it offers in India taking the socio-historical context, the Indian state must continue to intervene in multiple markets, and make critical investments, to ensure the welfare of both farmers and consumers.

Specificities of agriculture:

- Due to a variety of limiting factors, from uncertainties of the weather to soil fertility and water availability, increasing returns to scale are very difficult to achieve in farming. This underscores the need for the right kind of public investment in agriculture.
- The economies of scale allow producers in the industry to make profits by cutting unit costs, even as prices fall, but in agriculture generating such profits similar to the industrial sector is hard.
- Again, production processes in agriculture cannot be organised in an assembly line; they need to begin at the appropriate phase of the climatic annual cycle.
 - * This means that all farmers harvest their crop at the very same time; 86% of India's farmers are 'small and marginal', too poor to afford warehousing facilities and are, therefore, compelled to bring their harvest to the market at around the same time.

Concerns associated with agricultural sector in India:

- During a bumper crop, prices fall. It is expected that consumers will be benefitted. But the food grains are hoarded by the traders resulting in loss to the farmers and customers have to buy very expensive commodities.
- In the credit market, usurious interest rates (often as high as 60%-120% per annum) create a debt where it becomes virtually impossible for the farmer to escape from the debt cycle.
 - * The repayments due are 'adjusted' through exploitative practices in the input, output, labour and land-lease markets.
- There is growing evidence of a steady decline in water tables and water quality.
- The yield response to the application of increasingly expensive chemical inputs is falling, which has meant higher costs of cultivation, without a corresponding rise in output.

- Around 90% of India's water is consumed in farming, and of this, 80% is used up by rice, wheat and sugarcane. Farmers continue to grow these water-intensive crops even in water-short regions primarily because of an assured market — for rice and wheat in the form of public procurement, which still covers only a very low proportion of India's crops, regions and farmers.

India's food security system:

- The Food Corporation of India and the Agricultural Prices Commission (Commission for Agricultural Costs and Prices, or CACP since 1985) were set up in 1965.
- The idea was that as farm output rises with the Green Revolution, farmers are assured that their surplus would be bought by the government at a price high enough to leave them a margin.
- The crops procured were then made available to consumers at subsidised rates through the Public Distribution System (PDS).
- Thus, government intervention protected farmers during bumper crops and dipped into the buffer stock to protect consumers during droughts.
- This is how India got its much-vaunted food security over the past several decades.

Way forward:

- We need to expand the basket of public procurement to include more crops, more regions and more farmers.
- Procurement must be local and follow the logic of regional agro-ecology.
- The locally procured crops should then be incorporated into Anganwadi supplementary nutrition and school mid-day meal programmes.
- This would mean a large and steady market for farmers, while also making a huge contribution to tackling India's twin syndemic of malnutrition and diabetes.
- To incentivise farmers to make this change, governments must include them in procurement operations.
- Huge volumes of water could be saved if cropping patterns are diversified to include a variety of millets (rightly called 'nutri-cereals' now), pulses and oilseeds.
 - * Public investment in specific infrastructure required for millets and pulses, especially those grown through natural farming, would also help expand their cultivation.
- India has a network of 2,477 mandis and 4,843 sub-mandis to safeguard farmers from exploitation by large retailers. This network needs to be greatly expanded as today, only 17% of farm produce passes through mandis.

To provide farmers access within a radius of five kilometres, India needs 42,000 mandis, which are also in need of urgent reform.

- Rural India will have to be the focal point. Ever since the Second Five Year Plan was initiated in 1956, the primary focus was to move people from the rural heartland to industry and urban areas. The idea may be good but meeting the objective looks like a daunting task. According to United Nations estimates, in the year 2050, around 800 million people will continue to live in rural India. Given this unique Indian demographic transition, agriculture will need to be greatly strengthened, especially bearing in mind the complexities in the urban areas and the limited administrative initiatives to provide basic amenities.
- The government should reduce the regulatory ambiguity and economic uncertainty by bringing new reforms which will improve the agriculture sector.

Indian Economy-Agriculture related

10. Govt directs firms not to hike MRP of non-urea fertilisers

- » Prelims: Nutrient based subsidy scheme; Non urea fertilizers in India

Context:

- Fertiliser makers, including the largest player Indian Farmers Fertilisers Cooperative Ltd (IFFCO), announced a steep price hike for key agri inputs Di-Ammonium Phosphate (DAP) citing higher prices raw materials in the international markets
- The Centre directed manufacturers of fertilisers to withhold any proposed hike in prices for nutrients, including complex fertilisers.
- It also kept the Nutrient-Based Subsidy (NBS) scheme unchanged for potassic and phosphatic fertilisers for 2021-22.

Fertiliser subsidy:

- It is purchasing by the farmer at a price below MRP (Maximum Retail Price), that is, below the usual demand-and-supply-rate, or regular production and import cost.
 - * The sale price paid by the farmer is fixed by the Government.
 - * The difference between the cost of production and the sale price is reimbursed as subsidy by the Government.

- Urea is sold by companies at government-set prices
 - * Urea is the most widely used fertiliser and accounts for almost 60 per cent of the country's total fertiliser consumption.
- Fertiliser subsidy ultimately goes to the fertiliser company, even though it is the farmer that benefits.

Non-Urea Fertiliser:

- It is decontrolled or fixed by the companies. However, the government pays a flat per tonne subsidy to maintain the nutrition content of the soil, and ensure other fertilisers are economical to use.
 - * The retail prices of these fertilizers were fully deregulated in 2010. Here, companies are free to fix the sale price payable by farmers.
- The non- urea fertilisers are divided into two parts, DOP (Diammonium Phosphate) and MOP (Muriate of Phosphate).

Details:

- Currently, IFFCO is selling Di-Ammonium Phosphate (DAP), the most widely consumed fertilizer after urea, at Rs. 1,200/bag of 50kg.
 - * A 50-kg bag of di-ammonium phosphate (DAP), would have costed farmers Rs 1,900, more than 58 per cent higher than the existing rate of Rs 1,200/bag.
- Some of the private fertiliser companies wanted to revise retail prices of fertilisers, which are non-urea fertilisers in view of rising global prices of raw material

Impact:

- Non-urea (MoP, DAP, complex) varieties cost higher, many farmers prefer to use more urea than actually needed.
 - * Had prices of non-urea fertilizers increased, it could have reduced crop yield as farmers resort to excessive use of subsidised fertiliser urea instead.

Classification of fertilizers**Fertilizers**

- Straight Fertilizers
- Complex Fertilizers
- Mixed Fertilizers

- Straight fertilizers: Straight fertilizers are those which supply only one primary plant nutrient, namely nitrogen or phosphorus or potassium.
 - * Urea, ammonium sulphate, potassium chloride and potassium sulphate.
- Complex fertilizers: Complex fertilizers contain two or three primary plant nutrients of which two primary nutrients are in chemical combination. These fertilisers are usually produced in granular form.
 - * eg. Diammonium phosphate, nitrophosphates and ammonium phosphate.
- Mixed fertilizers: are physical mixtures of straight fertilisers. They contain two or three primary plant nutrients. Mixed fertilisers are made by thoroughly mixing the ingredients either mechanically or manually.

to generate processed food output of Rs. 33,494 crores and create employment for nearly 2.5 lakh persons by the year 2026-27.

Objectives:

- To support the creation of global food manufacturing champions.
- To strengthen select Indian brand of food products for global visibility and wider acceptance in the international markets.
- To increase employment opportunities of off-farm jobs.
- Ensuring remunerative prices of farm produce and higher income to farmers.

Governmental schemes / Programmes/Initiatives**12. PGINvIT**

- » Prelims: InvITs
- » Mains: Significance of InvITs in Indian economy
- PGINvIT would be an InvIT sponsored by PowerGrid.
- Infrastructure Investment trusts (InvITs) are mutual fund like institutions that enable investments into the infrastructure sector by pooling small sums of money from a multitude of individual investors for directly investing in infrastructure.
- InvITs are regulated by SEBI.
- PGINvIT would be India's first InvIT sponsored by a Maharatna PSU.

Governmental schemes / Programmes/Initiatives**11. PLI scheme for the food processing industry**

- » Prelims: PLI scheme- provisions; significance
- » Mains: Significance of food processing industry in the Indian economy; Potential

Context:

- The Union Cabinet has approved a production-linked incentive scheme for the food processing industry with an outlay of Rs. 10,900 crores.

Details:

- The scheme would cover ready-to-cook and ready-to-eat foods, processed fruits and vegetables, marine products and mozzarella cheese.
- Organic products, free-range eggs, poultry meat and egg products are also covered.
- The applicants selected for the scheme would be required to invest in plant and machinery in the first two years.
- The implementation of the scheme would facilitate the expansion of processing capacity

Governmental schemes / Programmes/Initiatives**13. Incentives for solar energy sector**

- » Prelims: Working of photovoltaic modules
- » Mains: Governmental measures to promote renewable energy sector in India

Context:

- The Union Cabinet has approved two production-linked incentive schemes.
 - * White goods (air-conditioners and LED lights).
 - * High-efficiency solar photovoltaic modules.

Details:

- Rs. 6,238-crore has been approved for the PLI scheme for air-conditioners and LEDs.
- The scheme would extend an incentive of 4% to 6% on incremental sales of goods made in India for five years.

- The Cabinet also approved a proposal of the Ministry of New and Renewable Energy for a PLI scheme for high-efficiency solar PV modules with an outlay of Rs. 4,500 crore.
- Solar capacity addition presently depends largely upon imported solar PV cells and modules as the domestic manufacturing industry has limited operational capacities of solar PV cells and modules.
- The National Programme on High Efficiency Solar PV Modules will reduce import dependence in a strategic sector like electricity.

National Programme on High Efficiency Solar PV Modules:

- The programme aims to achieve manufacturing capacity in the Giga Watt scale in high-efficiency solar PV modules.
- The Solar Photo Voltaic manufacturers are to be selected through a transparent competitive bidding process.
- The scheme will reward manufacturers with higher efficiencies of solar Photo Voltaic modules.
- Also, they will be incentivised for sourcing their material from the domestic markets.

Significance:

- The prime objective of the PLI scheme is to make manufacturing in India globally competitive by removing sectoral disabilities, creating economies of scale and ensuring efficiencies.
- It is designed to create a complete component ecosystem in India and make India an integral part of the global supply chains.
- Also, this is another step towards the vision of "Atmanirbhar Bharat" (self-reliant India).
- The scheme is estimated to lead to incremental investment, an increase in production as well as the creation of jobs.

Governmental schemes / Programmes/initiatives

14. DGFT Trade Facilitation App

- » Prelims: DGFT

Context:

- Commerce & Industry Minister launched DGFT Trade Facilitation Mobile App.

About DGFT Trade Facilitation App:

- The App has been launched with an aim to improve the efficiency of importers and exporters.
- The new app provides features such as all services offered by DGFT, tracking IEC Portfolio – IEC, applications, authorisations; raise and track help requests in real-time and share trade and public notices.

- The app would provide real-time trade policy updates, notifications, applications, status alerts and real-time data.
- It would also enable exporters and importers to explore item wise EXIM (export-import) data, policy, and statistics. Besides, it would provide artificial intelligence-based 24x7 assistance and all services of the DGFT.
- The App has been developed by Tata Consultancy Services (TCS), as per the directions of the DGFT.
- The app will be available on Android and iOS platforms. It can also be downloaded from the DGFT website.

Governmental schemes / Programmes/initiatives

15. e-SANTA

- » Prelims: e-SANTA
- » Mains: Aqua farming in India- potential and significance.

Context:

- Union Minister inaugurates e-SANTA.

What is e-SANTA?

- E-Santa is an electronic marketplace providing a platform to connect aqua farmers and buyers.
- The term e-SANTA was coined for the web portal, meaning Electronic Solution for Augmenting NaCSA farmers' Trade in Aquaculture.
 - * National Centre for Sustainable Aquaculture (NaCSA) is an extension arm of the Marine Products Export Development Authority (MPEDA), Govt. of India, Ministry of Commerce & Industry.
- e-SANTA is a Digital Bridge to end the market divide and will act as an alternative marketing tool between farmers & buyers by eliminating middlemen.
- It will revolutionize traditional aquafarming by providing cashless, contactless and paperless electronic trade platform between farmers and exporters.
- The farmers have the freedom to list their produce and quote their price while the exporters have the freedom to list their requirements and also to choose the products based on their requirements such as desired size, location, harvest dates, etc.

How it works?

- The platform provides detailed specification of each product listing and it is backed by an end to end electronic payment system with NaCSA as an Escrow agent.
- After crop listing and online negotiation, a deal is struck, advance payment is made and an estimated invoice is generated.

- Once the harvest date is fixed, the buyer goes to the farm gate and the produce is harvested in his presence.
- Once the harvest is completed, the final count, quantity of material is verified, the final amount is decided and delivery challan is issued.
- Once the material reaches the processing plant, the final invoice is generated and the exporter makes the balance payment.
- This payment is reflected in the escrow account. NaCSA verifies it and accordingly releases the payment to farmers.

Benefits of the portal:

- e-SANTA can become a tool to advertise collectively the kind of products the buyers, fishermen & fish producing organisations are harvesting, so people in India & internationally can know what is available & in the future, it can become an auction platform.
- The platform is available in many languages, which will help the local population.
- It enables the farmers and buyers to have greater control over the trade and enables them to make informed decisions.
- It will raise income, lifestyle, self-reliance, quality levels, traceability, and provide new options for aqua farmers.

Governmental schemes / Programmes/initiatives

16. Madhu Kranti Portal

- » Prelims: National Beekeeping & Honey Mission

Context:

- Union Minister for Agriculture and Farmers' Welfare launched Madhu Kranti portal and Honey Corners of NAFED.

About Madhu Kranti Portal:

- Madhu Kranti portal is an initiative of the National Bee Board (NBB), Ministry of Agriculture and Farmers' Welfare under the National Beekeeping & Honey Mission (NBHM).
- This portal is being developed for online registration to achieve traceability source of honey and other beehive products on a digital platform.
- Necessary functionalities are being developed on the portal to create a database of all stakeholders involved in honey and other beehive products' production, sales and marketing chain.
- There is a provision for the online registration of beekeepers.
- In the second phase, all sales transactions in honey trading in the country shall be captured through a mobile app to achieve desired results in the area of honey source traceability.

- This will help in keeping a check on the adulteration of honey.

Governmental schemes / Programmes/initiatives

17. Pre-packaged insolvency resolution process (PPIRP)

- » Prelims: Pre-packs
- » Mains: Significance; differences when compared with corporate resolution process

Context:

- The central government has promulgated an ordinance allowing the use of pre-packs as an insolvency resolution mechanism for Micro, Small and Medium Enterprises (MSMEs) with defaults up to Rs 1 crore, under the Insolvency and Bankruptcy Code.

What are pre-packs?

- A pre-pack is the resolution of the debt of a distressed company through an agreement between secured creditors and investors instead of a public bidding process.
- With the introduction of pre-pack insolvency, India joins the ranks of countries like the U.K., U.S., Singapore and France to have an informal, hybrid and debtor-driven pre-insolvency process that will operate under the Code. International experience shows pre-packs have generally been successful in preserving enterprise value.
- Under the pre-pack system, financial creditors will agree to terms with a potential investor and seek approval of the resolution plan from the National Company Law Tribunal (NCLT).

Approval:

- The approval of a minimum of 66 per cent of financial creditors that are unrelated to the corporate debtor would be required before a resolution plan is submitted to the NCLT.
- Further NCLTs are also required to either accept or reject any application for a pre-pack insolvency proceeding before considering a petition for a CIRP.

What was the rationale for such an arrangement?

- First, this option will help ease the resolution process of MSMEs, as, considering that there aren't enough buyers for stressed assets in the economy in the first place, not allowing existing promoters the option of participating in the resolution process would lead to capital destruction.
- Second, the scheme will not only bring down the costs associated with the resolution process, but may also lead to faster resolution of cases, as the frivolous litigation brought by defaulting promoters, in hopes of clinging on to their firms, will be reduced.

- Therefore, pre-packs are largely aimed at providing MSMEs with an opportunity to restructure their liabilities and start with a clean slate while still providing adequate protections so that the system is not misused by firms to avoid making payments to creditors.

What are the benefits of pre-packs over the Corporate Insolvency Resolution Process (CIRP)?

- One of the key criticisms of the CIRP has been the time taken for resolution. At the end of December 2020, over 86 per cent of the 1717 ongoing insolvency resolution proceedings had crossed the 270-day threshold. One of the key reasons behind delays in the CIRPs are prolonged litigations by erstwhile promoters and potential bidders.
- The pre-pack in contrast is limited to a maximum of 120 days with only 90 days available to the stakeholders to bring the resolution plan to the NCLT.
- Another key difference between pre-packs and CIRP is that the existing management retains control in the case of pre-packs while a resolution professional takes control of the debtor as a representative of financial creditors in the case of CIRP. Experts note that this allows for minimal disruption of operations relative to a CIRP.

How are creditors protected from misuse by promoters to simply reduce liabilities and retain control?

- The pre-pack provisions introduced by the central government also provided for adequate protection to ensure the provisions were not misused by errant promoters.
- The pre-pack mechanism allows for a swiss challenge for any resolution plans which proved less than full recovery of dues for operational creditors.
- Under the swiss challenge mechanism, any third party would be permitted to submit a resolution plan for the distressed company and the original applicant would have to either match the improved resolution plan or forego the investment.
- Creditors are also permitted to seek resolution plans from any third party if they are not satisfied with the resolution plan put forth by the promoter.

Governmental schemes / Programmes/initiatives

18. Small Saving Schemes

- » Prelims: Small saving schemes in India.
- » Mains: Reasons for lowering of the interest rates; impact

Context:

- The government had sharply slashed the rates on all small savings instruments for the first quarter of 2021-22.
- After announcing a sharp cut the government withdrew its order
 - * The finance ministry clarified in an order saying that the Interest rates on small savings schemes for the current quarter will be maintained at the levels of the previous quarter

Meaning:

- These schemes are typically offered by post offices (and occasionally, banks).
- They come with a central government guarantee and the money raised via them goes to the centre.

Small Saving Schemes can be grouped under three heads:

- Post office Deposits: Post Office Savings Account, Post Office Time Deposits (1,2,3 and 5 years), Post Office Recurring Deposits and Post Office Monthly Account
- Savings Certificates: National Savings Certificate and Kisan Vikas Patra
- Social Security Schemes: Public Provident Fund, Senior Citizens Savings Scheme and Sukanya Samriddhi Account
- These schemes provide an alternative avenue to saving in banks, often at interest rates that tend to be higher than bank deposits of a comparable maturity.

National Small Savings Fund (NSSF):

- It is a fund body, which pools money from various small saving schemes
- NSSF was established in 1999 within the Public Account of India. It is administered by the Ministry of Finance, Government of India, under the National Small Savings Fund (Custody and Investment) Rules, 2001, derived from Article 283(1) of the Constitution.

A look at numbers:

- According to the central bank, of every Rs. 100 of new investments in 2019-20 by Indian households in financial assets, only Rs. 12 went into small savings (excluding the Public Provident Fund, or PPF).
- Even if one includes PPF, that number increases only marginally, given that PPF accounts for 9% of total small savings.

Background:

- The Central Government in 2010 had constituted an Expert Committee under the Chairpersonship of Smt. Shyamala Gopinath, Deputy Governor, Reserve Bank of India for comprehensive review of the National Small Savings Fund.

What does Govt use these savings for?

- For the government, small savings remain a balancing act. It relies on them to finance its fiscal deficit. Small savings funded 26% of the Centre's fiscal deficit in 2020-21, against 10% in 2015-16
- Thus, there is an imperative to keep interest rates aligned to market rates.

How are rates determined, and how does cutting them help the government?

- Interest rates on small savings schemes are reset on a quarterly basis, in line with the movement in benchmark government bonds of similar maturity.

Why the government wanted to cut interest rates on small savings?

- Lowering the interest outgo will allow the Centre to reduce the coupon rate on fresh issues of special securities
- Concurrently, it might encourage savers to opt for deposit schemes of banks, which would give banks access to cheaper funds and in turn keep lending rates benign.

Impact:

- Lowering of interest rates will help the government reduce interest costs, it would hurt investors, particularly senior citizens and the middle class.

Future course:

- Rates can now be expected to be reset for the July-September quarter.

Miscellaneous**19. The big push for digital currency in China**

- » Prelims: Digital Renminbi
- » Mains: Recommendations for a digital currency of India
- China has been undertaking pilot trials of its new digital currency, with reported plans of a major roll-out by the end of the year. China is among a small group of countries that have begun pilot trials; others include Sweden, South Korea and Thailand.

- Officially titled the Digital Currency Electronic Payment (DCEP), the digital RMB (or Renminbi, China's currency) is a digital version of China's currency.
- The DCEP can be downloaded and exchanged via an application authorised by China's central bank.

Difference compared to e-wallets:

- unlike the e-wallet platforms like Paytm in India, the Digital RMB does not involve a third party. This is legal tender guaranteed by the central bank, not a payment guaranteed by a third-party operator. There is no third-party transaction, and hence, no transaction fee.
- Unlike e-wallets, the digital currency does not require Internet connectivity. The payment is made through Near-field Communication (NFC) technology.
- Also, unlike non-bank payment platforms that require users to link bank accounts, this can be opened with a personal identification number.

Miscellaneous**20. Growth of pharma exports**

- » Prelims: Facts related to India's exports; major markets;
- India's pharmaceutical exports grew 18.7% to \$24.44 billion in the financial year ended March 31, spurred by strong demand for the country's generic drugs.
- Notably, this performance came amid global contraction and the global pharma market shrinking by 1-2% in 2020.
- Drug formulations and biologicals remained the second-largest commodity exported by India.
- The record growth was due to a surge in demand for made-in-India generics, owing to their quality and affordability.

Major markets:

- North America remains the largest market for Indian pharmaceuticals, accounting for a more than 34% share.
- South Africa emerged as the second-largest market for Indian pharmaceuticals.
- Europe accounts for the third-largest market for Indian pharmaceutical exports.
- There is a growing demand for Indian pharmaceutical products in non-traditional markets such as Latin America, CIS countries and Middle East.

Miscellaneous**21. RBI extends States' Ways and Means credit to Sept.**

» Prelims: Ways and Means Advances

Context:

- The Reserve Bank of India (RBI) has decided to continue with the existing interim Ways and Means Advances (WMA) scheme limit of Rs. 51,560 crore for all States/UTs till September 2021.
- * The Special Drawing Facility shall continue to be linked to the quantum of their investments in marketable securities issued by the Government of India, including the Auction Treasury Bills.

Ways and Means Advances:

- Ways and means advances is a mechanism used by RBI under its credit policy to provide to States banking with it, to help them tide over temporary mismatches in the cash flow of their receipts and payments.
- Under this scheme, a government can avail itself of immediate cash from the RBI.
- The WMA is to be repaid after 90 days. The interest rate for WMA is currently charged at the repo rate.
- The governments are, however, allowed to draw amounts in excess of their WMA limits. The interest on such overdraft is more than the repo rate. Further, no state can run an overdraft with the RBI for more than a certain period.

Indian Economy and issues relating to growth and development**22. Maintaining the inflation target at 4%**

- » Prelims: Inflation targeting; MPC
- » Mains: Significance of inflation targetting

Context:

- The Finance Ministry's announcement that the inflation target for the five years between April 2021 and March 2026 will remain unchanged at 4%, with an upper tolerance level of 6% and a lower tolerance level of 2%.

Background:

Inflation targeting monetary policy framework:

- India had switched to an inflation target-based monetary policy framework in 2015, with the 4% target kicking in from 2016-17.

Inflation concerns:

- Moody's Analytics had recently termed India's inflation trends "worrisome". It noted that the volatile food prices and rising oil prices had driven India's consumer price index (CPI)-based inflation past the 6% tolerance threshold several times in 2020 and that core inflation trends were rising again.
- Though retail inflation has remained below 6% since December 2020, it accelerated from 4.1% in January 2021 to 5% in February.

Details:

- With inflation headwinds remaining a concern, especially with oil prices staying high, there was some speculation that the Central government, whose topmost priority now is to revive growth in the COVID-19 pandemic-battered economy, may ease up on the inflation target by a percentage point or two thus allowing the Reserve Bank of India (RBI) to cut interest rates even if inflation was a tad higher with an aim to revive growth.
- However, the government has desisted from increasing the retail inflation target and has left the inflation target untouched.
- The set retail inflation target will drive the country's monetary policy framework and influence its decision to raise, hold or lower interest rates.

Significance:

- The inflation targeting monetary policy framework has worked reasonably well in keeping inflation in check over the last five years. Experts have attributed the few recent instances when the upper target was breached to the exceptional nature of the COVID-19 shock.
- The RBI has also previously sought a continuance of the 4% target with the flexible tolerance limits of 2%. The Central bank has asserted that accepting inflation levels beyond 6% would hurt the country's growth prospects.
- The inflation target helps ensure consumer friendly policies given that appropriate measures would be taken to keep retail prices within acceptable levels.

- The move marks a continuance of the policy adopted by many developed countries which have adopted an inflation-rate focus as an anchor for policy formulation for interest rates rather than past fixations with metrics like the currency exchange rate or controlling money supply growth. Emerging economies have also been gradually adopting this approach.

INTERNATIONAL RELATIONS

International Relations: Effect of policies and politics of developed and developing countries on India's interests

1. A multipolarity, scripted by the middle powers

- » Prelims: QUAD; 'Partnership for Quality Infrastructure' initiative; New Asia initiative
- » Mains: Evolving global geopolitical scenario; critical role of middle powers;

Context:

- The article analyzes the critical role that the middle powers- Japan, Iran, Turkey and India could play in the evolving global geopolitical scenario.

Background:

U.S. China Cold War like situation:

- U.S. views China as its principal adversary on the world stage.
- The new Cold War like situation between China and the U.S. gained a concrete shape during the Trump presidency. The U.S. has been trying to build an alliance of likeminded countries to try and curb China's growth, reduce its influence in international institutions.
- The U.S. has been trying to use the Quad to challenge China in the Indo-Pacific, possibly as part of a "new Cold War".

U.S. Russia hostility:

- Russia's war with Ukraine and the occupation of Crimea in 2014, followed by allegations of Russian cyber-interference in the U.S. presidential elections of 2016 has raised the hostility between U.S. and Russia..

China-Russia partnership:

- U.S. animosity has encouraged China and Russia to solidify their relations.
- Besides significantly expanding their bilateral ties, the two countries have agreed to harmonise their visions under the Eurasian Economic Union sponsored by Russia and China's Belt and Road Initiative (BRI). This idea has now been subsumed under the 'Greater Eurasian Partnership' to which both the countries are committed.
- The new Cold War is now being reflected in a new geopolitical binary — the Indo-Pacific versus Eurasia.

Details:

- The article analyzes the relation between China, Russia and U.S. with the middle power nations of India, Iran, Turkey and Japan.

Evolving alignments:

- The alignments between the rival power groups and the middle powers seem to be crystallizing.
 - * Japan and India are deeply entrenched in the Quad and have substantial security ties with the U.S.
 - * Iran, facing a sanction regime from western powers led by the U.S. has found strategic comfort with the Sino-Russian alliance. Iran and China recently concluded an economic pact.
 - * Turkey, a NATO member, has found its interests better-served by Russia and China rather than the U.S. and its European allies.

The role of middle powers:

- Japan, Iran, Turkey and India are well set to shape the emerging world order. The "middle powers", have the capacity to project power regionally, build alliances, and support (or disrupt) the strategies of international powers pursuing their interests in the region.

Reluctant allies:

- Despite the allure of joining the rival super power groupings led by the U.S. or China and Russia, the four nations are not yet prepared to join the power alliances.

Japan:

- Though, Japan has an ongoing territorial dispute with China relating to the Senkaku islands in the East China Sea, Japan has a strong economic linkage with China.
 - * In 2019, 24% of Japanese imports came from China, while 19% of its exports went to China.
- Japan's \$200 billion 'Partnership for Quality Infrastructure' initiative that funds infrastructure projects in Asia and Africa, is willing to work on BRI projects on a selective basis.
- Japan has the security treaty of 1951 with the U.S. making it dependant on the U.S. for much of its security concerns.
 - * Notably, Japan has been trying to reduce its security-dependence on the U.S. and pursue an independent role in the Indo-Pacific.

India:

- As the threats from China at the border and intrusions in its South Asian neighbourhood and the Indian Ocean became sharper, India has moved closer to the U.S. India- U.S. relationship has been on the upswing, marked by expanding defence ties with the U.S., including defence purchases and agreements on inter-operability and intelligence-sharing and frequent military exercises.
- Through the border stand-off at Ladakh, China is perhaps indicating to India that its security interests demand close engagement with China rather than a deepening alignment with the U.S.
- The recent Freedom of navigation exercise carried out by the U.S. in India's EEZ without its consent would undermine India U.S. bilateral relationship
- India will need to manage its ties with China largely through its own efforts, while retaining Russia as its defence partner.

Iran:

- Given the strategic culture of Iran that eschews long-term security alignments, it is very likely that the Islamic Republic of Iran will seek to redefine its strategic space and exercise independent options rather than joining either power groups.

Turkey:

- Turkey has been witnessing a steady distancing from its western partners and increasing geopolitical, military and economic alignment with Russia and China.
- However, Turkey still wishes to keep its ties with the U.S. intact, and retain the freedom to make choices. Its "New Asia" initiative, involves strengthening of east-west logistical and economic connectivity backed by western powers and China.

Conclusion:

- The four middle powers, seem to be vying for "strategic autonomy" — defined by flexible partnerships, with freedom to shape alliances to suit specific interests at different times.
- These four middle powers will thus make multipolarity, rather than a new Cold War, the defining characteristic of the emerging global order.

International Relations: India's bilateral relations with U.S.**2. U.S. currency watchlist**

- » Prelims: U.S. currency watch list- criteria
- » Mains: India's concerns with respect to the inclusion of India in the watchlist

Context:

- Indian Commerce Secretary's statement on the U.S. government's decision to put India on the watchlist for currency manipulators as being an intrusion into the policy space of central bank.

Background:

- Report on Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States placed India in the 'Monitoring List' with regard to the currency practices.
 - * The semi-annual report submitted to the U.S. Congress reviews the currency practices of the U.S.'s 20 biggest trading partners.
- The United States has retained India among many other countries on its currency manipulation watchlist.
 - * India was added to the list for a second time in December 2020. It was first added to the list in December 2018, and later removed in 2019.
- 11 countries have been placed in the U.S. Treasury's 'Monitoring List'.
 - * The other 10 countries on the list with India are China, Japan, Korea, Germany, Ireland, Italy, Malaysia, Singapore, Thailand, and Mexico.

Reasons for retaining India on watchlist:

- Three criteria are used to review partners:
 - * A significant (at least \$20 billion) bilateral trade surplus
 - * A material current account surplus
 - * Persistent one-sided intervention in forex markets
- India met two of the three criteria — the trade surplus criterion and the persistent, one-sided intervention criterion.

High dollar purchases:

- The Reserve Bank of India (RBI) has purchased dollars' worth close to 5% of India's gross domestic product

Trade surplus:

- India enjoys a trade surplus of \$20 billion or more with the U.S.
- India's trade surplus with the U.S. grew by about \$5 billion to \$23 billion in 2020-21, from around \$18 billion in the previous fiscal year, as imports fell more sharply than exports in the COVID-affected year.

India's stand:

- The RBI has been only taking necessary steps to maintain stability in the financial markets and not accumulating forex reserves like China did in the past

- The central bank's activity in the foreign exchange market has been perfectly balanced and completely legitimate within the accepted monetary policy mandate of central banks across the world.
 - * It is a mandate of the central bank to provide stability in the currency as a result of which central banks buy and sell foreign currency.
- The U.S. move to list India on the currency manipulator watchlist amounts to an intrusion into the policy space of central banks.

International Relations: India's bilateral relations with U.S.

3. U.S. denies vaccine inputs ban

- » Prelims: U.S.'s Defense Production Act
- » Mains: Irritants in India- U.S. relations

Context:

- Covishield vaccine manufacturer Serum Institute of India's (SII) had appealed to U.S. administration to lift embargo on raw material export to assist the production of COVID-19 vaccines.

Background:

Emergency legislation:

- The U.S. is a major source of raw materials in Vaccine production.
- The U.S.'s Defense Production Act — an emergency law that requires domestic manufacturers to prioritize federal (central) government purchase orders- has resulted in short supply of vital raw materials in the open market.
 - * The act is aimed to expand domestic vaccine manufacturing and prioritize quick vaccination of Americans.

Details:

- The U.S. administration has denied any 'outright bans' on the export of vaccine raw materials.

Attempts at resolving the situation:

- India has expressed specific concerns raised by vaccine manufacturers and the U.S. officials have said they will "positively consider" the concerns raised by the Indian side.
- India and the U.S. have alluded to cooperation on "COVID-19" or "health" during the recent phone call between the foreign ministers of the two countries.

Recent development:

- The U.S. administration has allowed the export of critical raw materials for vaccine production to India.

International Relations: India's bilateral relations with U.S.

4. India should be a 'country of particular concern': U.S. panel

- » Prelims: The U.S. Commission on International Religious Freedom (USCIRF)
- » Mains: Irritants in India- U.S. relations

Context:

- The U.S. Commission on International Religious Freedom (USCIRF) has recommended for the second year in a row that the State Department put India on a list 'Countries of Particular Concern' (CPCs) for the worst violations of religious freedoms in 2020.

Recommendations:

- The administration must impose targeted sanctions on Indian individuals and entities for severe violations of religious freedom.
- Another recommendation was for the administration to promote inter-faith dialogue and the rights of all communities at bilateral and multilateral forums such as Quad.

Note:

- USCIRF is an independent bi-partisan commission.
- It was created by the International Religious Freedom Act (IRFA) of 1998.
- USCIRF's principal responsibilities are to review the facts and circumstances of violations of religious freedom internationally and to make policy recommendations to the President, the Secretary of State, and the Congress.
- The USCIRF recommendations are non-binding and the Trump administration had rejected the USCIRF recommendation to designate India a CPC in 2020.
 - * Pakistan and China along with Myanmar, Eritrea, Iran, Nigeria, North Korea, Saudi Arabia, Tajikistan and Turkmenistan were placed in the CPC list for engaging in or tolerating systematic, ongoing, egregious violations of religious freedom.
 - * The US also designated al-Shabaab, al-Qaida, Boko Haram, Hayat Tahrir al-Sham, the Houthis, ISIS, ISIS-Greater Sahara, ISIS-West Africa, Jamaat Nasr al-Islam wal Muslimin and the Taliban as 'Entities of Particular Concern'.

International Relations: Effect of policies and politics of developed and developing countries on India's interests/ diaspora

5. H-1B visa rule

- » Prelims H-1B visa- provisions
- » Mains: India- U.S. economic interdependency

Context:

- U.S. President Joe Biden has allowed a Trump-era H-1B visa rule to expire.

Background:

U.S. immigration policy under President Trump:

- In June 2020, the U.S. administration under former President Donald Trump, halted the issuance of non-immigrant work visas of several types, including the skilled worker visa, or H-1B. In a move aimed at tightening immigration policy, the stated aim of the policy was to stop foreign workers from cornering American jobs.
- Immigration reforms in favour of protecting U.S. jobs for Americans was a major policy thrust for the former U.S. President Donald Trump.
- U.S. under President Trump had also announced a 60-day halt on legal migration, effectively a ban on "green card" issuance.

Fallout of the visa ban:

- America Inc., employing around millions of non-immigrant foreign workers has been steadfast in its opposition to the skilled worker visa ban, given the critical role played by the immigrant workforce in U.S. based companies.
 - * Google CEO Sundar Pichai had lashed out at the policy, noting that Immigration had contributed immensely to America's economic success, making it a global leader in tech. SpaceX founder and Tesla CEO Elon Musk and Apple CEO Tim Cook have also expressed similar anguish against the policy.
- Analysts have predicted that around 2,19,000 workers around the world might have been prevented from taking up work in the U.S. as a result of Mr. Trump's visa ban. Thus the skilled worker ban has had an impact on the potential remittance flow to developing countries.
- Experts have termed the policy measure to be driven more by politics rather than economics given the lack of any significant economic benefits arising from the skilled-worker visa ban.

Details:

- The original order was valid until December 31, 2020, it was extended by the Trump administration to be valid until March 31, 2021. Now, the current U.S. President, Joe Biden, has allowed the ban on H-1B visa issuance to expire.
- In allowing the H-1B visa ban to expire, Mr. Biden is walking a fine line between restoring the

inflow of skilled workers into the U.S., a source of productivity-increase for its labour force, and not being seen as overly aggressive in unwinding Trump-era immigration crackdowns give the support for protectionist policies within the U.S. electorate.

Significance:

- The end of ban on work visa would potentially bring relief to a large number of Indian nationals, especially IT workers.
 - * Until now, the U.S. issued 85,000 H-1B visas annually, of which 20,000 went to graduate students and 65,000 to private sector applicants, and Indian nationals would garner approximately 70% of these.
- The Indian corporations are also expected to benefit from the move given that the move would also ensure the availability of a large talent pool to IT companies with U.S. operations. This would also benefit Indian IT companies with U.S. operations.

International Relations: Relations between India and neighbouring countries

6. India, China agree to avoid new incidents on border

- » Prelims: Places in news

Context:

- 11th round of talks between the Corps Commanders recently held at Chushul.

Background:

- With disengagement complete on both banks of Pangong Tso in February, the focus of the talks was on disengagement from patrolling points (PP) at Gogra and Hotsprings.

Details:

- The two sides had a detailed exchange of views regarding disengagement along the Line of Actual Control (LAC) in eastern Ladakh.
- The two sides agreed on the need to resolve the outstanding issues in an expeditious manner in accordance with the existing agreements and protocols.
- India and China have agreed that the completion of disengagement at Gogra and Hotsprings would pave the way for the two sides to consider de-escalation of forces and ensure full restoration of peace and tranquillity and enable progress in bilateral relations.

International Relations: Relations between India and neighbouring countries

7. India China border issue

- » Prelims: Track 2 diplomacy
- » Mains: Differences in India and China's stand on the border issue and multilateralism

Context:

- Statement by the envoys of India and China during their interactions with academicians and experts as part of the track 2 diplomacy efforts

Background:

Talks deadlocked:

- Talks between military commanders appear to remain deadlocked over carrying forward disengagement in the Gogra and Hot Springs areas following the completion of the first phase at Pangong Lake.
- Recently, China's state media reported deployment of an advanced long-range rocket launcher to the border with India.

China's stand:

On border issue:

- Though the Chinese envoy acknowledged the fact that the boundary dispute should be given sufficient attention and taken seriously, he argued that the boundary question is not the whole story of China-India relations and should be put at a proper place in the overall bilateral relations.

On multilateralism:

- China has called on India to abide by the purposes and principles of the UN Charter, and uphold the international system with the United Nations at its core and an international order based on international law and reject 'small circles', a phrase some Chinese experts have used to refer to groupings such as the Quad.

India's stand:

On border issue:

- India's envoy to China has stated that unlike the popular tendency in some quarters to characterize the border face-off between the two neighbours as just a minor issue, maintaining peace and tranquillity at the border is very essential to take forward India's ties with China.
- India and China should work towards early resolution of the border crisis as a resolution of the long pending issue is inevitable to develop closer development partnership between the two countries.

On multilateralism:

- Indian envoy stressed the importance of multipolarity in the changed geo-political scenario, both in the Indo-Pacific and beyond and has reiterated that in such a multipolar world, no country can set the agenda by itself without prior agreement and consultation.

International Relations: Relations between India and neighbouring countries

8. India- China relations

- » Prelims: BRICS
- » Mains: Core issues for resolution between India and China; way forward

Context:

- Track-II dialogue held between India and China in early April.

Background:

- India and China have witnessed a troubled relation in the recent past.
- The Galwan valley clash marked the worst violence on the border since 1967. The border crisis has led to a tense relationship between the two neighbours.

Details:

- The Track-II dialogue brought together former ambassadors and military officials from both countries.
 - * Track II diplomacy or "backchannel diplomacy" is the practice of "non-governmental, informal and unofficial contacts and activities between private citizens or groups of individuals, sometimes called 'non-state actors'".
 - * It contrasts with track I diplomacy, which is official, governmental diplomacy that occur inside official government channels.
- It is possibly the first of its kind to be held after the border crisis between India and China.

Core issues for resolution:

- The shared view during the recent dialogue was that the key to arriving at a new, more realistic state of relations will be managing three issues — the boundary question, trade, and the increasing impact of third-party and multilateral engagements on the two-way relationship.
- The dialogue emphasized the need to focus on limited goals which may end up paying rich dividends.

Boundary dispute:

- Despite the progress seen in terms of disengagement on the north and south banks of Pangong Lake, there has been an apparent

stalemate even after the eleventh round of talks between Corps Commanders.

- The Chinese behaviour seems to be suggestive of a lack of appetite in China at the moment for a final settlement of the boundary question. That is also the view of most Chinese experts, who suggest the boundary question to be left for later ages to be negotiated.
- Though this may mean a prolonged period of continued uncertainty on the borders due to the unclarified LAC, it is significant to note that the absence of a permanent peace need not necessarily mean a conflict.
- There is the need to take small steps to restore the shattered trust between the two neighbours.
- If delineation of the LAC is not possible at the present moment, the two countries should at least, clarify the most sensitive spots, and arrive at understandings, such as coordinated patrolling either by time or area. These are small steps that have, in the past, helped cool down the temperatures.

Trade:

- The tension along the LAC has resulted in growing calls for "decoupling" of the economic relations between the two countries.
- Though the unresolved political problems do not seem to support the idea of economic partnership with China, the calls for complete disengagement on the trade front too are unrealistic.
- Despite the biggest border crisis in decades between the two countries in 2020, trade reached \$87.6 billion between India and China.
 - * China was India's largest trading partner, with India importing \$66.7 billion worth of machinery and medical equipment.
 - * India exported a record \$20 billion to China, mostly ores to China's industries.
- Given the fact that jettisoning all activity with China is neither realistic nor prudent, there is the need for recognizing possible areas of cooperation which would not have any associated security concerns. Infrastructure development, clean energy may be some of the potential areas for cooperation.

Third country and external engagements:

- Both India and China need to have a clear conversation on how third parties and external engagement are an increasing factor in the bilateral relation.
 - * China is viewing relations with India through the prism of its relations with the United States. China has been unequivocal over its concerns over the U.S. backed Quad and India's participation in it.

* India has its own concerns with China's increasing support to Pakistan and its growing influence in South Asia and the Indian Ocean littoral countries.

- Instead of letting their engagements with third countries impact their bilateral relations, India and China would be better served by having an open conversation about what could be the red lines in such third country engagements.
- Also as relations stabilise, India and China could start injecting more energy into their own shared platforms such as BRICS. They could also revive their bilateral cooperation in Afghanistan.

Conclusion:

- Given the fact that the chequered history of India-China relations is rife with examples of how misplaced expectations have burdened the relationship, there is the need to restrain the temptation of high expectation and aim for modest goals.
- A conversation driven by hard talk and finding shared interests, even if modest ones, may be more rewarding in restoring the strained bilateral relationship between India and China.

International Relations: Relations between India and neighbouring countries

9. Indications of backchannel talks between India and Pakistan

- » Prelims: Indus water treaty
- » Mains: Thaw in India Pakistan relations; significance of the back channel talks

Context:

- Indications of backchannel talks taking place between India and Pakistan since 2020.

Background:

Strained relationship:

- India Pakistan Bilateral relations witnessed a particularly recriminatory period following the 2019 Pulwama attack, the Balakot strikes and capture of an Indian pilot thereafter.
- Even prior to that, the Pathankot terror attack and the subsequent surgical operation by India had pushed the bilateral relation to the limits.
- The periodic violation of ceasefire agreement along the LoC had further strained the relationship between the two neighbours.

Thaw in relationship:

- The joint statement issued by the Director Generals of Military Operations employing terms like the resolution of "core issues" indicate a much needed thaw in relationship between the two neighbours.

- India-Pakistan border commanders have agreed to strictly observe all agreements between the two countries.
- There has been the scheduling of the much-delayed Indus Water Treaty talks, the granting of sports visas, and the salutary messages between the two leaders of the two countries.

Details:

- The recent developments seem to be indicative of backchannel talks between the two countries involving both coordination at a diplomatic level and high-level political approval.
 - * Backchannels mostly involve officially sanctioned contacts between nominees from India and Pakistan to resolve any issue or existing concerns.
- There have been reports of talks being overseen by National Security Adviser (NSA) Ajit Doval and Pakistan Army Chief General Qamar Bajwa which have been taking place for months, in different neighbouring countries, facilitated by foreign governments including the United Arab Emirates.
- Notably, however there has been an absence of official acceptance of a backchannel.

Significance of backchannel talks:

- Notably, there has been a history of back channel talks between India and Pakistan over the years. At times they have involved diplomats, businessmen and other senior bureaucrats in the governments. They have operated in the worst of times, including wars, terror strikes and military action including during the Kargil war, Pathankot terror attack, Kulbushan Yadav arrest controversy.
- At times even when official channels have faltered, the backchannel talks have been activated to soothe the tensions between the two countries.
- The backchannel talks allow for a more open discussion on issues of concern/conflict between the two countries without the constraint imposed by media glare on the talks. The people involved in the talks can involve in a more open negotiation without the fear of domestic emotions.

Why a backchannel now?

Inevitability of engagement:

- While establishing friendship and trust between inimical neighbours with a bitter history, such as what India and Pakistan share, may seem an uphill task, engagement between the two countries is inevitable for peace and stability in the two countries and the region at large.

Domestic challenges:

- The domestic constraints and challenges on other fronts for the two countries have

necessitated the need for a workable peace on the India-Pakistan front.

For Pakistan:

- Pakistan's dire economic condition and the mounting pressure from the Financial Action Task Force to shut down all terrorist safe havens or face severe sanctions is one imperative for Islamabad's willingness to engage via the backchannel.

For India:

- For India, the stand-off with the People's Liberation Army at the Line of Actual Control in Ladakh has made the possibility of a two-front war more real, and thus needs to push to reduce tensions with Pakistan.

Common interests:

- The evolving situation in Afghanistan and the stakes that both India and Pakistan hold in the developments, necessitate both Delhi and Islamabad to defuse the situation along the LoC and avoid a conflagration at their boundaries, to let them focus their attention on Afghanistan.
- Co-operation and collaboration between the two neighbours on the economic front holds immense potential for economic growth of the two countries specially in the post pandemic phase.
 - * Pakistan's move to consider import of raw cotton from India for its domestic textile industry and import sugar to meet its domestic demand are indicative of economic interdependency between the two countries which can be used to set right the bilateral relation.

Conclusion:

- Terror and talks cannot go together but talks on terror can definitely go ahead.
- There is ample scope for improvement of the bilateral relationship between India and Pakistan provided that there is no terror attack in India traceable to Pakistan.

International Relations: Relations between India and neighbouring countries

10. India Pakistan Relations

- » Prelims: SAARC
- » Mains: Thaw in India Pakistan relations; potential of the bilateral relation; way forward

Context:

- The thaw in relationship between India and Pakistan.

Details:

- The recent thaw in the bilateral relationship between the two neighbours- India and Pakistan seems to indicate a growing, but unstated, realisation that an atmosphere of peace and tranquillity is of mutual interest to both the countries.
- Kashmir issue seems to have taken a back seat between the two countries.

Implications of India- Pakistan rivalry:

- India-Pakistan animosity hurts regionalism and South Asian growth.
 - * SAARC has remained a victim of India-Pakistan rivalry. Pakistan has been blocking trade and connectivity and people-to-people ties. The repeated boycotting of the SAARC summits is an indication of the impairment of the organization.
 - * South Asian with a population of slightly over 1.9 billion and a GDP (PPP) of \$12 trillion, performs badly when compared with the Association of South East Asian Nations (ASEAN) member countries which have registered impressive economic growth and development.

Potential of a vibrant bilateral relationship:**Regional integration:**

- A fair peace between India and Pakistan is not just good for the two states but for all the nations constituting the South Asian Association for Regional Cooperation (SAARC).

Economic potential:

- Reports from World Bank, Asian Development Bank and the European Union have noted the immense potential hidden in the South Asian economic integration.
- An economically transformed and integrated South Asian region could advantageously link up with China's Belt and Road Initiative and even join the Regional Comprehensive Economic Partnership, unleashing great economic potential

Way forward:**India's role:**

- India should seize the moment and become more South Asia-concerned and much less Pakistan-obsessed.
- Given its size and heft, India should take the lead in transforming the South Asian region.
 - * India enjoys an overwhelming 'size imbalance' in South Asia. The shares of India in the total land area, population, and real GDP of South Asia in 2016 are 62%, 75%, and 83%, respectively. The two other big

countries in South Asia are Pakistan and Bangladesh with shares in regional GDP of only 7.6% and 5.6%, respectively.

- India needs to view a peace with Pakistan not as a bilateral matter, to be arrived at leisurely, but as essential and urgent, viewing it as a chance dramatically transform South Asia for the better.

Larger agenda for the region:

- There should be a more focussed approach on issues plaguing the entire subcontinent like poverty and malnutrition. Co-operation and collaboration in these aspects would benefit both India and Pakistan.

International Relations: India's bilateral relations with Russia**11. India Russia ties**

- » Prelims: Eurasian Economic Union; S-400; CAATSA
- » Mains: Issues in the India Russia bilateral relation

Context:

- Russian Foreign Minister Sergei Lavrov's recent visit to Delhi saw both he and External Affairs Minister S. Jaishankar reaffirming traditional India-Russia ties.
 - * Lavrov's trip was to make preparations for the upcoming visit of Russian President Vladimir Putin for the annual summit.

Details:

- On the bilateral front, both sides appeared to make progress on strategic cooperation, cooperation in energy, nuclear and space sectors, and on talks on a free trade agreement with the Eurasian Economic Union (EAEU).
- More agreements on military-technical cooperation for the joint production of India-made Russian weapons were discussed highlighting that Russia is the only partner supplying India with cutting-edge military technology.
- They reaffirmed their commitment to their defence partnership.
 - * However, neither side referred to the upcoming delivery of the \$5 billion S-400 missile defence system directly.
 - * Countering America's Adversaries Through Sanctions Act (CAATSA) can affect India-Russia joint defence ventures.
 - * CAATSA is a United States Federal Law that has imposed sanctions against Iran, Russia and North Korea. This act prevents trade partners of the United States from entering into bilateral contracts with these three nations.

- Avenues for more investment in connectivity including the International North-South Transport Corridor and the Chennai-Vladivostok Eastern Maritime Corridor were discussed.

Divergence in views:

- The areas of divergence over their worldview seemed to emerge during their public remarks.
- Jaishankar referred to the “rebalanced nature” of international relations. Mr. Lavrov’s praise of Russia-China ties was clearly not shared by Mr. Jaishankar.
- While India’s external affairs minister referred repeatedly to India’s “Indo-Pacific” strategy his Russian counterpart preferred the more continental reference to the “Asia-Pacific” region.
- The Russian push for bringing the Taliban into a power-sharing arrangement in Kabul seemed to come up against India’s consistent push for a “democratic Afghanistan”.

Issue:

- New Delhi and Moscow are not as much on the same page as they have traditionally been.
- Lavrov’s first visit to Pakistan in nine years is a clear message of deepening ties.
 - * Russia’s Foreign Minister said Moscow and Islamabad would boost ties in the fight against terrorism, with Russia providing unspecified military equipment to Pakistan and the two holding joint exercises at sea and in the mountains.
 - * Russia is also building a gas pipeline between the southern port city of Karachi and eastern Lahore.

Conclusion:

- The deep, traditional and time-tested relations of the kind that India and Russia have shared for decades cannot be taken for granted despite the fact that both the countries have successfully addressed divergences between them earlier. The two sides should move quickly to dispel the notion that those ties are under any strain

International Relations: India’s bilateral relations

12. India-Netherlands Virtual Summit

- » Prelims: Map based facts
- » Mains: Areas of co-operation

Context:

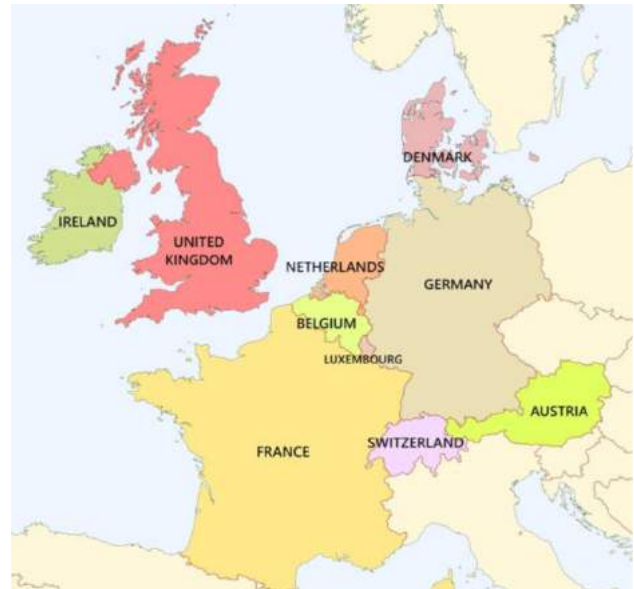
- The Prime Ministers of India and the Netherlands held a virtual summit.

Details:

- The two leaders had a detailed review of the entire spectrum of bilateral engagements and exchanged views on further expanding and diversifying the relationship in trade and

economy, water management, agriculture sector, smart cities, science & technology, healthcare and space.

- The two Prime Ministers also agreed on instituting a ‘Strategic Partnership on Water’ to further deepen the Indo-Dutch cooperation in the water related sector, and upgrading the Joint Working Group on water to Ministerial-level.



Historical background:

- Indo-Dutch contacts go back to more than 400 years. Official relations, established in 1947
- The two countries also share common ideals of democracy, pluralism and the rule of law.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India’s Interests

13. India, Australia, Japan push for supply chain resilience

- » Prelims: Supply Chain Resilience Initiative
- » Mains: Countering China in the Indo-Pacific region

Context

- The Supply Chain Resilience Initiative (SCRI) was formally launched by the Trade Ministers of India, Japan and Australia.

Details:

- The three sides agreed that the pandemic revealed supply chain vulnerabilities globally and in the region.
- The countries noted the importance of risk management and continuity plans in order to avoid supply chain disruptions.

- The SCRI aims to create a virtuous cycle of enhancing supply chain resilience with a view to eventually attain strong, sustainable, balanced and inclusive growth in the region.
- It seeks to build upon the existing bilateral frameworks like the ASEAN-Japan Economic Resilience Action Plan and India-Japan Industrial Competitiveness Partnership and attract foreign direct investment in the region.
- Some of the joint measures being considered are:
 - * Supporting the enhanced utilisation of digital technology.
 - * Trade and investment diversification.
- Initially, SCRI will focus on sharing best practices on supply chain resilience and holding investment promotion events and buyer-seller matching events to provide opportunities for stakeholders to explore the possibility of diversification of their supply chains.

Note:

- The initiative is seen as a move to counter China's dominance of the supply chain in the Indo-Pacific region.
- China has described the effort as unrealistic.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

14. U.S. and China relations

- » Prelims: NATO; SCO
- » Mains: Confrontation and competition between U.S. and China; interdependency of U.S. and China

Context

- U.S.-China Foreign Ministers' meeting in March at Alaska.

Background:

Increasing clout of China:

- China will surpass the U.S. as the world's largest economy, has established a worldwide network of economic ties and set up multilateral and financial institutions like the Shanghai Cooperation Organisation, New Development Bank and Asian Infrastructure Investment Bank to compete with the West-dominated International Monetary Fund and World Bank.
- It has been successful in countering American increases in military funding by expanding its own military power.
 - * According to International Institute for Strategic Studies, the overall estimate of China's military budget is at \$230 billion. China's defence spending has in recent years

evolved to reflect its military might and to close the gap with the United States.

- With China's rise and increase in budget spending, it may not be in a position to surpass the United States in its military prowess, but it is focusing on an agenda which is to aggressively build a parallel economic order envisaging new centres of hegemonic power.
- China has extended its influence globally. Some of the U.S.'s formal allies have re-shaped their foreign and economic relations with China deepening their own bilateral relationship with China.
- The primary geopolitical rivals of the US, namely Russia and China may possibly provide the strategic and tactical counterbalance to the hegemony of America.

Downslide in the U.S.'s geo-political clout:

- America in all likelihood will continue to play a prime role in international affairs though its image representing universal brotherhood had sharply declined during the Trump regime, particularly his foreign policy of threatening to withdraw from the North Atlantic Treaty Organization (NATO) and withdrawing from the Paris Agreement on climate change.
- Other threats such as terrorism, ethnic conflicts and the warning of annihilation owing to climate change necessarily demand joint international action where American "exceptionalism" is inconsistent with global plans.
- This indeed has chipped away the American global supremacy.

Confrontation and competition between U.S. and China:

- The rising U.S.-China tension may be attributed to China's rise that is transforming power settings and the U.S.'s attempts to constrict China before it becomes a peer competitor.
- Former U.S. President Donald Trump had accused China of unfair trade practices and pursued a dual policy of offering deals and threatening sanctions.
- The current U.S. President, Joe Biden has censured China for human rights abuses in Hong Kong and Xinjiang, aggression in the South and East China Seas, intimidation of Taiwan, intellectual property theft, currency manipulation, and cyberattacks.
- The U.S. and Europe have imposed sanctions against China and others.

Details:

- The beginning of the Alaska meeting between the foreign ministers was marked by a war of words between the representatives of the two countries.

- * The U.S. Secretary of State, Antony Blinken, blamed China of attacks on global values; posing threats to a rules-based order that maintains global stability and economic coercion against U.S. allies.
- * China countered by strongly opposing U.S.'s interference in China's internal affairs, and asked U.S. to introspect on its own track record of the poor treatment of minorities, and criticised U.S. policies seeking military and financial hegemony.

Interdependency:

- Confrontation and competition between the U.S. and China will dominate this century.
- Despite the constant war of words between the U.S. and China, interdependence between the two super powers makes the war of words confined to rhetoric.

Economic interdependency:

- Both countries need each other for economic growth, supply chains, jobs, services, investments and market access.

Strategic dependency:

- Despite the confrontation and competition between the two countries, the Americans require the Chinese to work together on issues like climate change, COVID-19, Asia-Pacific Economic Cooperation and G-20, health, cyber-security, the Iran nuclear issue, Afghanistan, Korea and Myanmar.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

15. Iran Nuclear issue

- » Prelims: JCPOA
- » Mains: Significance of reviving the nuclear deal; challenges

Context

- Vienna talks as part of the efforts to revive the Joint Comprehensive Plan of Action (JCPOA).

Details:

- The Vienna talks between China, Russia, the U.K., France, Germany and Iran, have raised hopes for the revival of the agreement.
- The participation of an American delegation is a significant development in this regard.

U.S.'s outreach:

- The Biden administration has displayed flexibility in its approach towards Iran. The President appointed a special envoy, ended the U.S.'s support for Saudi Arabia's war against the

Houthi, Iran-backed militants, in Yemen and promised to lift sanctions if Tehran returns to the JCPOA terms.

- The U.S. administration has also reportedly made an offer to Iran to release \$1 billion of Iranian money frozen in South Korea as part of the sanctions in exchange for ending its 20% uranium enrichment.

Challenges:

- Though all parties agree that bringing the deal back on track is ideal, there are several challenges which need to be addressed first.

Iran's enhanced nuclear programme:

- Iran has lately unveiled some latest developments in domestic centrifuge technology which could enable it to enrich larger quantities of uranium at much higher speeds. This development could disrupt the ongoing negotiations.

American sanctions:

- Notably though the new U.S. administration under President Joe Biden has signalled its willingness to return to a nuclear deal with Iran, it has continued to enforce the sanctions imposed by the previous U.S. President Donald Trump.
- This has not been taken well by the Iranians.

Deadlock in negotiations:

- The U.S. wants Iran to end its uranium enrichment and centrifuge development programmes and return to the 2015 agreement, while Tehran has demanded the U.S. to first lift all sanctions imposed on it.

Domestic pressures:

- Iran holds its presidential polls in June 2021.
- The best possibility of reviving the JCPOA is before the presidential election in Iran given the possibility of election of a more conservative candidate for Iranian Presidentship. The current President Mr. Rouhani who is considered a moderate is more likely to agree to a negotiated revival of the nuclear agreement.

External dangers:

- Iran-backed Shia militias in Iraq continue to target U.S. forces and bases in Iraq.
- The Israel-Iran shadow conflict is now being fought inside Syria and on the seas.
- If security tensions rise in the region involving Iran and its proxies, it could derail the diplomatic efforts.

Conclusion:

- The U.S.'s best chance to address Iran's nuclear programme is through the revival of the JCPOA.
- The U.S. and Iran should exercise restraint, stay focused on talks and rebuild the lost trust, and take measures to get the deal back on track to

resolve the nuclear crisis before time runs out

International Relations: Effect of policies and politics of developed and developing countries on India's interests

16. Enter the peace process

- » Prelims: Heart of Asia-Istanbul Process
- » Mains: India's stand on the Afghanistan issue; India's stake in the evolving situation

Heart of Asia-Istanbul Process (HoA-IP):

- It was founded in 2011 in Istanbul, Turkey.
- It provides a platform for sincere and results-oriented regional cooperation by placing Afghanistan at its centre.
- It was established to address the shared challenges and interests of Afghanistan and its neighbours and regional partners.
- The Heart of Asia is comprised of 15 participating countries, 17 supporting countries, and 12 supporting regional and international organizations.

Context:

- At the Heart of Asia Ministerial Conference, Union Minister S Jaishankar said peaceful Afghanistan is the basis for peace and progress in the region.

Dealing with the Taliban:

- In the 1990s and 2000s, India was vocal in its opposition to the Taliban regime.
- But its position seems to have evolved over the years. In 2018, when Russia hosted Afghan and Taliban talks, India had sent a diplomatic delegation to Moscow.
- In 2020, at the intra-Afghan peace talks in Doha, India reaffirmed the long-held Indian position that any peace process should be Afghan-led, Afghan-owned and Afghan-controlled.
- In the latest move at the Heart of Asia conference, India has been supportive of all efforts being made to "accelerate the dialogue" between the Afghan government and the Taliban.

Biden's Afghanistan plan:

- The Biden plan includes two key proposals.
- A unity transition government
 - * This would enable the Kabul government and the Taliban to push discussions around developing the country's future constitution, government and the terms of a ceasefire.
 - * The agreement includes a political roadmap for the creation of a transitional peace government, which shall exist temporarily until a new constitution and permanent government are formed.

- A UN-led multilateral conference
 - * This would include a meeting between foreign ministers of countries (including Russia, China, Pakistan, Iran, India and the US) to discuss a common approach towards supporting peace.
 - * This is an important move that will ensure that all the regional countries (and the US) are on the same page towards charting their respective political, economic and developmental contributions towards Afghanistan.
- India has supported the UN-led process, in an apparent climb-down from its earlier position, and now shown willingness to deal with the Taliban.

The evolution of India's position is in sync with the evolution of the reality in Afghanistan:

- The Taliban is no longer an untouchable force and controls much of Afghanistan's rural territories.
 - * The U.S. has already signed a deal with the Taliban, wherein American troops are scheduled to pull back from Afghanistan.
 - * China had long ago reached out to the Taliban.
 - * Russia has hosted talks between the two sides.
 - * European powers have also shown interest in sponsoring talks.
 - * So, India has to be more flexible and adapt to the new strategic reality.

India's Strategy in Afghanistan:

- Ever since the Government has controlled significant regions in Afghanistan and the country has witnessed a drop in the influence of the Taliban, India managed to increase its clout in the region by deepening the ties with the Afghan people and the government, with investments in multiple projects dealing with education, power generation, irrigation and other infrastructure development.
- Some of the initiatives include:
 - * The first batch of vaccines Afghanistan got was from India.
 - * India signed an agreement to build the Shahtoot dam near Kabul.

Inference:

- Thus, its economic, strategic and security ties could be disrupted if the Taliban were to take over.
- The question that bothers India and other stakeholders in the region is how to help Afghanistan end the violence without total submission to the Taliban.

Way forward:

- Afghanistan Government which is currently negotiating on weaker terms may get a stronger backing if India is actively engaged in talks.
- Therefore, India must use its regional influence as well as its deep ties with both the U.S. and Russia, strive for what Mr. Jaishankar called "double peace", both inside Afghanistan and in the region.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

17. ASEAN leaders urge Myanmar to end killings

- » Prelims: ASEAN
- » Mains: Working of ASEAN; its success in the regional economic growth and peace

Context:

- Emergency leaders summit between the leaders of the Association of Southeast Asian Nations (ASEAN) grouping and the Myanmar coup leader Min Aung Hlaing, in the Indonesian capital city of Jakarta.

Background:

Violence in Myanmar:

- Daily shootings by police and soldiers since the February 1 coup have killed more than 700 mostly peaceful protesters and bystanders, according to several estimates.
- Aung San Suu Kyi and many other political leaders have been detained.
- Amnesty International has urged ASEAN states to investigate Min Aung Hlaing over "credible allegations of responsibility for crimes against humanity in Myanmar."

Details:

- Expressing deep concerns over the violence in Myanmar, Southeast Asian leaders demanded an immediate end to killings and the release of political detainees in Myanmar.
- They also called for a dialogue between contending parties in Myanmar, with the aid of the bloc's envoys. ASEAN has urged the pursuance of dialogue, reconciliation and the return to normalcy in accordance with the will and interests of the people of Myanmar.

Unusually blunt stance by ASEAN:

- The messages conveyed by the group was unusually blunt and could be seen as a breach of the ASEAN's bedrock principle of non-interference in each other's domestic affairs.
- The grouping is known to adopt a non-confrontational approach to any issue and employs consensus based decision making.

Reasons for the unusual stance:

- The ASEAN leaders have argued that the policy of non-interference should not lead to inaction given that the domestic situation in Myanmar could jeopardize the peace, security, and stability of ASEAN and the region.
- There is international clamour for resolute action against Myanmar
- There is a tremendous expectation on the part of the international community on how ASEAN is addressing the Myanmar issue.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

18. Biden lifts Trump's sanctions on international court officials

- » Prelims: ICC- mandate and powers; Rome statute
- » Mains: Need for a rule based international order and multilateral organizations

Context:

- U.S. President Joe Biden has lifted sanctions imposed by previous President Donald Trump on two top officials of the International Criminal Court (ICC)

Background:

- ICC was probing alleged crimes by U.S. troops in Afghanistan.
- The U.S. sanctions had targeted ICC officials for pressing with investigations into the U.S. for alleged war crimes. The U.S. sanctions had specifically targeted ICC chief prosecutor Fatou Bensouda and the court's head of jurisdiction, Phakiso Mochochoko.
- Sanctions included travel ban, freeze on assets of the concerned individuals. The subsequent round of sanctions also made giving the pair "material support" a potentially sanctionable offence.
- The Trump administration was openly hostile to the tribunal for pursuing prosecutions of Americans for actions in Afghanistan and Israel for actions against the Palestinians.

Details:

- U.S. Secretary of State Antony Blinken has stressed that the U.S. still strongly disagreed with some actions by the court and has stressed that the concerned cases would be better addressed through diplomacy rather than through the imposition of sanctions.

Significance:

- The move marks the undoing of the past administration's aggressive moves targeting international institutions and officials.

- The removal of the sanctions is the latest signal that the Biden administration is intent on returning to the multilateral fold.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

19. BIMSTEC

- » Prelims: BIMSTEC- Composition
- » Mains: Achievements and missed opportunity with respect to BIMSTEC

Context:

- The foreign ministers of BIMSTEC (the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) met virtually on April 1, 2021.
 - * The last ministerial meeting was held in August 2018.
 - * Their major task was to pave the way for the next summit (the grouping's fifth) due to be held in Sri Lanka.

BIMSTEC:

- BIMSTEC was established as a grouping of four nations — India, Thailand, Bangladesh and Sri Lanka through the Bangkok Declaration of 1997 to promote rapid economic development.
- BIMSTEC was expanded later to include three more countries — Myanmar, Nepal and Bhutan.
- BIMSTEC moved at a leisurely pace during its first 20 years with only three summits held and a record of modest achievements.

Unfolding rejuvenation:

- The grouping suddenly received special attention as India chose to treat it as a more practical instrument for regional cooperation over a faltering SAARC.
- The BIMSTEC Leaders' Retreat, followed by their Outreach Summit with the BRICS leaders in Goa in October 2016, drew considerable international limelight to the low-profile regional grouping. This also opened up the path for its rejuvenation.
- The fourth leaders' summit, held in Kathmandu in 2018, devised an ambitious plan for institutional reform and renewal that would encompass economic and security cooperation. It took the important decision to craft a charter to provide BIMSTEC with a more formal and stronger foundation.
- The shared goal now is to head towards "a Peaceful, Prosperous and Sustainable Bay of Bengal Region".
- India's External Affairs Minister observed that India saw a mix of "energy, mindset and possibility" in BIMSTEC.

Recent decisions:

- The foreign ministers cleared the draft for the BIMSTEC charter, recommending its early adoption.
- They endorsed the rationalisation of sectors and sub-sectors of activity, with each member-state serving as a lead for the assigned areas of special interest.
- The ministers also conveyed their support for the Master Plan for Transport Connectivity.
 - * This will be adopted at the next summit.
- Preparations have been completed for the signing of three agreements relating to:
 - * Mutual legal assistance in criminal matters
 - * Cooperation between diplomatic academies
 - * Establishment of a technology transfer facility in Colombo.

Issue:

- On certain fronts, BIMSTEC remains a work in progress.
- A January 2018 study by the Federation of Indian Chambers of Commerce and Industry had suggested that BIMSTEC urgently needed a comprehensive Free Trade Agreement to be a real game-changer. Ideally, it should:
 - * Cover trade in goods, services and investment.
 - * Promote regulatory harmonisation.
 - * Adopt policies that develop regional value chains.
 - * Eliminate non-tariff barriers.
- An effort to enthuse and engage the vibrant business communities of these seven countries, and expand their dialogue, interactions and transactions is lacking.
- Over 20 rounds of negotiations to operationalise the BIMSTEC Free Trade Area Framework Agreement, signed in 2004, are yet to bear fruit.
- Uncertainties over SAARC hovers, complicating matters.
 - * Both Kathmandu and Colombo want the SAARC summit revived, even as they cooperate within BIMSTEC, with diluted zeal.
- China's decisive intrusion in the South-Southeast Asian space has cast dark shadows.
- The military coup in Myanmar, brutal crackdown of protesters and continuation of popular resistance resulting in a protracted impasse have produced a new set of challenges.

Achievements:

- Much has been achieved in Humanitarian Assistance and Disaster Relief and security, including counterterrorism, cybersecurity, and coastal security cooperation.
- India has led through constant focus and follow-up — to the extent that some member-states have complained about the over-securitisation of BIMSTEC.
- While national business chambers are yet to be optimally engaged with the BIMSTEC project, the academic and strategic community has shown ample enthusiasm through the BIMSTEC Network of Policy Think Tanks and other fora.

Way Forward:

- The trick to ensuring balance is not to go slow on security but to accelerate the pace of forging solid arrangements for economic cooperation.
- The goal now should be to overcome the obstacles leading to BIMSTEC's success.
- The trajectory of India-Nepal, India-Sri Lanka, and Bangladesh-Myanmar ties in recent years is an impediment to the grouping. A strong BIMSTEC needs cordial and tension-free bilateral relations among all its member-states.

Miscellaneous**20. Raisina dialogue**

- » Prelims: Raisina dialogue
- » Mains: India's HADR initiatives

Context:

- India's External Affairs Minister's comments at Raisina Dialogue.

Raisina Dialogue:

- This is an annual geopolitical event, hosted by the Ministry of External Affairs and Observer Research Foundation (ORF).
- It is designed to explore prospects and opportunities for Asian integration as well as Asia's integration with the larger world.
- Every year, leaders in politics, business, media, and civil society converge in New Delhi to discuss the state of the world and explore opportunities for cooperation on a wide range of contemporary matters.
- The Dialogue is structured as a multi-stakeholder, cross-sectoral discussion.

Important observations:

- India has been the first responder on a number of crisis situations in the neighbourhood and beyond and the response to the pandemic is part of that same chain of initiatives.
- In terms of humanitarian assistance, whether

it was an earthquake in Nepal, or a civil war in Yemen, or a cyclone in Mozambique, or a typhoon in Fiji, or a mudslide in Sri Lanka, or whether it is taking the Paris agenda forward through initiatives like the International Solar Alliance, or how to respond collectively towards disaster resilience, India has been proactive in taking measures.

Miscellaneous**21. Boao Forum for Asia**

- » Prelims: Boao forum for Asia
- The Boao Forum for Asia is an initiative of some Asian countries and Australia and is a non-profit organisation that hosts high-level forums for leaders from government, business and academia in Asia and other continents to share their vision on the most pressing issues in the Indo-Pacific region and the world at large.
- The annual Boao Forum, is also known as China's Davos.

Military Exercises**22. Military exercise in Bangladesh**

- » Prelims: Shantir Ogrosena

Context:

- Multinational military exercise Shantir Ogrosena, underway in Bangladesh, concluded.

Details:

- The exercise saw participation by four countries, along with observers from the U.S., the U.K., Russia, Turkey, Saudi Arabia, Kuwait and Singapore.
- The aim of the exercise was to strengthen defence ties and enhance interoperability among neighbourhood countries to ensure effective peacekeeping operations.

International Relations: India's bilateral relations with U.S.**23. U.S.'s FONOP in Lakshadweep**

- » Prelims: UNCLOS; EEZ; straight baseline principle
- » Mains: Implications of the recent U.S. move; Recommendations for India's reaction

Context:

- U.S.'s freedom of navigation operation in India's Exclusive Economic Zone near Lakshadweep.

Background:**UNCLOS:**

- Under the UNCLOS (UN Convention on the Law of the Sea) there is a 12 nautical mile territorial sea, an additional 24 nautical miles as a contiguous zone where a country can have some law and order, policing etc., and a 200 nautical mile Exclusive Economic Zone (EEZ) which a country is free to exploit the natural resources like fisheries or sea-bed mining but cannot exercise territorial rights.

FONOP controversy:

- On April 7, the U.S.'s 7th Fleet Destroyer, the USS John Paul Jones, conducted a 'Freedom of Navigation Operation' 130 nautical miles west of the Lakshadweep Islands inside India's Exclusive Economic Zone (EEZ).
- his exercise was conducted without requesting India's consent as required by Indian laws.
- While India protested against the U.S. move, the U.S. has argued that it conducted the "freedom of navigation operation" (FONOP) to challenge what it has termed as India's excessive maritime claims.
- The two countries have expressed two different positions on the issue.
 - * While the U.S. has asserted that India's requirement of prior consent is "inconsistent with international law", India has asserted that the UN Convention on the Law of the Sea (UNCLOS) "does not authorize other States to carry out in the Exclusive Economic Zone and on the continental shelf, military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal state".

Points of differences:**Prior notification:**

- Military ships of other countries can go through even territorial waters of claimant countries on what is called innocent passage.
- However, India insists on prior notification for passage of military ships not only for its territorial waters but even in its EEZ.

Straight baseline issue:

- In Lakshadweep, there is another complicated issue called Straight Baselines, which allows countries to claim a larger area of water around an island group.
- UNCLOS does not permit continental states like India to claim Straight Baselines, but only archipelago states like Indonesia or the Philippines.
- The U.S. has challenged the use of straight baselines by India in the Lakshadweep islands.

U.S.'s hypocrisy:

- The U.S. has itself not ratified UNCLOS.

Legal position of India's stand:**UNCLOS law:**

- UNCLOS binds all its signatories and customary international law binds all states, subject to exceptions like the doctrine of persistent objector.
- As per the UNCLOS, EEZ is an area adjacent to the territorial waters of a coastal state where the sovereign coastal state has rights and duties relating to management of natural resources; establishment and use of artificial islands, installations and structures; marine scientific research; and protection of the marine environment.

Freedom of navigation:

- Article 58 (1) provides that in the EEZ, all States enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in Article 87 of navigation and overflight and of the laying of submarine cables and pipelines as well as other internationally lawful uses of the sea.
- Article 87 provides for freedom of the high seas under which all states have the freedom of navigation.

Regulation:

- Despite the freedoms conferred by Article 87 of UNCLOS, it is to be noted that the freedom of navigation is subject to the conditions laid down under the UNCLOS and other rules of international law.
- Notably, Article 58 (3) notes that "In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State..."

India's 1995 declaration:

- The Indian law - Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones of India Act, 1976 under Section 7 sub-section 9 of recognises the freedom of navigation of the ships of all States but makes them subject to the exercise of rights by India within the zone.
- India in its declaration in 1995 noted that its understanding of the provisions of the Convention is that it does not authorize other States to carry out in the exclusive economic zone and on the continental shelf military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal State.

- It is important to note the legal effect of such declarations. Article 310 of the UNCLOS does permit states to make declarations in order to explain the relationship between the Convention and their own laws, but such declarations should not “purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State”.

India's argument:

- A conjoint reading of Articles 58, 87 and 310 of the UNCLOS, makes it clear that freedom of navigation cannot be read in an absolute and isolated manner.
- Also given that non-consensual military activities hinder the lawful enjoyment of EEZ rights of the concerned country and that military exercises and manoeuvres pose a risk to its coastal communities, its installations or artificial islands, as well as the marine environment, any state which wishes to conduct such exercises must do so only in consultation with the coastal state.
- Any state which wishes to conduct military exercises in an exclusive economic zone must first consult the coastal state.

Implications:

On bilateral relations:

- The India U.S. bilateral relations have been on the upswing in recent times, especially in the defence domain.
 - * For several years now, the relationship of the U.S. and India has been marked by their sensitivity to each other's concerns as they deepened cooperation on strategic issues, and aligned positions on multilateral issues.
 - * The Indo-Pacific policy under President Trump with increased emphasis on the relationship with India, the deepening of the Quad engagement, deepening defence relationship and the conclusion of India-US defence agreements all point to the evolving strategic relationship between the two countries
- The change in the Presidency of the U.S. which was expected to alter India and U.S. bilateral dynamism has not happened. There have been high level visits from the U.S. administration to India.
- However, the recent controversy surrounding the U.S.'s FONOP threatens to adversely impact the bilateral relation between the two countries.

- The Indian government is said to have expressed its “concerns” to the U.S. government through diplomatic channels. In addition, India contested the U.S. claim about international law, saying that UNCLOS did not authorise military manoeuvres on the continental shelf or EEZ, as the 7th fleet had carried out, without prior consent.

On Quad grouping:

- The recent development does not augur well for the Quad grouping.
- The Quad advocates a rules-based order for the region. The latest FONOP controversy underlines the fact that both countries have huge differences when it comes to what a “rules-based order” means for the region.
- The difference in understanding of the UNCLOS provisions among the Quad member states of India and India might lead to weakening of the Quad grouping.

Encourage similar moves by other countries:

- The other future scenario to consider is that other countries like the Pakistan may consider similar moves by sending a ship through India's EEZ, or the Chinese and Pakistanis may carry out a joint exercise there.
 - * Notably, in a recent development, a Chinese surveillance which came near the Andamans, was allegedly chased away by the Indian Navy.

Way forward for India:

- While the matter has been disposed of diplomatically for the moment, it is clear that India must prepare to grapple with the issue with the U.S. in the long term.
- India will have to deal with the open challenge the U.S. has posed to its maritime claims in the following ways.

Clarifying India's claim:

- India must clearly explain its own position, making it clear to all partners how the Indian law governing maritime claims is in line with international law.

Understanding U.S. motivations:

- India must analyse the U.S.'s motivations for this move, and chart out a course accordingly. The U.S. naval actions maybe a message to China, whose maritime claims are increasingly coming into conflict with those of the U.S. and its allies.

Leveraging India's position in Indian Ocean:

- India must try to leverage the U.S.'s push for Quad partnership, especially in its attempts to contain China and question the U.S. on how the proposed collaboration on the Quad platform for keeping a "free and open Indo-Pacific", can co-exist with the open challenge the U.S. Navy has posed to India's maritime claims.

ART AND CULTURE

Art and Culture - Architecture

1. Lingaraj Temple

- » Prelims: Kalinga style of architecture: Features, Important personalities
- » Mains: Regional styles of temple architecture
- Lingaraj temple at Bhubaneswar in Odisha is an 11th-century temple.
- It is a symbol of Kalinga style architecture built in red stone.
 - * Odisha temples are a distinct sub-style of the Nagara style called Kalinga Style.
- The temple is built in the Deula style that has four components namely, vimana (structure containing the sanctum), jagamohana (assembly hall), natamandira (festival hall) and bhoga-mandapa (hall of offerings), each increasing in height compared to its predecessor.
- The temple was built by King Jajati Keshari, who belonged to Soma Vansh.
- The central deity of the temple, Lingaraja, is worshipped both as Shiva and Vishnu.
 - * The harmony between the two sects of Hinduism, Shaivism, and Vaishnavism, is seen in this temple where the deity is worshipped as Harihara, a combined form of Vishnu and Shiva.

Art and Culture - Architecture

2. Khajuraho temples

- » Prelims: Khajuraho temples: Features; UNESCO world heritage sites in India
- The Khajuraho Group of Monuments are a group of Hindu temples and Jain temples in Madhya Pradesh
 - * The Khajuraho group of temples were built together but were dedicated to two religions, Hinduism and Jainism, suggesting a tradition of acceptance and respect for diverse religious views among Hindus and Jains in the region

- Most Khajuraho temples were built by the Chandela dynasty
- They are a UNESCO World Heritage Site
- The temples are famous for their nagara-style architectural symbolism
- The common date palm - khajura - has given Khajuraho its name
- Some of the most prominent temples here are KandariyaMahadev Temple, Chaunsat Yogini Temple, Brahma Temple, Chitragupta Temple, Devi Jagdamba Temple, Lakshmana Temple, Matangeshwar Temple and Parsvanath Temple.

Art and Culture - Awards

3. Dadasaheb Phalke Award

- » Prelims: Dadasaheb Phalke award

Context:

- The Centre announced the prestigious Dadasaheb Phalke Award for Rajinikanth for his contribution as an actor, producer and screenwriter.

Dadasaheb Phalke Award:

- Instituted in 1969, the award is the highest honour for an artist in Indian cinema.
- The Award is a part of the 'National Film Awards'.
- It is presented annually by the 'Ministry of Information and Broadcasting'.
- The award is presented by the President of India.
- The first recipient of the award was Devika Rani Roerich.
- It consists of a 'Swarna Kamal' (Golden Lotus), a cash prize of Rs 10 lakh, a certificate, a silk roll, and a shawl.

Note:

- Dhundiraj Govind Phalke is the pioneering filmmaker who gave India its first film, 'Raja Harishchandra', in 1913. The Award is named after him.

SCIENCE AND TECHNOLOGY

Awareness in the field of Space

1. Discovery of new quasars

- » Prelims: Quasars; gravitational lensing effect

Context

- Astronomers have discovered a dozen quasars.

Quasars:

- Quasars are extremely luminous cores of distant galaxies that are powered by supermassive black holes.
- The Quasars are warped by a naturally occurring cosmic "lens" and are observed as being split into four similar images. Hence they are termed as "quadruply imaged quasars" or quads for short.

Significance of the finding:

- This discovery increases the number of known quasars or quads by about 25% and can help determine the expansion rate of the universe and address other unanswered questions regarding the birth and evolution of the universe.

Awareness in the field of Space

2. ARIES facility will host the support centre for Aditya-L1

- » Prelims: Aditya mission- Objectives; Lagrangian point 1; Coronal Mass Ejection (CMEs) and sunspots
- » Mains: India's space programme; significance of study of sun

Background:

Aditya-L1 mission:

Mission objective:

- The Indian programme Aditya-L1 aims to study the Sun and the region between the Sun and the Earth. It is due to be launched in 2022.
- Initially Aditya-1 was meant to observe only the solar corona.
 - * The outer layers of the Sun, extending to thousands of km above the disc (photosphere) is termed as the corona. It has a temperature of more than a million degree Kelvin which is much higher than the solar disc temperature of around 6000K. How the corona gets heated to such high temperatures is still an unanswered question in solar physics.
- However, later the scope of the project was enhanced and the satellite now carries additional six payloads with enhanced science scope and

objectives.

- * Aditya-L1 with additional experiments can now provide observations of Sun's Corona, Chromosphere and photosphere.

- In addition, particle payloads will study the particle flux emanating from the Sun and reaching the L1 orbit, and the magnetometer payload will measure the variation in magnetic field strength at the halo orbit around L1.

Satellite placement:

- The Satellite would be placed in the halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth system, which is 1.5 million km from the Earth. The major advantage of such a placement is that it would allow the satellite to continuously view the Sun without any occultation/ eclipses.

Significance:

- Aditya-L1 mission provides an opportunity to solar scientists from multiple institutions within the country to participate in space based instrumentation and observations.
- The enhanced Aditya-L1 project will enable a comprehensive understanding of the dynamical processes of the sun. It will enable the understanding of the long-term evolution of the dynamic processes and underlying physical mechanisms responsible for them.
- The Mission will enable the availability of a detailed compendium of the location and duration of different features on the solar surface such as coronal holes, prominences, flares, Coronal Mass Ejection (CMEs) and sunspots. Continuous monitoring of the location and duration of these features will help in monitoring the Earth directed CMEs and thereby, the space weather.

Details:

- The ARIES facility (short for Aryabhata Research Institute for observational Sciences), situated near Nainital, will provide the ground support centre to monitor and coordinate the work on the various payloads of the Aditya-L1 mission.

Significance:

- ARIES plans to allow every interested individual to be able to perform scientific analysis of the data procured by the Aditya-L1 mission.
 - * Researchers who may not even be associated with core Aditya-L1 team will be able to book a specific payload to conduct observations for a particular time. This will enable every researcher in India perform analysis over scientific data obtained from Aditya-L1.

- The Aditya-L1 Support Centre (ASC) will also provide training through regular workshops for the guest users.
- The collaboration with ARIES will not only expand the visibility of Aditya-L1 within India, it will also ensure the reach of Aditya-L1 reaches beyond India at the international level.

Awareness in the field of Space

3. A space for science, experiments and unity

- » Prelims: ISS related facts
- » Mains: Significance of ISS

Context:

- Russian space agency Roscosmos's chief has declared that Russia is ready to build its own space station and launch it by 2030.
- Further, Russian Deputy Prime minister has also said that Russia would leave the International Space Station (ISS) by 2025.

International Space Station (ISS):

International collaboration:

- The International Space Station (ISS) is a landmark of international cooperation in the realm of space
- For over 20 years, it has seen intense collaboration between the NASA (U.S.), Roscosmos (Russia), ESA (Europe), JAXA (Japan) and CSA (Canada), and has played host to people from 19 countries since its launch in 1998.
- Ever since November 2, 2000, the ISS has seen the steady presence of human beings.

Features:

- The ISS, at a height of about 402 km above the Earth, orbits it 16 times every day, once every 90 minutes. It has a speed of 28,000 km per hour.

Scientific studies:

- The space station will permit quantum leaps in human research in science, communications, and in metals and lifesaving medicines which could be manufactured only in space.
- The following studies have been undertaken so far.

Biological:

- The first experiments on the ISS studied the dynamics of cells under microgravity.
- Some of the experiments being conducted by the latest expeditions include a study of how muscles work under long-term stay under low-gravity conditions. This experiment observes biochemical properties of muscles under long-term exposure to spaceflight. This can help in developing rehabilitation both on Earth and in Space.

Material:

- An important experiment mimics the way geckos attach themselves to surfaces, using an adhesive that has been shown to work in space. This can help devise methods for robots to attach themselves to surfaces and then to detach just the way geckos do.

Physics experiments:

- Some of the early physical sciences experiments related to crystal growth.
- Current studies involve research into Janus particles, or particles that have two 'faces' with distinct properties — one side is hydrophobic, while the other is hydrophilic. Studying these in microgravity reveals the fundamental physics behind microparticle self-assembly and the kinds of colloidal structures that can be fabricated.

Awareness in the field of Space.

4. MOXIE

- » Prelims: MOXIE
- » Mains: Significance of oxygen production on Mars

Context:

- NASA has extracted oxygen from the carbon dioxide present in the thin Martian atmosphere.
 - * The Martian atmosphere is about 95% carbon dioxide

Details:

- The unprecedented extraction of oxygen on Mars, marking the first extraction of a natural resource from the environment of another planet, was achieved by a device called MOXIE aboard Perseverance rover of NASA.
 - * MOXIE is short for Mars Oxygen In-Situ Resource Utilization Experiment.
- The device extracted carbon dioxide from the atmosphere on Mars and then electrochemically split oxygen atoms from carbon dioxide molecules. The conversion process requires high levels of heat to reach a temperature of approximately 1,470 degrees Fahrenheit (800 Celsius).
- The device was able to produce about 5 grams of oxygen, equivalent to roughly 10 minutes' worth of breathing for an astronaut.

Significance:

- This breakthrough could allow for longer human stays on future manned missions to Mars.
- It would also enable the space agencies to design lighter launch vehicles with lower payload capacities given that future missions could prepare the required oxygen for the return journey in situ on Mars.

Awareness in the field of Space

5. Mini black hole

- » Prelims: Unicorn blackhole; V723 Mon
- Scientists have discovered what may be the smallest-known black hole in the Milky Way galaxy and the closest to our solar system.
- Nicknamed 'Unicorn' the black hole is roughly three times the mass of the Sun.
- A luminous red giant star orbits with the black hole in a so-called binary star system named V723 Mon.

Awareness in the field of Space

6. China eyes asteroid defence

- » Prelims: AIDA; International lunar research station.
- China is considering building a defence system against near-earth asteroids, as part of its efforts towards realising its longer term space ambitions.
- China signed a memorandum of understanding in March 2021 with Russia to set up an international lunar research station.

AIDA:

- The European space agency has signed a deal with NASA for a joint project looking at how to deflect an asteroid heading for earth.
- This combined endeavour is known as the Asteroid Impact Deflection Assessment, or AIDA for short. Its purpose is to deflect the orbit of the smaller body of the double Didymos asteroids between Earth and Mars through an impact by one spacecraft. Then a second spacecraft will survey the crash site and gather the maximum possible data on the effect of this collision.
 - * NASA's contribution to AIDA, the Double Asteroid Impact Test, or DART spacecraft, is already under construction for launch in summer 2021, to collide with its target at 6.6 km/s in September 2022. Flying along with DART will be an Italian-made miniature CubeSat called LICIAcube (Light Italian CubeSat for Imaging of Asteroids) to record the moment of impact.
 - * Then will come ESA's part of AIDA, a mission called Hera which will perform a close-up survey of the post-impact asteroid, acquiring measurements such as the asteroid's mass and detailed crater shape. Hera will also deploy a pair of CubeSats for close-up asteroid surveys and the very first radar probe of an asteroid.

Awareness in the field of Space

7. China launches key module for its permanent space station

- » Prelims: Tiangong

Context:

- China has launched the main module of its first permanent space station that will host astronauts for the long term.

Details:

- The Tianhe, or the "Heavenly Harmony" module, was launched atop a Long March 5B rocket.
- The launch kicks off the first of 11 missions necessary to complete, supply and crew the station by the end of 2022.

Tiangong:

- The Space Station China is building is called Tiangong which means "Heavenly Space".
- The size of Tiangong Space Station will be a quarter the size of the International Space Station, and has a lifespan of fifteen years.

China's space programme:

- China's space programme recently brought back the first new lunar samples in more than 40 years and it also expects to land a probe and rover on the surface of Mars shortly.

Awareness in the field of Space

8. NASA Mars helicopter makes first flight on another planet

- » Prelims: Ingenuity

Context:

- NASA successfully flew its helicopter "Ingenuity" on Mars.

Details:

- Ingenuity, nicknamed Ginny, is a robotic rotorcraft that is planned to be used to test the technology to scout targets of interest on Mars, and help plan the best driving route for future Mars rovers.
- The challenge that ingenuity will be facing is that it will be attempting to fly in an atmosphere that is one percent the density of Earth's, which makes achieving lift harder. However, notably the ingenuity will be assisted by gravity that is one-third of Earth's.
- Ingenuity's flight is the first powered flight on another planet.
- Ingenuity travelled to Mars attached to the underside of Perseverance, which touched down on Mars on February 18, 2021.

- * Perseverance is on a mission to search for signs of extra-terrestrial life.
- It has a wireless communication system, and is equipped with computers, navigation sensors, and two cameras. It is solar-powered, able to charge on its own.

Science and Technology- Achievements of Indians in science and technology; indigenization of technology and developing new technology

9. DRDO develops crystal blades for aero engines

- » Prelims: Grain boundary and associated characteristics; Single crystal technology
- » Mains: Significance of the technological breakthrough

Context:

- The Defence Research and Development Organisation (DRDO) has developed single crystal blade technology.

Background:

Grain boundary:

- During normal casting of metal components, the metal while solidifying forms grains. Each grain has a different orientation of its crystal lattice from its neighbours.
- A grain boundary is the interface between two grains, or crystallites, in a polycrystalline material.
- The grain boundaries are characterized by increased chemical activity, slippage under stress loading, and the formation of voids. These conditions can lead to creep, the tendency of blade material to deform at a temperature-dependent rate under stresses well below the yield strength of the material.
- Corrosion and cracks also start at grain boundaries. Thus grain boundaries greatly shorten turbine vane and blade life, and require lowered turbine temperatures with a concurrent decrease in engine performance.

Single crystal technology:

- To offset the limitations imposed by grain boundaries in poly crystalline materials, metallurgists have sought to eliminate grain boundaries from turbine airfoils altogether, by inventing techniques to cast single-crystal turbine blades and vanes, and design alloys to be used exclusively in single-crystal form.
- By eliminating grain boundaries, single-crystal airfoils have longer thermal and fatigue life, are more corrosion resistant and can also be cast with thinner walls.

Details:

- The single crystal high pressure turbine (HPT) blades were manufactured using a nickel-based super alloy.

- The work was part of a programme taken up by the Defence Metallurgical Research Laboratory (DMRL), a laboratory of the DRDO.

Significance:

Technological breakthrough for India:

- This development marks a major technological breakthrough. Very few countries such as the U.S., the U.K., France and Russia have the capability to design and manufacture such single crystal components.

Impetus to indigenous defence production:

- The single crystal technology is a critical component in aero engines.
- Helicopters need compact and powerful aero-engines for operating at extreme conditions and to achieve this, state-of-the-art single crystal blades having complex shape and geometry, manufactured out of nickel-based super alloys capable of withstanding high temperatures of operation are used.
- DRDO has supplied 60 such single crystal blades to the Hindustan Aeronautics Limited (HAL) as part of their indigenous helicopter development programme for helicopter engine application.

Awareness in the field of physics

10. Hints of 'new physics' from Fermilab

- » Prelims: 'muon g-2' experiment; Quantum effects

Context:

- Fermilab, housing the American particle accelerator, has released the first results from its 'muon g-2' experiment.

Details:

- These results spotlight the anomalous behaviour of the elementary particle called the muon.
 - * The muon is considered as a heavier cousin of the electron.
- The results from the study seem to signify the fact that there are new particles in the environment that the Standard Model does not account for.
- This observation together with the recently observed anomaly at CERN indicates that the effects of new yet unobserved particles and forces is being seen as quantum effects.

Awareness in the field of physics

11. Bose-Einstein condensate

- » Prelims: Bose-Einstein condensation (BEC)
- » Mains: Quantum communication
- Bose-Einstein condensation (BEC)—the macroscopic ground-state accumulation of particles with integer spin (bosons) at low

temperature and high density—has been observed in several physical systems, including cold atomic gases and solid-state quasi particles.

- The optical Bose-Einstein condensate, is conceived as one large ‘super photon’ made up of many light particles.
- A new study has reported a hitherto unknown phase transition in an optical Bose-Einstein condensate called the overdamped phase. This study may be relevant for encrypted quantum communication.

Issues relating to Intellectual property rights

12. Scaling up vaccine production

» Prelims: Compulsory licensing

Context:

- The second wave of COVID-19 infections in India and the reports of scarcity of COVID-19 vaccines and drugs in India.

Details:

- According to the Observer Research Foundation, till the end of March, India had produced 316 million doses of Covishield and Covaxin — the two COVID-19 vaccines in use in India.
- The issue of vaccine shortage may not be due to low vaccine production potential. Perhaps, the problem has more to do with centralised procurement, distribution, and coordination with different State governments and local authorities.
- As India aims to inoculate more and more people it is imperative to ramp up vaccine production. Serum Institute of India (SII), which manufactures Covishield, has said that it can produce 100 million doses a month, up from the 50 million doses, provided it can scale up its manufacturing capacity.

Means to ramp up vaccine production:

- There are several legal means that the government should employ to scale up production of COVID-19 vaccines
- These legal means can be divided into the non-intellectual property-(IP)-based and IP-based options.

Non-IP-based solutions:

- The government can direct pharmaceutical companies to loan their manufacturing capacity to the existing COVID-19 manufacturers like the SII and Bharat Biotech to boost their manufacturing capability so that more COVID-19 vaccine vials can be produced.

Supporting legal provisions:

- Section 2 of the Epidemic Diseases Act of 1897 empowers the government, to take measures

that it may deem necessary to prevent the outbreak or its spread.

- Section 26B of the Drugs and Cosmetics Act, 1940, empowers the Central government to regulate the sale, manufacture, and distribution of a drug that is essential to meet the requirements of an emergency arising due to an epidemic.

IP-based solutions:

- The Central government can licence specific companies to manufacture the COVID-19 vaccines.
- Another option available to the government, is to ensure that all COVID-19 vaccine projects that are funded by the taxpayer's money should not claim IP rights in the first place or if patents are granted, they should not be enforced.

Supporting legal provisions:

- Under Section 100 of the Patents Act, 1970, the Central government has the power to authorise anyone to use any patents or patent applications for the “purposes of government”.
- The Section 92 of the Patents Act, allows the Central government to issue a compulsory licence (a licence issued to manufacture the patented product without the consent of the patent holder) in circumstances of national emergency or extreme urgency or in case of public non-commercial use.

Compulsory licensing:

- Compulsory License is a licence issued/ authorised by the government that allows the company or an individual seeking other's intellectual property to use it (making, using and selling a patented product or employing a patented process) without having to seek the consent of the owner/the right holder, by paying a predetermined fee for the license.
- Indian Patents Act 1970 and the Agreement on Trade-Related Aspects of Intellectual Property Rights deal with compulsory licensing.
- The application for a compulsory license can be made any time after 3 years from the date of sealing of a patent.
- As per Clause 92 of the Patent Act, compulsory licenses can also be issued suo motu by the Controller of Patents pursuant to a notification issued by the Central Government in cases of national emergency, extreme urgency, public non-commercial use.

Using public sector companies:

- The government needs to explore the production capabilities of the pharmaceutical companies in the public sector to build India's manufacturing competence.

Issues relating to Intellectual property rights

13. Intellectual Property Appellate Board

- » Prelims: IPAB
- » Mains: Lacunae in the envisaged system and concerns associated with the shutting down of the IPAB

Context:

- The Tribunal Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, has resulted in shutting down the Intellectual Property Appellate Board (IPAB).

Intellectual Property Appellate Board:

- The Intellectual Property Appellate Board (IPAB) was India's specialist tribunal for determining disputes relating to intellectual property (IP) rights.
- Historically, appeals from the Intellectual Property Office (IPO), rectification and revocation applications were heard by the various High Courts. However, the Patents (Amendment) Act of 2002 divested these powers from the High Courts and extended it to the IPAB.
- The IPAB was initially established under the Trade Marks Act of 1999, later its jurisdiction was extended to hear patent cases after the Patents (Amendment) Act of 2002.

Lacunae with respect to functioning of IPAB:

- The IPAB has been plagued by challenges ever since its inception.

Understaffed:

- It has remained perennially understaffed.
 - * It has functioned without a full time head for almost two years.
 - * The appointment of the technical member for patents, who brings the much-needed technical expertise that patent cases usually demand, was delayed.

Poorly funded:

- Not only was the IPAB understaffed, with its administrative staff often being on deputation, it was also grossly underfunded, which resulted in very poor infrastructure for it.
- The IPAB had sittings in five different cities, with just one chairperson who had to fly between them at times.

Less emphasis on patent side functions:

- The IPAB's jurisdiction of cases was split between trademarks, patents, copyright, and geographical indication, where the predominant business pertained to trademarks.
- The IPAB has not been performing its adjudicatory function on the patent side regularly due to administrative reasons.

- Though the patents side of the IPAB existed in theory since 2002, the Central government notified its functioning only in April 2007 after a rebuke from the Madras High Court.

Poor disposal rate:

- The disposal rate for patents at the IPAB was very poor.
- The patents bench saw a paltry disposal rate of about 20 patent cases a year. Nearly 70% of the patent cases filed were either pending at some stage or yet to be taken up for hearing. Going by this disposal rate, it would have taken another decade to dispose of the pending applications, leave alone the new ones.
 - * Notably, the tribunals were established with the primary aim of speedy disposal of cases by specialised experts.

Other issues:

- The IPAB has been the subject matter of judicial review before the various High Courts. These cases include a challenge to the constitutionality of the IPAB.
- One of the former chairpersons had publicly raised concerns regarding the judicial and institutional independence of the IPAB.

Concerns:

Impact on the innovation ecosystem:

- The functioning of the IPAB is critical for the innovation ecosystem.
- Every patent granted by the Patent Office is a potential subject matter in appeal before the IPAB. An unjustified patent grant at the Patent Office, by error or oversight, can only be corrected in appeal.
- Thus the shutting down of the IPAB adversely impacts the innovation ecosystem in India.

Missed opportunity:

- India has done relatively well with respect to legislation regarding patents. It has offered the world a host of TRIPS-compliant flexibilities in its statute.
 - * Retraction of product patents for pharmaceuticals and chemicals
 - * Anti-evergreening provisions
 - * Robust compulsory licensing regime
- The tenure of the IPAB will be remembered as a missed opportunity to develop the home-grown jurisprudence on patent law—case laws from the highest courts on how these provisions will be worked.

Issues relating to Intellectual property rights

14. Trade-Related Aspects of Intellectual Property Rights

- » Prelims: TRIPS; WTO; Compulsory licensing
- » Mains: Balancing IP rights with the right to equitable access to all.

Context:

- India and South Africa had submitted a joint petition to the WTO, requesting a temporary suspension of rules under the 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

TRIPS initiative:

- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international legal agreement between all the member nations of the World Trade Organization (WTO). It establishes minimum standards for the regulation by national governments of different forms of intellectual property (IP) as applied to nationals of other WTO member nations.
- TRIPS is administered by the WTO.

Details:

- A waiver was sought to the extent that the TRIPS rules impinged on the containment and treatment of COVID-19.
- Over the last few decades, intellectual property rules have served as a lethal barrier to the right to access healthcare.
- The request for the waiver has, since, found support from more than 100 nations.
- But a small group of states including the U.S., the European Union, the U.K. and Canada continue to block the move.
- Their reluctance comes despite these countries having already secured the majority of available vaccines, with the stocks that they hold far exceeding the amounts necessary to inoculate the whole of their populations.

Patent:

- A patent is an exclusive right to make, use and sell an inventive product or process, and is conferred by the state.
- Patent laws are usually justified on three distinct grounds:
 - * On the idea that people have something of a natural and moral right to claim control over their inventions.
 - * On the utilitarian premise that exclusive licenses promote invention and therefore benefit society as a whole.

- * On the belief that individuals must be allowed to benefit from the fruits of their labour and merit, that when a person toils to produce an object, the toil and the object become inseparable.

Issue:

- Each of the above justifications for patents has long been a matter of contest, especially in the application of claims of monopoly over pharmaceutical drugs and technologies.
- In India, the question of connecting the idea of promoting invention and offering exclusive rights over medicines on the one hand with the state's obligation of ensuring that every person has equal access to basic healthcare on the other has been a source of constant tension.

Evolution of IPR in India:

- The colonial-era laws that India inherited expressly allowed for pharmaceutical patents.
- But, in 1959, a committee chaired by Justice N. Rajagopala Ayyangar objected to this on ethical grounds.
- The Parliament put this into law through the Patents Act, 1970, that monopolies over pharmaceutical drugs be altogether removed, with protections offered only over claims to processes. This change in rule allowed generic manufacturers in India to grow. As a result, life-saving drugs were made available to people at more affordable prices.
- With the advent of the TRIPS agreement in 1995, and compelling signatories to introduce intellectual property laws, drugs that reduced AIDS deaths in developed nations were placed out of reach for the rest of the world.

Arguments against stricter IP regime:

- The idea that patents are the only means available to promote innovation has become something of a dogma.
- Two common arguments are made in favour of stricter IP regime, both of which have been refuted time and again.
 - * Unless corporations are rewarded for their inventions, they would be unable to recoup amounts invested by them in research and development.
 - * Without the right to monopolise production there will be no incentive to innovate.
- Proposals for a prize fund for medical research in place of patents could also help incentivize innovation.
- Given the excessive focus on profits the research is usually driven towards diseases that afflict people in the developed world.

Conclusion:

- Reports suggest that for most poor countries it would take until at least 2024 before widespread vaccination is achieved. Quick and efficient vaccination is the surest route to achieving global herd immunity against the virus.
- The temporary waiver of TRIPS provisions will allow countries to facilitate a free exchange of know-how and technology surrounding the production of vaccines.

Miscellaneous**15. ISRO to support projects of IIT-D**

- » Prelims: ISRO's RESPOND programme
- The Indian Space Research Organisation (ISRO) has announced that it will support eight joint research projects mooted by the Space Technology Cell (STC), IIT-Delhi.
- The ISRO will support the projects under its RESPOND programme.
- This move would strengthen the research collaboration between the two organisations to carry out focused research projects in the space technology domain with specific deliverables.
- Some of the envisaged projects include developing a system for drought and flood forecasting and understanding land-atmosphere interactions.

SECURITY AND DEFENCE

Cyber Security

1. Paris Call for Trust and Security in Cyberspace

- » Prelims: Paris Call for Trust and Security in Cyberspace.

Context

- Microsoft president calling on India and the U.S. to join the Paris Call for Trust and Security in Cyberspace.

Paris Call for Trust and Security in Cyberspace:

- The Paris Call for Trust and Security in Cyberspace has 75 countries on board to deal with new cybersecurity threats facing the world.
- The Paris Call for Trust and Security in Cyberspace is a nonbinding declaration.
- It calls for states, the private sector, and civil society organizations to work together to promote security in cyberspace, counter disinformation, and address new threats endangering citizens and infrastructure.

Details:

- Terming the recent spate of cyberattacks a wake-up call for tech companies as well as governments, he emphasised the need to train more professionals to cope with cyber threats.
- He emphasised the need for a global initiative to really accelerate all kinds of training to put more cybersecurity professionals in place.

Cyber Security

2. Cyber crime

- » Prelims: Indian Cyber Crime Coordination Centre (I4C); Cyber Volunteer Scheme
- » Mains: Citizen awareness regarding cyber crime and cyber security measures

Context:

- Survey conducted by online security solutions provider on cybercrime.

Key Findings:

- About 52% of adults do not know how to protect themselves from cybercrime.
- 59% of the adults in India had become victims of cybercrime in the past 12 months.
- Cybercrime victims collectively spent 1.3 billion hours trying to resolve these issues.
- Many fell victim to identity theft in the past 12 months and most are concerned about data privacy.

- 70% believe that remote work has made it much easier for hackers and cybercriminals to take advantage of people.

Cyber Security:

- Cyber security refers to preventing any form of unauthorized and malafide access to any of the electronic digital device.
- Cyber espionage, cyber attack, cyber terrorism and cyber warfare are various forms of Cyber-Crimes.

Additional Information:

Cyber Volunteer Scheme:

- It is the plan of the Ministry of Home Affairs to rope in around 500 persons to flag unlawful content on the Internet for "improvement in the cybercrime ecosystem of India".
- Its aim is to make citizens contribute to the fight against cybercrime in the country.
- It was launched by the Indian Cyber Crime Coordination Centre (I4C).

Indian Cyber Crime Coordination Centre:

- I4C was established in 2018 under the Ministry of Home Affairs to act as a nodal point at the national level in the fight against cybercrime.
- I4C has seven key components.
 - * National Cyber Crime Threat Analytics Unit,
 - * National Cyber Crime Reporting Portal,
 - * National Cyber Crime Training Centre,
 - * Cyber Crime Ecosystem Management Unit,
 - * National Cyber Crime Research and Innovation Centre,
 - * National Cyber Crime Forensic Laboratory Ecosystem and
 - * Platform for Joint Cyber Crime Investigation

Security Establishments - Police Force

3. Strengthening the process of choosing the police chief

- » Prelims: Prakash singh case on police reforms
- » Mains: Police reforms; recommendations

Context:

- Param Bir Singh has been removed as the Mumbai Police Commissioner. The removal has put the focus on the process of appointing and removing police chiefs.

Problems in Police Personnel Administration:

- Absence of any prescribed procedure in law about the appointment and the removal.
- The political executive in the state enjoys enormous discretion and wield unregulated power to select and appoint officers of their choice as the heads of their police forces and remove them when they are not found to be aligned with the Government.
- Lack of independent processes has led to appointment and removal the basis of which is questionable and even if the procedure has been laid, the proceedings are opaque.
- While the principles of democratic accountability necessitate the police chief to remain answerable to the elected government at all times, the moot reform issue is in ensuring the right balance between conditioning the government's legitimate role in appointing or removing the police chief with the need to safeguard the chief's operational autonomy.

Police Reforms:**Independent police oversight body:**

- Shifting the responsibility of appointment and removal from the government alone to a bipartisan, independent oversight body of which the government is one part.

Background:

- The National Police Commission (NPC) was appointed by the Government of India in 1977. This was the first commission appointed at the national level after independence.
- Since the power to appoint its head and to remove becomes highly important from the point of view of controlling the force, it had suggested that the head of the police force should be selected from a panel.
- This position was later reaffirmed by the Supreme Court of India in its judgment in 2006, in Prakash Singh.
- The SC in the past had issued directives to the State Government restraining their powers of appointment. It had directed the states to first consult the Union Public Service Commission to ensure that the entire selection process is not only transparent but also corruption-free.
- The Model Police Bill, 2015 places the responsibility with a multiparty State Police Board, also referred to as the State Security Commission (SSCs). Made up of government officials, the Leader of the Opposition as well as independent members from civil society, the board provides the additional safeguard of civilian oversight over the appointment process.

Gaps in SSCs:

- New police acts were created by a few states, some have made changes to existing acts and a few states have passed executive orders to establish SSCs but not a single state adheres to the balanced composition suggested by the SC.
- Some do not include the Leader of the Opposition; others neither include independent members nor follow an independent selection process of the members.
- In essence, the commissions remain dominated by the political executive.
- Moreover, in as many as 23 States, governments retain the sole discretion of appointing the police chief.
- Assam, Jharkhand, Karnataka, Meghalaya and Mizoram are the only States where, on paper, the SSC is given the responsibility of shortlisting candidates. Whether this process is followed in practice each time remains to be verified.

Appointment process:

- The second element critical to police reforms is instituting an independent and transparent selection and decision-making process around appointment and removal.
- On appointments, the Court and the Model Police Act require the UPSC/SSC to shortlist candidates on the basis of length of service, service record, and range of experience and a performance appraisal of the candidates over the past 10 years.
- Unanswered Questions
 - * What qualifies as a "good" range of experience?
 - * How is the integrity of a candidate measured during appraisals?
 - * What is the process required to be followed by the SSC in reviewing the suitability of candidates?
 - * Should not interviews with the candidates be considered as a requirement, for instance?

Removal:

- The NPC had required State governments to seek the approval of the State Security Commission before removing the police chief before the end of term.
- This important check was diluted under the Prakash Singh judgment that only requires governments to consult the SSC.
- Concerns
 - * Most States omit even this cursory step.
 - * Broad terms such as "on administrative grounds" or "in the public interest" continue

to be retained in police acts to justify the government's power to remove the police chief. Such terms remain liable to misuse.

Background:

- The Supreme Court has emphasised that "prima facie satisfaction of the government" alone is not a sufficient ground to justify removal from a tenure post in government.
- The rule of law requires such decisions to be for compelling reasons and based on verifiable material that can be objectively tested.

Way forward:

- To prevent politically motivated adverse actions, clear cut rules, regulations, specific benchmarks have to be integrated into decision-making processes, both on appointments and removals.
- The United Kingdom (UK) example can be adopted:
 - * The UK had passed the Police Reform and Social Responsibility Act, 2011, which introduced public confirmation hearings as an additional layer of check for the appointment of the heads of their police forces known as Chief Constables (outside of London city).
 - * Such steps can help ensure fairness in administrative decisions and need to be considered in our context as well in order to protect the political neutrality of the police.

Conclusion:

- Any further delay in implementing reforms in this area will continue to demoralise the police and cripple the rule of law.

Defence Related Issues

4. Joint Logistics Node

- » Prelims: Joint Logistics Node

Context:

- The Chief of Defence Staff (CDS) operationalized and dedicated to the Services 3rd Joint Logistics Node (JLN) in Mumbai.

Details:

- The third JLN was operationalised as part of measures to boost tri-service integration and resource optimisation.
- The JLN would enhance joint interoperability between the Services and go a long way in improving the logistics processes of the Armed Forces.
- According to a Defence Ministry statement, these JLN will provide integrated logistics cover to the armed forces for their small arms ammunition, rations, fuel, general stores, civil hired transport, aviation clothing, spares and also engineering

support in an effort to synergise their operational efforts.

- The initiative would accrue advantages in terms of saving of manpower, economise utilisation of resources, besides financial savings.

Background:

- JLN are an important step in logistics integration of the three services.
- The Joint Operations Division (JOD) under the aegis of Headquarters Integrated Defence Staff (Hq IDS) actively pursued and enabled establishment of the JLN as the first concrete step towards logistics integration of the Tri-Service.
- In January 2021, the JLN in Guwahati and Tri-Services, Andaman and Nicobar Command, Port Blair, were operationalised.

Miscellaneous

5. Nano Sniffer

- » Mains: Use of technology in fighting crime and terrorism

Context:

- Union Minister launched Nano Sniffer, a microsensor based explosive trace detector.

What is Nano Sniffer?

- Nano Sniffer is the world's first microsensor based Explosive Trace Detector (ETD) developed by Nano Sniff Technologies, an IIT Bombay incubated startup.
- Nano Sniffer can detect explosives in less than 10 seconds and it also identifies and categorizes explosives into different classes.
- It detects all classes of military, conventional and homemade explosives.
- Nano Sniffer gives visible & audible alerts with sunlight-readable colour display.
- Nano Sniffer is a 100% 'Made in India' product in terms of research, development & manufacturing. The core technology of Nano Sniffer is protected by patents in the U.S. & Europe.

Significance:

- Given the constant threats, which India faces due to geo-political realities, explosives & contraband detection has become a norm at high security locations like airports, railways & metro stations, hotels, malls, and other public places.
- Check points at such locations are incorporating advanced detection equipment for rapid scanning of people and baggage.
- Almost all these products for explosive detection are imported at a high cost leading to the loss of valuable foreign exchange by the country.

- Nano Sniffer is a perfect substitute for such products.
- This is significant because this affordable device will reduce India's dependency on imported explosive trace detector devices.

Internal security challenges - Left Wing Extremism

6. Sukma Naxal Attack

- » Mains: Concerns associated with the Maoists movement and the governmental efforts to counter the movement; Way forward for governmental action

Context:

- The Maoist's recently conducted an ambush and killed more than 20 paramilitary personnel in the Tarrem area in the Bijapur-Sukma district border in southern Chhattisgarh

Background:

Formation of CPI (Maoist):

- The CPI (Maoist) came into being after the merger of two of the strongest Naxalite groups — the Peoples' War Group (PWG) and the Maoist Communist Centre — in 2004.
 - * The PWG was formed in 1980 by Kondapalli Seetharamaiah from the splinter groups that had broken away from the Communist Party of India (Marxist-Leninist), led by general secretary Charu Mazumdar in the early 1970s.
 - * The MCC was founded by Kanai Chatterjee in 1975 and had strongholds in the Jharkhand forests.

Modus Operandi:

- The PWG had a sizeable following in the 1980s and 90s in undivided Andhra Pradesh as it had led mass agitations on various issues, including peasant wages and land struggles. The PWG graduated into a military force by forming guerrilla zones in northern Telangana, extending up to the Nallamalla forests.
- Anticipating state actions, a group from the PWG had already moved to present-day Chhattisgarh in the early 1990s and had formed mass organisations like the Dandakaranya Adivasi Kisan Mazdoor Sangathan (DAKMS) in the tribal areas in the southern part of Chhattisgarh. The armed cadres of the PWG also used the difficult terrain to build guerrilla zones.
- The Indian Maoists have sought refuge in remote forested areas which offer them the camouflage and difficult terrain to engage in guerrilla warfare and to seek support from tribal people living in areas that are either under-developed or have limited access to the institutions of the Indian state.

- The Maoists claim to have set up "janathana sarkars" — local government units in places such as the Abujmarh forested areas in southern Chhattisgarh.

Governmental measures:

- The Indian government has launched a military campaign against the guerrillas, while taking steps to cut their popular support in remote villages through developmental work and infrastructure building.

Pressure on the Maoists:

- The Maoists have been dealt a severe blow by incarcerations and "encounter" killings of senior leaders.
- The Maoists have been facing desertions due to surrenders by cadres to security forces in various States.
- The Maoists have also been at the end of strong attacks by paramilitary and police forces in areas such as the Andhra-Odisha border that is close to south Chhattisgarh, in Gadchiroli in Maharashtra and even as far as the western ghat forests in the tri-state junction between Kerala, Tamil Nadu and Karnataka.
- The constant pressure on the Maoists has not allowed them to build a workable organisation in new areas, and are being hemmed into what seems to be their last stronghold — South Bastar.

Concerns:

- Some of the major concerns associated with the Maoists movement and the governmental efforts to counter the movement are as follows:

Evolution as a military force:

- The CPI(Maoist) has evolved into a military force. By 2010, the Indian government already identified the Maoists as the "single biggest internal security challenge".

Attacks on security personnel:

- Maoist insurgents, despite facing desertions and counter-attacks, stick to armed struggle, continuing to target security personnel. The recent attack has raised the number of security forces killed in the Bastar region to more than 175 since the killing of 76 CRPF personnel in the Chintalnar attack in April 2010.

Ideology:

- The Indian Maoists have steadfastly held that violent armed struggle is a must in its aims to achieve a socialist revolution in India. The CPI (Maoist) rejects Indian democracy and electoral politics.
- The Maoists have refused to change their understanding of the nature of the Indian state and continue to insist on an armed struggle.

- The Maoists remain committed to militant insurgency even as they reject any call for recourse to peaceful agitations or to enter the democratic process to further their goal.
- The Maoist movement in India seems headed in the same direction that several violent and failed insurgencies, inspired by the Chinese revolution, went — from the Shining Path in Peru to the Communist Party of the Philippines.

Tribals caught in the crossfire:

- The Indian government's recourse to counter-mobilize tribals into armed resistance groups such as Salwa Judum was met by militant backlash by the Maoists that severely affected the tribal population.
- The Tribals have had to face both severe state repression as well as Maoist violence in the last decade.

Determination:

- Despite several reversals in the recent past, Maoists have time and again targeted security forces at will.
- They have been able to strike at security forces and indulge in indiscriminate killing from time to time.

Objectives:

- The demands made by the Maoists apart from a call for the formation of a 'people's government', also includes an armed struggle to overthrow the popularly elected governments. These are secessionist in nature, which no constitutionally elected establishment will ever concede to.

Tactics:

- The Maoists continue to operate from their forest hide outs, periodically targeting security forces. They also indulge in intoxicating the local populace with an anti-establishment propaganda.

Assistance being received by maoists:

- The Maoists continue to receive assistance in terms of weaponry from various sources.

Lack of an all out approach:

- What has worked to the Maoists advantage is the fact that many States cannot give undivided attention to the task of eradicating extremism. All that the Central and State governments often do to step up their operations is to deploy more policemen and pour in more money and improve technology, but this has an impact only for a short span of time.
- This focus seems to dissipate over time with an element of fatigue arising in the government's efforts.

Way forward:

Developmental push:

- Many experts have put forward the argument that rapid economic development of a region can help lure people away from extremist ideology and also help cut the popular support that the extremists receive from the local population.

Need for dedicated leadership at local levels:

- Andhra Pradesh, especially Srikakulam district is an apt example where a developmental push has helped address the challenge posed by naxals. A dedicated leadership at the district and grassroots levels had played a vital role in the district and there is the need to ensure similar approach in other naxal affected areas as well.

Inducting local into security forces:

- Inducting local youth into the security forces would help in fighting the extremists.
 - * The Greyhounds, raised in Andhra Pradesh in 1989, is a successful example of induction of local youth into security forces to help counter the naxalites.
- This would not only help the states reduce their over-dependence on Central forces but will also offer the forces some operative advantage given the locals awareness of the local topography.

ENVIRONMENT AND ECOLOGY

Species in news - Fauna

1. Dolphin boom in Odisha's Chilika lake

- » Prelims: Dolphin species in India- Range and conservation status; Chilika lake.

Context:

- Dolphin census data released by the wildlife wing of the Odisha State Forest and Environment Department.

Details:

- The population estimation exercise for dolphins and other cetacean species covered almost the entire coast of Odisha.
- Three dolphin species were recorded during the census- Irrawaddy, bottle-nose and humpback dolphins.
- The population of dolphins in Chilika and along the Odisha coast has doubled this year compared with last year, thus indicating a spectacular growth in numbers.
 - * Of particular interest is the sizeable growth in the population of endangered Irrawaddy dolphins. The Irrawaddy dolphins are mostly found in Chilika lake. Apart from Chilika, Irrawaddy dolphins were also sighted in the Rajnagar mangrove division.
 - » Chilika lake is India's largest brackish water lake.
 - * The highest growth has been noticed in the case of humpback dolphins. Large groups of humpback dolphins have been spotted near Ekakula and Habelikhathi areas, close to the Gahirmatha Olive Ridley nesting ground.
 - » The humpback dolphins are not part of any riverine systems and so they cannot be identified as residential mammals.

Species in news - Fauna

2. South Asian river dolphin

- » Prelims: South Asian river dolphin- habitat range and conservation status
- » Mains: Threats to river dolphins and associated concerns.

Context:

- Study of the Indus and Ganges river dolphins.

Background:

- The South Asian river dolphin (*Platanista gangetica*) is an endangered freshwater or river dolphin found in the region of the Indian

subcontinent, which is split into two subspecies, the Ganges river dolphin (*P. g. gangetica*) and the Indus river dolphin (*P. g. minor*).

- The Ganges river dolphin is primarily found in the Ganges and Brahmaputra rivers and their tributaries in India, Bangladesh, and Nepal, while the Indus river dolphin is now found only in the main channel of the Indus River in Pakistan and in the River Beas (a tributary of the Indus) in Punjab in India.

Details:

- Detailed analysis of South Asian river dolphins has revealed that the Indus and Ganges River dolphins are not one, but two separate species.
- The research team studied body growth, skull morphology, tooth counts, colouration and genetic makeup. The researchers studied ancient DNA that they got out of skulls and skeletons which were 20 to 30 to even 150 years old.
- The study estimates that Indus and Ganges river dolphins may have diverged around 550,000 years ago.

Ganges Dolphin:

- The Ganges river dolphin can only live in freshwater and is essentially blind. They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to "see" an image in their mind.
- The Ganges river dolphin has been recognized by the government of India as its national aquatic animal.

Conservation status:

- The Ganges dolphin is a Schedule I animal under the Indian Wildlife (Protection) Act 1972, and has been included in Annexure – I of Convention on International Trade in Endangered Species (CITES).
- The Ganges River dolphin is classified as an 'Endangered' species by the International Union for Conservation of Nature (IUCN).

Threats:

- Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh. But the species is extinct from most of its early distribution ranges.

Declining river flow:

- The fast declining river flow due to diversion through the barrages has adversely affected the dolphin habitats.

Accidental deaths:

- Previously fishermen used to hunt dolphins and use their oil as bait, though that practice of directed killing has stopped; they still end up as accidental catches. The increasingly mechanized boat fleet being used for fishing increase the chances of accidental injury to the dolphins.

River Pollution:

- The point and non-point source of pollution in the Ganges River is severely affecting the dolphin habitat.

Reduced gene flow:

- The physical barriers such as dams and barrages created across the river have reduced the gene flow to a great extent making the species vulnerable.

*Species in news - Fauna***3. Bustard poaching in Pakistan**

- » Prelims: Great Indian Bustard- Habitat range, threat and conservation status

Context:

- The recent shooting of two Great Indian Bustards (GIBs) in Pakistan's Cholistan desert.

Background:

Great Indian Bustard:

- The Great Indian Bustard (*Ardeotis nigriceps*) is found on the Indian subcontinent.
- The great Indian bustard bird is among the heaviest of the flying birds. It is also the largest land bird in its native range.
- It is the State bird of Rajasthan.

Habitat:

- It's habitat is characterized by large expanses of arid and semi-arid grasslands, open country with thorn scrub, tall grass interspersed with cultivation. It avoids irrigated areas.
- This species was formerly widespread in India and Pakistan.
 - * In India, the bird was historically found in Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Rajasthan, Gujarat, Maharashtra, Karnataka and Tamil Nadu. Today the bustard is restricted to isolated pockets in Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Madhya Pradesh and Rajasthan.
 - » The Desert National Park is one of the Great Indian Bustard's last remnant wild habitat. The GIB's population of fewer than 100 in Rajasthan accounts for 95% of its total world population.

- A few birds have also been detected in Cholistan Desert in Pakistan.

» The grassland habitat with grass cover in the Cholistan desert is similar to the habitat in Rajasthan's Desert National Park.

- The major areas where they are known to breed are in central and western India and eastern Pakistan.
- These birds are often found associated in the same habitat as blackbuck.

Threat:

- The GIB was once common on the dry plains of the Indian subcontinent. But, today there habitat has reduced drastically.
- The International Union for Conservation of Nature and Natural Resources (IUCN), a global authority on species survival, which categorised the GIBs as "endangered" in 1994, was forced to upgrade the species to the status of "critically endangered" in 2011 because of continued threats faced by this species. In fact it is considered India's most critically endangered bird.
- The main threats are hunting and habitat loss.
 - * This species has been heavily hunted for their meat and for sport.
 - * In some places, such as Rajasthan, increased irrigation by the Indira Gandhi canal has led to increased agriculture and the altered habitat has led to the disappearance of the species from these regions. The migrating population into Pakistan face pressure due to hunting.
 - * Other critical threats to the species include the development of linear infrastructure intrusions such as roads and electric power lines in the desert that lead to collision-related mortality.

Conservation:

- It is protected under Wildlife Protection Act 1972 of India.
- The state of Rajasthan initiated "Project Great Indian Bustard", aimed at conservation efforts for the Great Indian Bustard.

Details:

- A group of hunters, allegedly led by a retired Major of the Pakistan Army, shot down two GIBs in a protected area of southern Punjab's Cholistan game reserve in Pakistan.
- This event has left wildlife activists in Rajasthan outraged.

Concerns:

- There is an ongoing captive breeding of GIB in the DNP through a project executed by the Wildlife Institute of India.

* The project is being supported by the Houbara Breeding Centre of UAE.

- As Rajasthan shares the international border with Pakistan's Sindh and Punjab provinces, it is suspected that Indian-bred GIBs will fly across to Pakistan's desert and may fall prey to the poachers there.

Species in news - Fauna

4. Bat with sticky discs found in Meghalaya

- » Prelims: Disc-footed bat, Wildlife sanctuaries in Meghalaya- Nongkhylllem Wildlife Sanctuary, Siju Sanctuary and Baghmara Sanctuary.

Context:

- Meghalaya has yielded India's first bamboo-dwelling bat with sticky discs.

Details

- The disc-footed bat (*Eudiscopus denticulus*) was recorded in Meghalaya's Lailad area near the Nongkhylllem Wildlife Sanctuary.
- It is a small bat with disc-like pads in the thumb and bright orange colouration.
- It has a flattened skull and sticky pads that enable the bats to roost inside cramped spaces, clinging to smooth surfaces such as bamboo internodes.
- While there are other bamboo dwelling species of bats in India, the extent of adaptation for bamboo habitat in this species is not seen in the others.
- It is found to be genetically very different from all other known bats bearing disc-like pads.

Bat species in India:

- There are 130 species of bats in India.
- The disc-footed bat has raised the variety of bat species in Meghalaya to 66.

* This is the most for any state in India.

Additional information:

- Meghalaya has three wildlife sanctuaries. These are the Nongkhylllem Wildlife Sanctuary, the Siju Sanctuary, and the Baghmara Sanctuary.
- Baghmara Sanctuary is the home of the insect-eating pitcher plant (*Nepenthes khasiana*).

Environmental Degradation

5. Groundwater depletion may reduce winter cropping intensity by 20% in India

- » Prelims: Rabi season- time period and associated crops
- » Mains: Concerns associated with depleting water level and corresponding recommendations

Context:

- New study into the problems being faced by wheat farmers in India with respect to productivity and sustainability.

Background:

Rabi season in India:

- The Indian cropping season is classified into two main seasons-Kharif and Rabi.
- Rabi crops are also known as winter crops. The Rabi crops are sown in late October or early November and harvested in spring.

Important crops:

- Some of the important winter crops are wheat, barley, mustard, peas and gram with wheat being the most important crop of the Rabi season.
- India is the second-largest producer of wheat in the world, with over 30 million hectares in the country dedicated to producing wheat in India.

Irrigation:

- Rabi crops require frequent irrigation because these are grown in dry areas.
- India's three main irrigation types on winter cropped areas include dug wells, tube wells and canals.

Concerns:

Sustainability issues with respect to cropping pattern:

- In the green revolution era, policy-supported environment led to a large increase in rice cultivation in north western India mainly in Punjab and Haryana which are ecologically less suitable for rice cultivation due to predominantly light soils.
- This policy-supported intensive agriculture led to unsustainable groundwater use for irrigation and in turn groundwater scarcity.
- There was also post-harvest residue burning to make way for the timely sowing of wheat. This has resulted in high levels of air pollution in NCT and adjoining areas which has cropped up as a major health challenge to India.

Water scarcity and impact on agricultural sector:

- The study found that 13% of the villages in which farmers plant a winter crop are located in critically water-depleted regions.
- The study notes that these villages may lose 68% of their cropped area in future if access to all groundwater irrigation is lost. The results suggest that these losses will largely occur in northwest and central India.
- The study notes that with severe groundwater depletion, the cropping intensity or the amount of land planted in the winter season may decrease by up to 20% by 2025.

- * Groundwater depletion has already reduced yields and cropped areas in India over the last 20 years.

Unviability of alternative sources:

- The study into using canals as an alternative irrigation source and as an adaptation strategy to falling groundwater tables noted that switching to canal irrigation has limited adaptation potential at the national scale.

Possible impact of climate change:

- Climate change is likely to further adversely affect the future availability of groundwater resources given the dependence of India on Monsoons for its water resources.

Way forward:

Adaptation strategy:

- The farmers will have to adopt new or additional adaptation strategies like the following:
 - * Adoption of water-saving technologies like sprinkler, drip irrigation
 - * Switching to less water-intensive crops to ensure more effective use of the limited groundwater resources. Example- Shifting from crops like Rice and Wheat to crops like millets
 - * Growing crops suited to the local resource base and environment.

Promoting agriculture in eastern India:

- There are enough groundwater resources supported with higher monsoon rainfall in eastern Indian states like Bihar. But due to lack of enough irrigation infrastructure, farmers are not able to make use of natural resources there.
- Better policies in eastern India to expand the irrigation will not only help provide an impetus to agricultural activity and agriculture productivity in this region but will also release some pressure from north-western Indian states.

Environmental Conservation Efforts

6. A fresh push for green hydrogen

- » Prelims: National Hydrogen Energy Mission-Objectives
- » Mains: Significance of hydrogen based economy and associated challenges in its adoption

Background:

Hydrogen usage in India:

- Currently, India consumes around 5.5 million tonnes of hydrogen, primarily produced from imported fossil fuels.
- In 2030, according to an analysis by the Council on Energy, Environment and Water (CEEW),

green hydrogen demand could be up to 1 million tonnes in India across application in sectors such as ammonia, steel, methanol, transport and energy storage.

National Hydrogen Energy Mission (NHEM):

- The National Hydrogen Energy Mission was announced in the Union Budget 2021 by the Finance Minister, who said it will be launched in 2021-22. The mission will draw up a road map for using hydrogen as an energy source.
- The National Hydrogen Energy Mission will focus on linking India's growing renewable capacity with the hydrogen economy while at the same time looking at generation of hydrogen from green power resources.

Significance:

- Hydrogen is a clean energy source as burning hydrogen does not produce any harmful by-products. It has a near-zero carbon footprint.
- Electricity generation in India is heavily dependent on fossil fuels (coal). If hydrogen can replace it, there will be reduced pollution (because of not burning fossil fuels). Additionally, the import of coal can be reduced.
 - * The usage of hydrogen will not only help India in achieving its emission goals under the Paris Agreement, but will also reduce import dependency on fossil fuels.
- Hydrogen is a renewable source of energy and found in abundance. Hydrogen is the most abundant element on the planet and has other advantages such as being lighter, more energy-dense and energy-efficient (2 – 3 times more than petrol).
- Hydrogen fuel is not a toxic source for human health unlike nuclear energy or energy from natural gas.
- The transportation, iron and steel and chemical industries will be benefitted.

Challenges in adopting a hydrogen economy:

- First, decentralised hydrogen production must be promoted through open access of renewable power to an electrolyser (which splits water to form H₂ and O₂ using electricity).
 - * Currently, most renewable energy resources that can produce low-cost electricity are situated far from potential demand centres. If hydrogen were to be shipped, it would significantly erode the economics of it.
 - * A more viable option would be wheeling electricity directly from the solar plant.
- Second, we need mechanisms to ensure access to round-the-clock renewable power for decentralised hydrogen production.

- * Therefore, as we scale up to the target of having 450 GW of renewable energy by 2030, aligning hydrogen production needs with broader electricity demand in the economy would be critical.
- Third, we must take steps to blend green hydrogen in existing processes, especially in the industrial sector.
 - * Improving the reliability of hydrogen supply by augmenting green hydrogen with conventionally produced hydrogen will significantly improve the economics of the fuel.
 - * This will also help build a technical understanding of the processes involved in handling hydrogen on a large scale.
- Fourth, policymakers must facilitate investments in early-stage piloting and the research and development needed to advance the technology for use in India.
 - * The growing interest in hydrogen is triggered by the anticipated steep decline in electrolyser costs.
 - * India should not be a mere witness to this. Public funding will have to lead the way, but the private sector, too, has significant gains to be made by securing its energy future.
- Finally, India must learn from the experience of the National Solar Mission and focus on domestic manufacturing.
 - * Establishing an end-to-end electrolyser manufacturing facility would require measures extending beyond the existing performance-linked incentive programme.
 - * India needs to secure supplies of raw materials that are needed for this technology.
 - * Further, major institutions like the DRDO, BARC and CSIR laboratories have been developing electrolyser and fuel-cell technologies.
 - * There is a need for a manufacturing strategy that can leverage the existing strengths and mitigate threats by integrating with the global value chain.

Environmental Conservation Efforts

7. Green initiatives by Saudi Arabia

- » Prelims: G20 green initiatives;
- » Mains: Global green initiatives; carbon capture and utilisation technology

Context:

- Two new initiatives the 'Saudi Green Initiative' and the 'Middle East Green Initiative' have been

launched by the Deputy Prime Minister of the Kingdom of Saudi Arabia, to combat the threat of climate change.

Background:

- Saudi Arabia is committed to lead regional efforts to address climate change and has been making steady progress in this direction.
- One of the main pillars of the Saudi G20 presidency was to "safeguard the planet".
 - * The G20 introduced initiatives like establishing a Global Coral Reef Research and Development Accelerator Platform to accelerate scientific knowledge and technology development in support of coral reef survival, conservation, resilience, adaptation and restoration.
 - * G20 leaders also acknowledged the Circular Carbon Economy (CCE) Platform as a tool towards affordable, reliable, and secure energy and economic growth.

Saudi Green Initiative:

- It aims to raise the vegetation cover, reduce carbon emissions, combat pollution and land degradation, and preserve marine life. 10 billion trees will be planted in the Kingdom.
- Saudi Arabia is working towards raising the percentage of its protected areas to more than 30% of its total land area exceeding the global target of 17%.

Middle East Green initiative:

- As part of this initiative, Saudi Arabia will work with the Gulf Cooperation Council countries and regional partners to plant an additional 40 billion trees in the West Asian region.
- It represents 5% of the global target of planting one trillion trees and reducing 2.5% of global carbon levels.

India and Saudi Arabia efforts in tackling climate change:

- Saudi Arabia has joined the International Solar Alliance, hence promoting cooperation in the renewable energy sector.
- Several MoUs and agreements in key sectors including renewable energy have been signed.

Working towards Vision 2030:

- In 2016, the Crown Prince unveiled Vision 2030, a comprehensive road map to improve the quality of life of the citizens of the country.
 - * As part of this, Saudi Arabia carried out a comprehensive restructuring of the environmental sector and established the Environmental Special Forces in 2019.

* With the NEOM project and The Line, Saudi Arabia has already redefined the idea of sustainable habitats.

- The pandemic has only strengthened Saudi Arabia's resolve to realise the goals of Vision 2030 and become one of the major producers of renewable energy with a capacity to generate 9.5 GW by 2023.

Additional Information:

- Saudi Arabia currently operates the largest carbon capture and utilisation plant in the world, turning half a million tonnes of CO₂ annually into products such as fertilizers and methanol.
- It also operates one of the region's most advanced CO₂-enhanced oil recovery plants that captures and stores 8,00,000 tonnes of CO₂ annually.
- India has made remarkable commitments to tackle climate change and is on track to achieve its Paris Agreement targets.
- India's renewable energy capacity is the fourth largest in the world.
- India has an ambitious target of achieving 450 gigawatts of renewable energy capacity by 2030.

Initiatives in news

8. Last two rhinos translocated under IRV 2020

- » Prelims: Indian Rhino Vision 2020; Conservation areas in Assam
- » Mains: Initiatives for biological diversity conservation in India

Context:

- The ambitious Indian Rhino Vision 2020 (IRV 2020) came to a close with the release of two rhinos in Assam's Manas National Park transported from Pobitora Wildlife Sanctuary.

Background:

- Assam had at least five rhino-bearing areas till the 1980s.
- Better conservation efforts helped maintain the population of the one-horned herbivore in Kaziranga, Orang and Pobitora, but encroachment and poaching wiped the animal out of Manas and Laokhowa Wildlife Sanctuary.
- Manas, in focus for the near-extinction of the pygmy hog, lost the World Heritage Site tag it had received in 1985 along with Kaziranga from the UNESCO.
- But, the translocated rhinos helped Manas National Park get back its World Heritage Site status in 2011.

Indian Rhino Vision 2020:

- Indian Rhino Vision 2020 was a partnership among the Government of Assam, the International Rhino Foundation, and the World

Wide Fund for Nature, the Bodoland Territorial Council, and the U.S. Fish & World Wildlife Foundation that aims to attain a population of 3,000 wild greater one-horned rhinos in seven of Assam's protected areas by the year 2020.

- Designed in 2005, the IRV 2020 is believed to have achieved its target of attaining a population of 3,000 rhinos in Assam.
- However, the plan to spread the Rhinoceros across four protected areas beyond Kaziranga National Park, Orang National Park and Pobitora could not materialise.

Initiatives in news

9. National climate vulnerability assessment

- » Prelims: Green Climate Fund, Adaptation Fund
- » Mains: Climate vulnerability of India; Significance of climate vulnerability assessment; Measures needed.

Context:

- National climate vulnerability assessment released.

Details of the Report:

- The report is titled 'Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework'.
- It identifies the most vulnerable states and districts in India with respect to current climate risk and key drivers of vulnerability.
- The report has been submitted by the Indian Institute of Technology Mandi and the Indian Institute of Technology Guwahati in collaboration with the Indian Institute of Science, Bengaluru.

Key findings of the vulnerability assessment:

- Based on an all-India assessment, this report identifies the most vulnerable states and districts in India with respect to current climate risk and the main drivers of vulnerability.
- The states with a relatively high vulnerability, Jharkhand, Mizoram, Odisha, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal, are mostly in the eastern part of the country, requiring prioritisation of adaptation interventions.
- Assam, Bihar, and Jharkhand have over 60% of districts in the category of highly vulnerable districts.

Significance of the report:

- The vulnerability assessment can assist in ranking and identification of the most vulnerable districts and states and help states prioritise adaptation planning and investments.

- It is critical for developing adaptation projects for the Green Climate Fund, Adaptation Fund, and funds from multilateral and bilateral agencies.
- It will also facilitate Nationally Determined Contributions, which aims to adapt better to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, health sector and regions such as the Himalayan region, coastal regions, etc.
- It may also aid to plan disaster management.

Environmental conservation efforts

10. Carbon Neutrality

- » Prelims: Carbon neutrality
- » Mains: Concerns with respect to calls for carbon neutrality; arguments against India pledging carbon neutrality; recommendations

Context:

- There has been a growing international chorus, led by global civil society organisations urging all countries to make explicit declarations with respect to carbon neutrality.
- An increasing number of countries are declaring in some documented form or other, their proposed intention to achieve carbon neutral status by around mid-century.
 - * As per Energy and Climate Intelligence Unit (ECIU) by April 2021, about 32 countries had declared their proposed intention to achieve carbon neutral status. Of these, only eight have any firm status, the rest being in the form of proposed legislation or mentions in policy documents.

Background:

Temperature goal:

- The declaration of intent of the Paris Agreement, as stated in Article 2 of the Paris climate deal, aims to limit temperature rise to well below 2°C and further pursuing efforts to restrict it to 1.5°C above pre-industrial levels.

Carbon neutrality:

- Article 4.1 of the Paris Agreement urges nations to reach global peaking of greenhouse gas emissions as soon as possible, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.

Concerns with respect to carbon neutrality calls:

- The authors of the article argue against the increasing demand from developed countries

and global civil society organizations urging all countries including developing countries like India to declare carbon neutrality goals.

Against principles of equity:

- Notably while urging the nations to seek carbon neutrality at the earliest the article 4.1 of the Paris agreement also recognizes the fact that peaking will take longer for developing country Parties which are also required to work towards eradication of poverty. It recognizes the principles of equity while emphasizing the importance of sustainable development.
- Article 2.2 declares that the Paris Agreement “will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances”.

Global and not individual goals:

- As against the notion being created by the developed country governments and civil society outfits of carbon neutrality being an individual commitment by all countries, a correct understanding of the stated provisions of the Paris climate agreement make it clear that the balance of emissions and removal of greenhouse gases is not sought on a country-wise basis but for the world as a whole.
- The text of the Paris Agreement clearly indicates, based on considerations of equity and differentiation, that Carbon neutrality is a global goal wherein the developed world will have to take higher responsibility based on considerations of equity and differentiation.

Insufficient climate action:

- The growing popularity of carbon neutrality seems to ignore the fact that the achievement of carbon neutrality is not compatible with achieving the 1.5°C Goal.
- The mid-century carbon neutrality goals of developed countries will not be sufficient to meet the temperature goals set out by the Paris climate agreement.
- According to The Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5° warming what remains of the global carbon budget from 2018 onwards, for a 50% probability of restricting temperature rise to less than 1.5°C, is 480 Giga-tonnes (billion tonnes) of carbon dioxide equivalent (GtCO₂eq). At the current rate of emissions of about 42 GtCO₂eq per year, this budget would be consumed in 12 years. To keep within the 480 Gt budget, at a steady linear rate of decline, global carbon neutrality must be reached by 2039.

- * The global carbon budget, indicates the limits on global cumulative emissions, from

the pre-industrial era to the time when net emissions cease, that correspond to definite levels of global temperature rise.

Emissions in the West:

- The hollowness of nation-level carbon neutrality declarations by developed countries is brought out by a detailed understanding of the emission data.
 - * Emissions in the U.S. (not considering land use and land use change and forest related emissions) (LULUCF), peaked in 2005 and have declined at an average rate of 1.1% from then till 2017, with a maximum annual reduction of 6.3% in 2009. Even if it did reach net-zero by 2050 at a steady linear rate of reduction, which is unprecedented, its cumulative emissions between 2018 and 2050 would be 106 GtCO₂, which is 22% of the total remaining carbon budget for the whole world. If the U.S. has to stay within its fair share of the remaining carbon budget, it would have to reach net zero emissions (with linear reduction) by 2025.
 - * Similarly, the European Union, to keep to its fair share of the remaining carbon budget would have to reach net zero by 2033, with a constant annual reduction in emissions. If the EU reaches net zero only by 2050 it would consume at least 71 GtCO₂, well above its fair share.

Arguments against India declaring carbon neutrality goal:

- Experts argue against India committing to carbon neutrality declarations, based on the following reasons.
 - * Given the high number of poor in the country, India has to stay focused on economic growth.
 - * India continues to have a low per capita carbon footprint.
 - * India does not owe a carbon debt to the world. India's emissions (non-LULUCF) are no more than 3.5% of global cumulative emissions prior to 1990 and about 5% since till 2018.
 - * India's mitigation efforts are quite compatible with a 2°C target.
 - * India's current annual emissions are low enough as to not seriously dent the emissions gap between what the world needs and the current level of mitigation effort.
 - * Any self-sacrificial declaration of carbon neutrality today in the current international scenario would be a wasted gesture

reducing the burden of the developed world and transferring it to the backs of the Indian people.

Recommendations:

- The following aspects would require greater attention going forward to ensure effective climate action.
 - * Adoption of green growth strategy
 - * Low-carbon technologies and processes
 - * Adaptation to climate impacts
 - * Research into the science of carbon capture

Conclusion:

- The hard scientific reality is that three-way compatibility between temperature goals, carbon neutrality, and equity would be very hard to achieve.
- India should not join the growing calls for carbon neutrality as it has to stay focused on development as its immediate need and aspirational goal. India must reject any attempt to restrict its options and be led into a low-development trap.
- India's approach to eventual net-zero emissions must be contingent on deep first world emissions reductions and an adequate and unambiguous global carbon budget.

Environmental Conservation Efforts

11. A low-carbon future through sector-led change

- » Prelims: IPCC
- » Mains: Climate action dilemma for India-balancing developmental needs and GHG mitigation efforts; recommendations for India-short and long term measures

Context:

- The upcoming 'Leaders' Climate Summit' being organised by the United States has led to a lot of conversation around a 'net-zero' emissions target for all countries including developing countries like India

Background:

- The Intergovernmental Panel on Climate Change (IPCC) 1.5°C report called for global carbon emissions to reach net-zero by 2050. This has led to a rising call for all countries to announce 2050 as the net-zero target year.

India's dilemma:

Developmental needs and climate justice:

- Given the historic emissions by developed countries and the fact that they have taken up a disproportionate share of the carbon space, it is fair enough to expect them to take greater ambitious targets when it comes to climate action.

- The higher targets by the more financially and technologically able developed countries will enable the developing countries to have some additional time for climate action while in the meantime they can focus on their developmental needs.
- India should not lose sight of its own developmental needs while taking up GHG mitigation measures. India continues to face a significant development deficit — India's per-capita carbon emissions are less than half the world average.

Climate vulnerability of India:

- India is one of the most climate-vulnerable countries and this necessitates India to up its Climate action and climate ambitions.

Way forward for India:

- Given that India can neither limit itself to only modest steps until richer countries do more given the context of a global climate crisis, nor India go ahead and announce a 2050 net-zero commitment taking a much heavier burden of decarbonisation than many wealthier countries, and seriously compromising India's development needs, there is the need for a more balanced approach when it comes to climate action.
- India should adopt a sector-led, action-based approach that could provide the framework to drive low-carbon transformation of India.

Short term:

- India should initially focus more on near-term sectoral transformations through adoption of latest technologies that are within reach.
- India should avoid high carbon lock-ins.
- There is the need to focus on sectoral low-carbon development pathways that combine competitiveness, job-creation, distributional justice and low pollution.
- Such an approach would be directionally consistent with India moving towards net-zero emissions.

Long term:

- In the long term, India should move towards net zero emissions. Over time, India can and should get more specific about future economy-wide net-zero targets and dates.

Electricity sector:

- Measures that can be taken in the electricity sector.

De-carbonizing power sector:

- De-carbonizing the electricity sector is a critical measure to achieve net-zero emissions.

- * The electricity sector is the single largest source (about 40%) of India's greenhouse gas emissions.

Renewable energy:

- There have been laudable efforts in the electricity sector focused on expanding renewable electricity capacity.
- * The targets have been set at 175GW of renewable capacity by 2022 and 450GW of renewable capacity by 2030.

Coal sector:

- Apart from expanding renewable, India also needs to focus on limiting the expansion of coal-based electricity capacity.
- * Coal accounts for almost 75% of electricity generation.
- India should consider pledging that it will not grow its coal-fired power capacity beyond what is already announced, and reach peak coal electricity capacity by 2030, while striving to make coal-based generation cleaner and more efficient.
- Apart from GHG mitigation, ceiling of coal capacity would also aid control air pollution. Such a pledge would also give full scope for development of renewable energy and storage, and send a strong signal to investors.
- Considering the significance of the coal sector in the economic as well as social development, it would be necessary to create a multi-stakeholder Just Transition Commission representing all levels of government and the affected communities to ensure decent livelihood opportunities beyond coal in India's coal belt. This move will help ensure that the transition costs to a low-carbon future would not fall on the backs of India's poor.

Addressing the challenges of distribution companies:

- A low-carbon electricity future cannot be realised without addressing existing problems of the distribution companies (DISCOMS). This would require sufficient financing as well as reforms in their structure as well as their functioning patterns.

Developing requisite technology:

- India will need to work towards becoming a leader in technologies of the future such as electricity storage, smart grids, and technologies that enable the electrification of other sectors such as transportation.
- This would necessitate well planned partnership with the private sector, including tools such as production-linked incentives.
- India should develop a strategic road map to enhance its own technology and manufacturing competence as part of the global clean energy supply chain, to gain benefits of employment and export revenues.

- India could infact use this electricity transition to aim for job creation and global competitiveness in these key areas.

Improving energy efficiency:

- Enhancing the efficiency of electricity use is an important complement to decarbonising electricity supply.
 - * Air conditioners, fans and refrigerators together consume about 60% of the electricity in households.
- The energy efficiency programmes apart from looking into electrical appliances should also focus on development of green buildings.
- In addition to reducing green house gas emissions, this would have the benefit of lowering consumer electricity bills. India can leverage this transition too as an opportunity to become a global leader in production of clean appliances.

Conclusion:

- A similar integrated approach as discussed above should also be adopted for other sectors.
- Such a sector-by-sector approach, which can and should be developed for other sectors, can demonstrate concrete, yet ambitious, domestic action that sets India on the path toward net zero emissions.
- Additionally such an approach also offers the following advantages:
 - * It could allow India to insist on developed countries to complement their distant net-zero targets by enacting concrete near-term measures.
 - * This approach allows India to nimbly adapt its sectoral transition plans as technologies mature and enable it to ratchet up its pledges periodically as required by the Paris Agreement.
 - * This would allow India adequate time to undertake detailed assessments of its development needs and low-carbon opportunities, the possible pace of technological developments, the seriousness of the net-zero actions by developed countries to prescribe its very own climate action pledges.

Environmental Conservation Efforts

12. Leaders' Summit on Climate

- » Prelims: India-U.S. climate and clean energy agenda 2030 partnership

Context:

- Leaders' Summit on Climate was hosted by US President Joe Biden.

Details:

- 40 world leaders, including the Prime Minister of India, Presidents of China and Russia have been invited to the virtual Leaders' Summit on Climate to underscore the urgency of stronger climate action.
- The US is seeking to bring America back into a leadership role on climate action after Mr. Trump had withdrawn the country from the Paris Agreement.
- President Biden and his administration have linked climate action and clean technology to jobs and economic growth.
- This is seen as a key milestone on the road to the United Nations Climate Change Conference (COP26) in November 2021 in Glasgow.

Key Takeaways:

U.S. Commitments:

- It was announced that the U.S. would cut its greenhouse gas emissions by 50%-52% by 2030 relative to 2005 levels.
- It was also announced that the U.S. would double its annual financing commitments to developing countries by 2024, including a tripling of its adaptation finance by 2024.
 - * Biden's financing announcements are part of a \$100 billion a year commitment from developed countries to developing countries for the period 2020-25.

Green partnership between India and the U.S.:

- The Prime Minister of India announced that India and the U.S. were launching an energy and climate partnership during the Summit.

Details:

- The Partnership envisages bilateral cooperation on climate action.
- "India-U.S. climate and clean energy agenda 2030 partnership" will help mobilise investments, demonstrate clean technologies, and enable green collaborations to help combat climate change.
- The Partnership will aim to:
 - * mobilize finance and speed clean energy deployment;
 - * Demonstrate and scale innovative clean technologies needed to decarbonize sectors including industry, transportation, power, and buildings; and
 - * Build capacity to measure, manage, and adapt to the risks of climate-related impacts.

Way forward:

- A forward-looking policy, should envision a new green development plan, provide funding and green technologies as compensation for the emissions space lost by poorer countries.

- The developed countries have to persuade industry and research institutions at home to share knowledge and subsidise the transfer of technologies.
- This would be a win-win game, since it would aid sustainable development, boost employment, clean up the environment and, crucially, help all countries emerge healthier from the pandemic.

Additional information:

- India ranks third in emissions, behind the U.S. and China, although its per capita carbon footprint is 60 per cent lower than the global average.

Issues Relating to Health

1. Antimicrobial resistance: the silent threat

- » Prelims: AMR
- » Mains: Factors aiding AMR; concerns; recommendations

Context:

- The health crisis brought out by the COVID-19 pandemic has starkly exposed the vulnerabilities of health systems to infectious diseases, both in the developing as well as in the richest countries.

Antimicrobial resistance:

- Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death.

Factors aiding AMR:

- Though the mutations are common in micro-organisms, Human activities seem to be augmenting the process of mutation in these micro-organisms, which seem to be driving the evolution of resistance in microbes.
- Drug resistance in microbes emerges for several reasons, some of which are as follows:
 - * Misuse of antimicrobials in medicine
 - * Inappropriate use in agriculture
 - * Contamination around pharmaceutical manufacturing sites where untreated waste releases large amounts of active antimicrobials into the environment

Concerns:

- AMR represents an existential threat to modern medicine. Without functional antimicrobials to treat bacterial and fungal infections, even the most common surgical procedures, as well as cancer chemotherapy, will become fraught with risk from untreatable infections.
- AMR is already responsible for up to 7,00,000 deaths a year. Unless urgent measures are taken to address this threat, the global community could witness an unprecedented health and economic crisis of 10 million annual deaths and costs of up to \$100 trillion by 2050.
- Though the AMR would be a global challenge, the low- and middle-income countries (LMICs) of Asia and Africa are more likely to be more impacted. The LMICs have significantly driven down mortality using cheap and easily available

antimicrobials. AMR which would render these antimicrobials ineffective would overrun the already deficient and overburdened health systems in these countries.

- Notably no new classes of antibiotics have made it to the market in the last three decades. This is mainly due to the inadequate incentives for the development and production of antibiotics.
 - * A recent report from the non-profit PEW Trusts found that over 95% of antibiotics in development today are from small companies, 75% of which have no products currently in the market. Major pharmaceutical companies have largely abandoned innovation in the antibiotics segment.
- World Health Organization Director-General has termed AMR a slow tsunami that threatens to undo a century of medical progress.

Recommendations:

- Tackling the diverse challenges posed by AMR requires action in a range of areas.

Developing new antimicrobials:

- The medicine sector should focus on developing new generation antimicrobials.
- The government should design and devise appropriate policies to incentivize the pharmaceutical companies to engage in research and development of antibiotics.
 - * A multi-sectoral \$1 billion AMR Action Fund was launched in 2020 to support the development of new antibiotics.
 - * U.K. is trialling a subscription-based model for paying for new antimicrobials towards ensuring their commercial viability. This will involve the governments paying upfront for these new antimicrobials, thereby delinking the life-saving value of the drugs from the volume of sales and providing an incentive for their production.

Infection control measures:

- The infection-control measures can help reduce antibiotic use on one hand and also aid in limiting the spread of AMR diseases.

Surveillance:

- To track the spread of resistance in microbes, surveillance measures to identify these organisms need to expand beyond hospitals and encompass livestock, wastewater and farm run-offs.

- There is the need for sustained investments and global coordination to detect and combat new resistant strains on an ongoing basis.

Ensuring appropriate clinical use of antibiotics:

- Regulating clinician prescription of antimicrobials alone would do little in settings where patient demand is high and antimicrobials are freely available over-the-counter in practice, as is the case in many LMICs. Efforts to control prescription through provider incentives should be accompanied by efforts to educate consumers to reduce inappropriate demand, issue standard treatment guidelines that would empower providers to stand up to such demands, as well as provide point-of-care diagnostics to aid clinical decision-making.
- A mix of incentives and sanctions should encourage appropriate clinical use.
 - * Peru's efforts on patient education to reduce unnecessary antibiotic prescriptions will help ensure appropriate use of antibiotics.
 - * Australian has undertaken extensive regulatory reforms to help influence prescriber behaviour when it comes to antibiotics.
 - * The EU supported VALUE-Dx programme, aims to increase the use of point-of-care diagnostics. This would aid clinical decision-making and help avoid unnecessary antibiotic usage.

Looking beyond health sector:

- The integrated approach to dealing with AMR will require the administration to look beyond the health system. Solutions in clinical medicine must be integrated with improved surveillance of AMR in agriculture, animal health and the environment.
- AMR needs engagement from a wide range of stakeholders apart from the health sector, representing agriculture, trade and the environment with solutions that balance their often-competing interests.
 - * Denmark's reforms to prevent the use of antibiotics in livestock have not only led to a significant reduction in the prevalence of resistant microbes in animals, but also improved the efficiency of farming.
 - * India's recently proposed law to curb the amount of active antibiotics released in pharmaceutical waste is a welcome initiative in helping address the critical role of manufacturing and environmental contamination in spreading AMR through pharmaceutical waste

Global collaborative effort:

- The high potential for spread of infectious diseases across international borders necessitates the need for cross-national cooperation around surveillance, monitoring and disease notification. These key activities will help minimise the impact of acute public health events such as COVID-19 and will help maintain global health security.
- Given the fact that successful policies in individual countries are no guarantee of global success, international alignment and coordination are paramount in both policymaking and its implementation.
 - * The Paris Agreement should act as a blueprint for developing a similar global approach to tackling AMR.

Conclusion:

- Antimicrobial resistance (AMR) is one of the greatest challenges of the 21st century.
- Given the threat posed by AMR, which the author of the article refers to as "silent pandemic", there is the need for urgent action to tackle the challenge.

Government Initiatives

2. National Policy for Rare Diseases 2021

- » Prelims: Rare diseases; National policy for rare disease 2021
- » Mains: Significance and concerns with respect to the new policy; recommendations

Context:

- The recent notification of the National Policy for Rare Diseases 2021

Background:

Rare diseases:

- Rare diseases are broadly defined as diseases that infrequently occur in a population, and three markers are used — the total number of people with the disease, its prevalence, and the availability/non-availability of treatment options. WHO defines rare disease as having a frequency of less than 6.5-10 per 10,000 people.
- As per an estimate, there are 7,000 known rare diseases with an estimated 300 million patients in the world; 70 million are in India.
- Rare Diseases include inherited cancers like Haemophilia, Thalassemia, autoimmune disorders, congenital malformations, Hirschsprung's disease, Gaucher disease, cystic fibrosis, muscular dystrophies, sickle-cell anaemia and Lysosomal Storage Disorders (LSDs) such as Pompe disease.

National Policy for Rare Diseases, 2021:

- The National Policy for Rare Diseases, 2021 was notified on the 31st of March 2021.
- India plans to create a national registry for a database on rare diseases, classify known rare diseases in three groups.
- In the new policy, 'rare diseases' have not been defined but classified into three groups based on expert opinion.
 - * Group 1 has disorders controllable by one-time curative treatment, including osteopetrosis and Fanconi anaemia.
 - * Group 2 has diseases requiring long-term or lifelong treatment with a relatively lower cost of treatment and benefit has been documented in literature, including galactosemia, severe food protein allergy, and homocystinuria.
 - * Group 3 has diseases for which definitive treatment is available, but challenges are to make optimal patient selection for benefit, and very high cost and lifelong therapy, covering diseases such as spinal muscular atrophy (SMA), Pompe disease, and Hunter syndrome.
- The policy says the government would provide financial assistance of up to Rs 20 lakh to poor patients and those covered under Ayushman Bharat for diseases under Group 1.
- The state governments would be asked to undertake treatment of diseases covered under Group 2, which largely include disorders managed with special dietary formulae or food for special medical purposes (FSMP) and disorders that are manageable to other forms of therapy.
- For diseases classified under Group 3, which require life-long expensive treatments, the government would create a digital platform to bring together Centres for Excellence, patients undergoing treatment and corporate donors or prospective voluntary individuals who could help fund treatment.
- The government has identified eight Centres of Excellence for the treatment of rare diseases.

Significance:

- The National Policy on rare diseases is a good step forward based on the following aspects.

Principle of inclusion:

- The National Policy for Rare Diseases 2021 is pegged on the principle of inclusion of every single citizen.
 - * It is binding on a welfare state to securing the wellbeing of every single citizen, particularly those unable to help themselves,

irrespective of whether they constitute a critical mass or not.

Financial support:

- The policy offers financial support for one-time treatment of up to Rs. 20 lakh and also introduces a crowdfunding mechanism.
- Up until now, it was mainly the Patient support groups that used to work towards drumming up funding assistance for the treatment of rare diseases.

Early detection:

- The policy provides for early detection. Early detection is critical for management of the rare diseases.

Concerns:

- Caregivers to patients with 'rare diseases' and affiliated organisations are dissatisfied with the National Policy for Rare Diseases, 2021.
 - * Though the document specifies increasing the government support for treating patients with a rare disease from ₹15 lakh to ₹20 lakh — caregivers say this doesn't reflect the actual costs of treatment.
 - * Concerns have been raised about the new policy not considering Group 3 patients, who require lifelong treatment support.
 - * It has been demanded that at least two centres in every state need to be identified as a centre of excellence to help the patients avoid the time and cost of moving out.
 - * As per the Policy, diseases such as LSD for which definitive treatment is available, but costs are prohibitive, have been categorised lower and hence would qualify for lower support from the government.
 - * No funding has been allocated for the immediate and lifelong treatment needs, for therapies already approved by the Drugs Controller General of India.

Way forward:**Fund support:**

- The Centre can set aside a substantial corpus to fund life-saving treatments, even as it rolls out the policy. Fund support from government is vital for continual treatment of those with rare diseases.
- The central government can extend the cost-sharing agreements that it has worked out with Kerala, Tamil Nadu and Karnataka, with other States too, which will help it reduce its costs by half.

Medical efforts:

- There is the need to support the development of and commercialisation of drugs for treatment, and improve funding for research on rare diseases.

Diseases in news- COVID19**3. Second wave of COVID-19 in India**

- » Prelims: R0 number; Mutation
- » Mains: Factors contributing to second wave; measures needed

Context:

- Second wave of the pandemic in India.

Background:

- Interestingly no surge was seen between mid-September 2020 to end-February this year despite perfect conditions for the virus to spread.
- The onset of the festival season since the pandemic peaked in mid-September in India, winter, no restrictions on movement, large gatherings and not-so-good adherence of mask wearing and other non-pharmaceutical interventions did not cause any spike in cases across the country.

Waves across the globe:

- The United States and Brazil have had three distinct waves.
- The United Kingdom had a small first wave, after which the virus seemed to be disappearing. This was followed by two explosive waves, which only subsided after a lockdown and an aggressive vaccination campaign in which 95% of all those over the age of 50 have been vaccinated.
- South Africa has also seen two waves.
- Given the pattern, a second wave in India was almost a given. And once this wave recedes, it is highly likely that a third wave will build up, unless active measures are taken to stop it from building up.

Details:

- There has been a steady increase in the daily fresh COVID-19 cases. The rate of increase in cases in India during March has been faster than at any other time during the pandemic.
- The seven-day average test positivity rate has been increasing.
- The reproduction number (R0) — how many people each infected person will infect on average — has risen to above 1.5 and has been steadily increasing over the last two–three weeks.
- Large cities including Mumbai and Pune, which had recorded large infection rates during the first wave, are witnessing a surge.

Possible reasons for the surge:

- Three important factors — the virus, the host, and the environment — constitute the epidemiological triad for the surge in cases in many States.

Virus:

- New variants of concern might be in circulation, which is probably more infectious, and some can be an immune escape as well.
- The evolution of coronavirus is among the major reasons for the second wave. Scientists have detected numerous mutations in the SARS-CoV-2.
- There has been the introduction of other variants due to international travel in some parts of the country, which can be more infectious than the earlier strain. A resumption of global travel meant that spread of variants into India was inevitable.
- An imported variant (UK variant) has been identified in a few States. A double mutant variant has also been identified in at least a few States.
 - * The double mutant virus that scientists had flagged as having a bearing on the spread of the pandemic in India, has a formal scientific classification: B.1.617.
 - * The variant is common in India and has a couple of defining mutations, E484Q and L425R, that enable it to become more infectious and evade antibodies.
 - * Though these mutations have individually been found in several other coronavirus variants, the presence of both mutations together were first found in some coronavirus genomes from India.

Host:

- The host factors include waning antibodies, not following COVID-19 appropriate behaviour and incomplete vaccination.

Environment:

- The environmental factors include super-spreader events and poor compliance with preventive measures. The misconception that vaccination prevents even infection might also be contributing to rising cases.
 - * Multiple super spreader events happening in schools, colleges, offices, public transport.
 - * From attending large weddings and crowded public functions to heedless crowding in malls and marketplaces, the general public has been quite lax about adhering to basic safety protocols.
- The Health Ministry has cited the general laxity among people regarding COVID-19 appropriate

behaviour, including mask wearing, and lack of containment and management strategy at the ground level as reasons for the surge in cases.

Concerns:

- According to Fitch Solutions, despite several healthcare reforms, India remains badly placed to tackle the current wave of COVID-19 infections.
 - * The virus has started spreading rapidly, due to complacency on the social distancing measures and mask-wearing policies.
 - * Several hospitals are stretched beyond their capacities.
 - * With 5 hospital beds per 10,000 population and 8 physicians per 10,000, the healthcare sector is not equipped for such a crisis.
 - * States bearing the maximum load of the pandemic, are already falling short of health infrastructure and equipment, ranging from oxygen to ventilators.
 - * More than 80% of the population does not have any significant health insurance coverage.
 - * Approximately 68% has limited or no access to essential medicines.
 - * India lags far behind in immunisations per capita having vaccinated only about one in 25 people, compared with almost one in two in Britain and one in three in the United States.
 - * India's soaring virus cases puts its position as a global supplier [of vaccines] at risk as it has had to hold back vaccine exports in order to maintain domestic supply.

Way Forward:

Long term measures:

- The low level of public spending on health is both a cause and an exacerbating factor accounting for the poor quality, limited reach and insufficient public provisioning of healthcare.
- The crisis has brought out the critical importance of the public sector in health provisioning and highlighted the need to increase investment in healthcare.

Short term measures:

Vaccination:

- Vaccines are the best option. However, this might not be the most feasible option to blunt either this or future waves due to:
 - * The huge population of the country
 - * The slow pace of vaccination
 - * Inelastic vaccine supplies both in India and globally
 - * Limited finances with State governments which have now been given the

responsibility of vaccinating the bulk of the country's population.

Other interventions:

- Along with vaccination, it is important to practise the full methods that have been shown to slow the spread of COVID-19 in different parts of the world: wearing a mask, physical distancing, hand hygiene and a ban on mass gatherings.
- While these measures may not be as effective as mass vaccination, but in the absence of vaccines, they are perhaps the only way to reduce community transmission and slow the spread of the virus.
- The near-universal adoption of nonmedical masks when out in public, in combination with complementary public health measures could reduce community spread, provided the measures are sustained.

Diseases in news - COVID19

4. Chances of infection after COVID-19 vaccination

» Prelims: Breakthrough infection

Context:

- The Indian Council of Medical Research (ICMR) has reported that around two to four of 10,000 people given two doses of the COVID-19 vaccine have tested positive for the disease.
 - * According to available data, of the 1.7 million people who got a second dose of Covaxin (and thus fully inoculated), 695 tested positive — a rate of 0.04%. Of the 15.7 million who got a second dose of Covishield, 5,014 tested positive, a rate of 0.03%.

Details:

Breakthrough infection:

- These are infections that occur in people who have been vaccinated.
- Such cases are not out of the ordinary as the vaccines that have been approved so far the world over are made to protect against disease and not the transmission of the virus.

Reasons for breakthrough infections:

- Healthcare and frontline workers were getting infected because of their constant high exposure to COVID-19 patients.
- The other reason could be the highly transmissible new variants.
 - * Studies on the AstraZeneca vaccine show that its efficacy is reduced when faced with the U.K. and the South African variant.

Conclusion:

- Though breakthrough infection has occurred in "a very small number" of people, it does not

undermine the effectiveness of vaccination. Vaccination does help protect against disease.

- While vaccines protect against death and disease, they may not be 100% protective.

Issues Relating to Health

5. 'Reduce health inequities to tackle pandemic challenges'

- » Mains: Social determinants of health; recommendations

Context:

- A study by the Jaipur-based Indian Institute of Health Management Research (IIHMR), on the public health situation during the COVID-19 pandemic.

Background:

- The rapid spread of the pandemic in the country had led to the loss of livelihood and productivity, increase in poverty and decline in nutrition levels.

Details:

Social determinants of health:

- The study identifying some primary aspects of inequities had noted that around 40% of the health outcomes could be measured through social determinants.
- The lack of accessibility and affordability, poverty, lack of education, inequitable distribution of income and lack of proper nutrition were the gaps which had caused major concerns in the health sector during the pandemic.

Recommendations:

- There is the need for urgent action for reducing health inequities in India. The transformation of public health could only be achieved through equity.
- India needs to adopt an integrated approach to address the various determinants at the individual, community and the health system levels. The integrated approach may require the state to work on aspects such as nutrition and sanitation along with improved access to healthcare facilities. Along with the bridging of gaps caused by inequities, a larger picture of health should be highlighted through Sustainable Development Goals with the focus on universal health coverage.
- There is the need for enhanced global collaboration. The global health leadership should work together and act beyond borders by sharing resources such as testing kits, treatment drugs and vaccinations with the low-income countries.

Issues Relating to Health

6. WHO urges halt on sale of live wild mammals in markets

- » Prelims: WHO; UNEP
- » Mains: One health approach

Context:

- The World Health Organization called for a halt to the sale of live wild mammals in food markets to prevent the emergence of new diseases such as COVID-19.

Details:

- Fresh guidance has been drawn up by the WHO in conjunction with the World Organisation for Animal Health (OIE) and the United Nations Environment Programme (UNEP).
- They called on all national competent authorities to suspend the trade in live caught wild animals of mammalian species for food or breeding and close sections of food markets selling live caught wild animals of mammalian species as an emergency measure unless demonstrable effective regulations and adequate risk assessment are in place.
- The agencies recalled that some of the earliest known cases of COVID-19 had links to a wholesale food market in Wuhan.

Significance:

- Animals, particularly wild animals, are the source of more than 70% of all emerging infectious diseases in humans, many of which are caused by novel viruses.
- Wild mammals, in particular, pose a risk for the emergence of new diseases.
- Because traditional markets play a central role in providing food and livelihoods for large populations, banning the sale of live wild mammals could protect the health of market workers and customers alike.

Diseases In News

7. World Malaria Day

- » Prelims: Malaria- Vector

Context:

- 25th April is observed every year as World Malaria Day.

About World Malaria Day:

- The first 'World Malaria Day' was observed on 25 April, 2008 led by the World Health Organisation (WHO) and many governments all over the world.

- The theme for the 2021 World Malaria Day is 'Reaching the zero malaria target'.
- The 'Africa Malaria Day' used to be observed on 25 April from 2011. The World Malaria Day evolved from this observance in order to emphasise the global health impact of this dreaded disease.

About Malaria:

- Malaria is a mosquito-borne disease caused by a parasite.

What causes malaria?

- It is typically transmitted through the bite of an infected Anopheles mosquito. Infected mosquitoes carry the Plasmodium parasite. When this mosquito bites a human, the parasite is released into the bloodstream.
- Once the parasites are inside the body, they travel to the liver, where they mature. After several days, the mature parasites enter the bloodstream and begin to infect red blood cells.
- Within 48 to 72 hours, the parasites inside the red blood cells multiply, causing the infected cells to burst open.
- The parasites continue to infect red blood cells, resulting in symptoms that occur in cycles that last two to three days at a time.
- Malaria is typically found in tropical and subtropical climates where the parasites can live. It is most prevalent in Africa, followed by Asia and Latin America. It also affects people in the Middle East and Europe albeit to a much smaller degree.

Symptoms:

- Symptoms include shaking chills, high fever, profuse sweating, headache, nausea, vomiting, abdominal pain, diarrhoea, anaemia, muscle pain, convulsions, etc.
- Malaria can cause a number of life-threatening complications such as swelling of the brain's blood vessels, organ failure, low blood sugar.

Treatment:

- A vaccine for malaria has not yet been formulated.
- But, it can be cured with prescription medicines, depending upon the case.
- In India, the National Malaria Control Programmes conducts programs and takes measures to eradicate this disease from India where it is a serious public health issue. Nearly 95% of the population resides in areas endemic to malaria.
- Unfortunately, most areas in India are prone to malaria except areas that are at a high altitude of 2000-2500 m.

Diseases in News

8. Diphtheria

- » Prelims: Diphtheria- causative micro-organism
- Diphtheria is a serious infection caused by strains of bacteria called *Corynebacterium diphtheriae* that make toxin (poison). It can lead to difficulty breathing, heart failure, paralysis, and even death.
- The diphtheria toxin causes inflammation of heart muscle (myocarditis) and this can lead to death if not treated with diphtheria antitoxin and proper antibiotics.
- Diphtheria is a vaccine preventable disease – the toxoid vaccine elicits an immune response against the toxin which is encoded by a tox gene of the pathogen.
- The increasing diversity of the bacterium species, emergence of variant toxin genes and progression of antimicrobial resistance may lead to an increase in the incidence of diphtheria.

Diseases in News

9. Brucellosis

- » Prelims: Brucellosis
- » Mains: Animal diseases- concerns associated

Context:

- Animal Husbandry officials in Kerala have launched preventive measures after a few cases of brucellosis were detected in animals.

Brucellosis:

- Brucellosis is a disease caused by a group of bacteria from the genus *Brucella*. These bacteria can infect both humans and animals.
- Brucellosis is a zoonotic infection. It is a bacterial infection that spreads from animals to people. It affects thousands of people worldwide.
- Most commonly, people are infected by eating raw or unpasteurized dairy products. Sometimes, the bacteria that cause brucellosis can spread through the air or through direct contact with infected animals.

Diseases in News

10. African Swine fever

- » Prelims: African swine fever

Context:

- Certain areas in four districts of Mizoram have been declared as epicentres of the African swine fever (ASF).
- African swine fever (ASF) has killed 276 domestic pigs in the Lunglei district of Mizoram.

African Swine Fever:

- African Swine Fever (ASF) is different from swine flu. The virus does not affect people and there is no impact on human health.
- Swine influenza or swine flu is a respiratory disease of pigs, which is caused by type A influenza virus.
- ASF is a severe viral disease that affects wild and domestic pigs typically resulting in an acute haemorrhagic fever.
- ASF is caused by a large DNA virus of the Asfarviridae family.

SOCIAL ISSUES

Social Issues - Related to Trans Persons

1. It's time to enact a Siras Act

- » Prelims: Sec 377 of the IPC; Article 14 of the Indian Constitution
- » Mains: Important SC judgements relating to the Trans persons community and their significance in ensuring equality

Context

- The article argues for an ex post facto pardon to those who were convicted under Section 377 of the Indian Penal Code (IPC).

Background:

Section 377 of the IPC:

- Section 377 dealing with unnatural offences notes that whoever voluntarily has carnal inter-course against the order of nature with any man, woman or animal, shall be punished with 1[imprisonment for life], or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine.
- While the statute criminalises all anal sex and oral sex, including between opposite-sex couples, it largely affected same-sex relationships.

Naz Foundation case:

- The Delhi High Court's verdict in Naz Foundation v. Govt. of NCT of Delhi (2009) resulted in the decriminalisation of homosexual acts involving consenting adults.
- The Court held that Section 377 offended the guarantee of equality enshrined in Article 14 of the Constitution, because it creates an unreasonable classification and targets homosexuals as a class.

Supreme Court's stand:

Suresh Kumar Koushal case:

- The Supreme Court, in Suresh Kumar Koushal vs. Naz Foundation (2013), reinstated Section 377 in the IPC.

Navtej Singh Johar case:

- The SC's judgment in Navtej Singh Johar & Ors. v. Union of India (2018) is a landmark decision of the Supreme Court of India that decriminalised all consensual sex among adults, including homosexual sex. The Supreme Court of India ruled that the application of Section 377 of the IPC to consensual homosexual behaviour

between adults was "unconstitutional, irrational, indefensible and manifestly arbitrary". The verdict was hailed as a landmark decision for LGBT rights in India.

- * Elements of Section 377 relating to sex with minors, non-consensual sexual acts such as rape, and bestiality remain in force.

Details:

- The article argues for an ex post facto pardon to those who were convicted under Section 377 of the Indian Penal Code (IPC). The author argues that such an enabling law would help do justice to those convicted in the LGBTQ+ community under the Section 377 of the IPC.
- Also notably such a law would be in line with international practice in some countries like the U.K which has enacted the Alan Turing law.
 - * The U.K's Alan Turing law grants amnesty and pardon to those convicted of consensual same-sex relationships.. The Alan Turing law provides not only a posthumous pardon but also an automatic formal pardon for living people.
- The Indian state could enact a 'Siras Act' on the lines of the Alan Turing law. Ex post facto pardon may be a novel concept in India, but it would do justice, even though delayed, to the prisoners of sexual conscience.

Social Issues - Related to Trans Persons

2. A way forward for trans persons

- » Prelims: Transgender Persons (Protection of Rights) Act, 2019- Provisions; Yogyakarta Principles
- » Mains: Significance and concerns associated with the act
- 13 members of the transgender community have been selected recently as constables under the Chhattisgarh police. This marks a significant step forward in the recognition of rights of the Transgender community.
 - * Earlier, a few transgenders were inducted into the Tamil Nadu police too.
- The selection despite the lack of reservation for the transgender community highlights the physical and mental competence of the candidates and will help shed the stigma of identity, disability, criminality, or untouchability.

- This will certainly help in changing the perception of people towards the community by aiding the society in erasing its biases and accept transgender people as equal human beings.

NALSA vs. Union of India (2014) case:

- The Supreme Court in NALSA vs. Union of India (2014) case ruled that transgender persons have the right to decide their self-identified gender. The binary notion of gender, which denied equal protection of law to transgenders, was rejected by the top court.

Transgender Persons (Protection of Rights) Act, 2019:

- The Transgender Persons (Protection of Rights) Act, 2019, recognises that transgender persons have a legal right to self-perceived gender identity in accordance with the principle of the "Psychological Test" instead of the "Biological Test". It paved the way for issuing a certificate of transgender identity.
- According to law, transgender persons cannot be discriminated against in any matter relating to employment by any establishment.
- The act is in spirit with international conventions, particularly the Universal Declaration of Human Rights, 1948, the International Covenant on Civil and Political Rights, 1966, and the Yogyakarta Principles, 2006.

Social issues - Related to Women

3. Girls face more pressure during pandemic: study

- » Mains: Disproportionate impact of the pandemic on women/girls

Context

- A study titled 'COVID in Her Voice: A Girl-led and Centred Participatory Research Study' conducted by girls aged 13-24 from Ahmedabad, Alwar, Bareilly, Delhi, Lucknow, Mumbai and Pune within their communities.
- The study was supported by the U.K. government and conducted by EMpower, a global philanthropy focused on at-risk youth in emerging markets.

Challenges Faced by Girls:

- * Inability to attend online school.
- * Increase in household chores, resulting in lesser or no time to study online.
- * Lack of access to resources and technology.
- * With households from marginalised communities facing financial stress due to the economic impact of COVID-19, the pressure to get married increased.

- * Almost 90% of girls reported experiencing mental distress and despair with no access to information about coping mechanisms.

Recommendations:

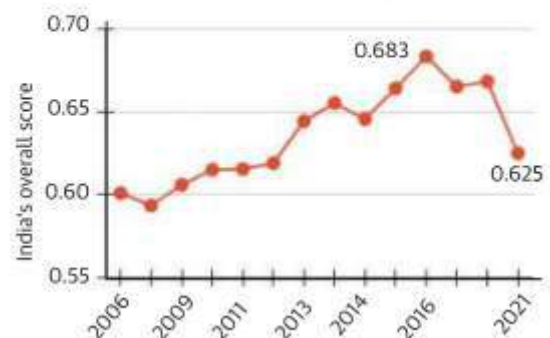
- The study recommended a list of policies including establishing girl-friendly spaces within the community such as skills training centres and violence-free spaces.

Social issues - Related to Women

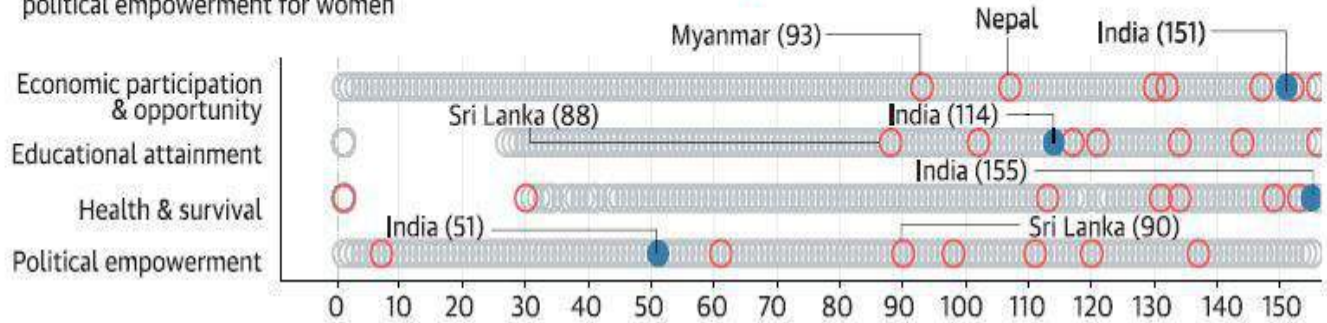
4. Global Gender Gap Report

- » Prelims: Global Gender Gap Report- parameters and India's performance
- » Mains: Global Gender Gap Report- Important observations
- India fell 28 spots to the 140th position in the World Economic Forum's Global Gender Gap Report 2021.
- India's score is at 0.625, implying that India has achieved 62.5% gender parity.
- Among the dimensions considered, India had its lowest ranking in terms of health and survival.

PROGRESS CHART | After a consistent rise from 2006, India's gender parity score reached a high of 0.68 in 2016. However, the score has dropped sharply since then and reached the lowest in a decade in 2021



WHERE INDIA STANDS | The chart depicts country **rankings** across four major dimensions used to measure progress towards gender parity. India (●) ranked among the bottom countries in terms of economic participation and opportunity, and health and survival, as did many of its South Asian neighbours (○). The country fared relatively better in terms of political empowerment for women



Social Issues - Related to Women

5. UNFPA's population report

- » Prelims: UNFPA
- » Mains: Issue of bodily autonomy for women

Context:

- United Nations Population Fund's (UNFPA) flagship State of World Population Report 2021 titled 'My Body is My Own' has been launched.

State of World Population Report:

- State of World Population Report is an annual flagship report of UNFPA
- Each edition covers and analyses developments and trends in world population and demographics, as well as shedding a light on specific regions, countries and population groups and the unique challenges they face.

Theme of 2021 report:

- The report turns the spotlight on bodily autonomy.
 - * This is the first time a United Nations report has focused on bodily autonomy.
- Bodily autonomy is defined as the power and agency to make choices about your body without the fear of violence or having someone else decide for you.
- Some examples of violation of bodily autonomy include, child marriage, female genital mutilation, a lack of contraceptive choices leading to unplanned pregnancy, unwanted sex exchanged for a home and food or when people with diverse sexual orientations and gender identities cannot walk down a street without fearing assault or humiliation.
- Under its ambit also fall people with disabilities stripped of their rights to self-determination, to be free from violence and to enjoy a safe and satisfying sexual life.

Important observations:

- Nearly half the women from 57 developing countries do not have the right to make decisions regarding their bodies, including using contraception, seeking healthcare or even on their sexuality.
- In countries where data is available, only 55% of women are fully empowered to make choices over healthcare, contraception and the ability to say yes or no to sex.
- It also highlights that only 75% of countries legally ensure full and equal access to contraception.

Social Issues - Poverty and Issue of Inequality

6. The pillars of an equitable post-COVID India

- » Prelims: K shaped economic recovery
- » Mains: Impact of the pandemic on the existing inequalities in India; recommendations in this regard

Context:

- Impact of the pandemic on the existing inequalities in India.

Details:

Economic shock of the pandemic:

- The economic shock due to the pandemic has been much more severe for India for two reasons. First, pre-COVID-19, the economy was already slowing down, compounding existing problems of unemployment, low incomes, rural distress, malnutrition, and widespread inequality. Second, India's large informal sector is particularly vulnerable.

Impact of the pandemic on economic inequality:

- India has been witnessing growing inequalities and the COVID-19 pandemic has only accelerated the trend.

- The share of wages declined as compared to that of profits implying the increasing profits being cornered by the investors as compared to wages being earned by the workers.
 - * The big companies and a large part of the corporate sector was able to manage the pandemic. The quarterly net profit of the BSE200 companies reached a record high of Rs. 1.67 trillion in the third quarter of FY21 and was up by 57% year-on-year.
 - * The informal sector and workers have suffered a lot with loss of incomes and employment in the last one year.
 - * Women lost more jobs and many are out of the workforce. Inequalities have increased in health care and education sector too.
- The economic recovery has been more k-shaped with rising inequalities.
- Many economic experts and reports have pointed out the uneven impact of the pandemic.
 - * International organisations like the World Bank, the International Monetary Fund and the International Labour Organization have warned about rising inequalities in several countries including India due to the pandemic.
 - * The Pew Research Report shows that India's middle class may have shrunk by a third, while the number of poor people earning less than Rs. 150 per day more than doubled due to the novel coronavirus pandemic.

Need to address the issue of inequality:

- Reduction in inequalities is important for its own sake and for improving demand which can raise private investment, consumption and exports for higher and sustainable economic growth.
- In the post-COVID-19 world, addressing inequality is important for higher and sustainable economic growth and the well-being of the population.

Way forward:

- The author suggests the following approach for reducing inequalities.

Employment and wages:

- The creation of quality and well paying employment is central to the inclusive growth approach.
- This would necessitate the need to improve the investment rate in the economy.
 - * The investment rate declined from 39% in 2011-12 to 31.7% in 2018-19.
- Investment in infrastructure including construction can create employment. The central government's move to focus on capital expenditure for infrastructure in the recent budget is a step in the right direction.

- The main challenges with respect to employment generation which would have to be addressed include the following:
 - * Creating productive jobs for seven to eight million per year
 - * Correcting the mismatch between demand and supply of labour- only 2.3% of India's workforce has formal skill training)
 - * Structural change challenge- While the service sector continues to expand and contribute an ever increasing share in the GDP matrix, ideally, manufacturing should be the engine of growth. Labour-intensive exports need to be promoted.
 - * Need to balance the objective of promoting growth of micro, small & medium enterprises and informal sectors by improving ease of doing business even while upholding the rights of workers
 - * Need to be well prepared for automation and technology revolution
 - * Need to ensure social security and decent working conditions for all
 - * Work towards raising real wages of rural and urban workers and guaranteeing minimum wages.

Focussing on human development:

- The state should focus on creating equality of opportunity by improving human development through increased public expenditure on health and education.
- Education and health achievements are essential for reducing inequality of opportunities.
- India should move towards universal health care and spend 2%-3% of GDP on health.
- The main concerns associated with the health and education sector are as follows:
 - * Public expenditure on health is only 1.5% of GDP.
 - * In education, there are islands of excellence that can compete internationally even as a vast majority of masses of children are churned out with poor learning achievement. The pandemic also brought to light the digital gap in education.

Social security net:

- An important intervention in addressing the inequalities would involve providing a quasi-universal basic income and other safety nets to the most vulnerable sections of the population.
- This could include providing a minimum income for the poor and the vulnerable based on cash transfers; expanding the number of days provided under the Mahatma Gandhi National Rural Employment Guarantee Act and a national employment guarantee scheme for urban areas.

- Schemes and interventions in the agri sector aimed at doubling the income of the farmers would play a critical role in reducing inequalities.
- These measures would help provide income support to the needy.

Addressing the financial aspects:

- Enhancing tax and non-tax revenues of the government is needed to spend on the above discussed priorities.
- The tax/GDP ratio has to be raised, with a wider tax base. Richer sections have to pay more taxes.
- The inequalities between the Centre and States in finances should be reduced. State budgets must be strengthened to improve capital expenditures on physical infrastructure and spending on health, education and social safety nets.

Non economic factors:

- Unequal distribution of development is rooted in the inequalities of political, social and economic power.
- Apart from economic factors, non-economic factors such as deepening democracy and decentralisation can help in reducing inequalities.

Social issues - Poverty and issue of inequality

7. Impact of the pandemic on nutritional security

- » Prelims: Global Hunger Index
- » Mains: Impact of the pandemic on nutritional security; Governmental measures and recommendations

Context:

- Growing levels of acute food insecurity.

Key facts:

- The second wave of Covid-19 infections will likely pose a greater risk to the poor.
- India has consistently ranked poorly in all international rankings on hunger (ranking 102 among 117 countries in the Global Hunger Index 2019).
- Surveys show among the poor and the marginalized, the quantity of food they consumed either 'decreased' or 'decreased a lot' compared to before the pandemic.
 - * Households reported cutting down on nutritious food such as milk, vegetables, pulses and oil.
 - * The poorer, socially marginalised Dalits, and those with lesser access to food security schemes (such as migrants) faced more severe food insecurity.

Reduced income:

- A large number of households reported no or lower levels of income.
- Households were also seeking loans for food, an indicator of the debilitating food and financial insecurities that poor households continue to face.

Migrants on the margins:

- Migrants who have travelled to cities only months ago are again travelling back to their villages.
- There was limited support for migrants even in existing social protection schemes such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

Impact:

- These reductions will undoubtedly further accelerate the impending effects on children's nutrition, as highlighted in the National Family Health Survey or NFHS-V (2019-20) and the Global Food Policy Report, 2021.
- The loss in nutrition may have come as a consequence of people losing their jobs and/or being pushed into lower income brackets over time.
- This indicates that households have not had a chance to rebuild, and with many completely exhausting their savings and facing massive debt, they are bound to be more severely hit than the first wave.

Way forward:

- The government will provide 5 kilogram of free food grains to millions of poor who are covered under the National Food Security Act, 2013, "due to economic disruptions caused by the Covid-19 outbreak in the country" for the months of May and June under the Pradhan Mantri Garib Kalyan Anna Yojana.
- Prime Minister stressed that it is important that the poor of the country have nutritional support when the country is facing the second wave of coronavirus pandemic.
- Experts suggest the programme should be further extended to six months because job recoveries will take time.
- The government needs to expand the current offering to include nutritious foods like pulses; address issues faced in existing schemes such as MGNREGA (like delays in wages and rationing); and new schemes such as a potential urban employment scheme should be explored.
- Social protection mechanisms for the poorest and most vulnerable people during and in the aftermath of the COVID-19 crisis need to be employed that incorporate provisions on the Right to Food, both in terms of quantity and nutritional quality.

- For migrants stuck in cities without work, community kitchens (such as Amma canteens) are required.

Miscellaneous

8. A road map for tolerance

- » Mains: Techno-racism; Consequences of racism and remedial actions needed

Context:

- March 21, marks the International Day for the Elimination of Racial Discrimination.

Background:

Forms of racism:

- Current forms of racism and discrimination are complex and often covert.
- The anonymity of the Internet has allowed racist stereotypes and inaccurate information to spread online. At the onset of the pandemic, traffic to hate sites and specific posts against Asians grew by 200% in the U.S. In India and in Sri Lanka, social media groups and messaging platforms were used to call for social and economic boycotts of religious minorities, amid false information accusing them of spreading the virus.
- Structural forms of discrimination, including micro-aggressions and everyday indignities, remain widespread.
- The use of new technologies and artificial intelligence in security has raised the spectre of 'techno-racism'.

Consequences of racism:

- Racial discrimination, beyond being a breach of human rights, has harmful effects on human health and well-being, and risks wider disruptions to social cohesion.
- Prejudiced attitudes and discriminatory acts, whether subtle or overt, aggravate existing inequalities in societies.
 - * A study published by The Lancet drew attention to the social dimension of the COVID-19 pandemic and the greater vulnerability of ethnic minorities, who have been disproportionately affected.
 - * The World Health Organization has cautioned on the dangers of profiling and stigmatising communities that can lead to fear and the subsequent concealment of cases and delays in detection.
- Racial discrimination deepens and fuels inequality in our societies.

UNESCO's role in anti racism movement:

- UNESCO has been playing a critical role in the anti- racism movement through its actions against racism through education, the sciences, culture, and communication. It has been promoting inter-cultural dialogue and learning.
- UNESCO's headquarters in Paris recently hosted a Global Forum against Racism and Discrimination. The Forum gathered policymakers, academics, and partners to initiate a new multi-stakeholder partnership on anti-racism.

Way forward:

- The new manifestations of racism and discrimination call for renewed commitments to mobilise for equality.
- Racism will not be overcome with mere professions of good faith but must be combatted with anti-racist action.
- There is the need for a multisectoral effort to tackle the root causes of racism through anti-racist laws, policies and programmes.
- A global culture of tolerance, equality and anti-discrimination needs to be cultivated. There is the need to eradicate harmful stereotypes and foster tolerance.

Quote:

- Former UN Secretary-General Kofi Annan: "Our mission is to confront ignorance with knowledge, bigotry with tolerance, and isolation with the outstretched hand of generosity. Racism can, will, and must be defeated."

Initiatives in news - Related to tribals

9. Anamaya

- » Prelims: Anamaya; TB elimination target for India
- » Mains: Government initiatives related to tribals

Context:

- Union Minister launched tribal health cooperative 'Anamaya'.

About Anamaya:

- Anamaya is a tribal health collaborative supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF).
- It will converge efforts of various government agencies and organisations to enhance the health and nutrition status of the tribal communities of India.
- The initiative is committed to ending preventable deaths in the tribal communities.

- Starting with 50 tribal aspirational districts, the Tribal Health Collaborative (THC) would help to accelerate TB activities and achieve India's target of TB Elimination by 2025 through the launch of a "Jan Andolan for TB" along with focus on addressing key determinants like alcohol dependence and under-nutrition in tribal areas.

Plans under Anamaya:

- Over a 10-year period, the work of the THC will be extended to 177 tribal districts as recognised by the Tribal Affairs Ministry.
- It aims to build a sustainable, high-performing health ecosystem to address the key health challenges faced by the tribal population of India.
- The THC proposes to establish 500 Primary Health Centres and 100 Community Health Centres in the next couple of years.
- It also plans to integrate 5000 tribal healers with the health system.
- There are also plans to establish tele-medicine facilities in the remotest tribal blocks.

Initiatives in news - Related to urbanization

10. Challenges launched by the Housing & Urban Affairs Ministry

- » Prelims: EatSmart Cities Challenge and Transport 4 All Challenge; smart cities mission.

Context:

- The Ministry launched the EatSmart Cities Challenge and Transport 4 All Challenge.

EatSmart Cities Challenge:

- The EatSmart Cities Challenge is envisioned as a competition among cities to recognize their efforts in adopting and scaling up various initiatives under Eat Right India.
- This unique challenge, in partnership with Smart Cities Mission will create an environment of right food practices and habits, strengthen the food safety and regulatory environment, build awareness among the consumers and urge them to make better food choices in India's major cities and can set an example for other cities to follow.
- The challenge is open to all Smart Cities, capital cities of States/UTs, and cities with a population of more than 5 lakh.
- At the end of first phase of the challenge, 11 cities will be selected for deeper engagement for an extended period to implement their vision.

Transport 4 All (T4All) Challenge:

- Transport 4 All challenge has been launched in collaboration with Institute for Transportation and Development Policy (ITDP).

- The Challenge aims to bring together cities, citizen groups, and start-ups to develop solutions that improve public transport to better serve the needs of all citizens.
- The first edition of the Challenge focuses on digital innovation.
- Cities and start-ups will receive guidance to develop and test various solutions, learn from them, and scale them to build people's trust in public transport and enhance their mobility.
- The solutions will make public transport—formal as well as informal— safe, convenient, and affordable for all.
- All the Smart Cities Mission cities, capitals of states and union territories (UTs), and all cities with a population of over 5 lakhs are eligible for the Challenge.
- Three stages of the challenge:
 - * Stage I PROBLEM IDENTIFICATION: Cities, with the support of NGOs, identify key recurring problems that citizens and public transport operators face.
 - * Stage II SOLUTION GENERATION: Start-ups develop prototypes of solutions to improve public transport with inputs from cities and NGOs.
 - * Stage III PILOT TESTING: Cities engage start-ups for large-scale pilots and refine the solutions based on citizen feedback.

Miscellaneous

11. NCSC Grievance Management Portal

- » Prelims: NCSC

Context:

- NCSC Launches "Online Grievance Management Portal" for Persons from Scheduled Castes.

About the Portal:

- The National Commission for Scheduled Castes (NCSC) aims to streamline the grievance redressal especially of the Scheduled Caste population through this portal.
- It would make it easier for them to register complaints from any part of the country.
- The portal will facilitate an end-to-end e-filing of complaints and grievances and their tracking.
- It is also intended to make the hearing process work on similar lines as e-courts.
- This portal is linked to the Commission's website and one can file one's complaint upon registering on it.
- The facility to upload documents and audio/video files is also available.

- This would supplement the physical submission of complaints and grievances.
- The portal was designed in collaboration with the Bhaskaracharya Institute for Space Applications and Geo-informatics (BISAG-N), a Centre of Excellence under the Ministry of Electronics and Information Technology, Government of India.

EDUCATION

Issues Relating to Education

1. Making education accessible

- » Mains: Measures to ensure quality education for all; Use of digital technology in educational sector

Context

- The article analyses the challenges with respect to quality education and suggests measures to be taken by the Government.

Potential of Airwaves:

- The Government of India owns the airwaves. Prasar Bharati is India's broadcasting corporation handling both radio and television in India.
- All India Radio (AIR) is blessed with 470 broadcasting centres which cover 92% of the country's geographical area and 99.19% of our population.
- Doordarshan (DD) handles television, online and mobile broadcasting across our country and the world with 34 satellite channels, 17 well-equipped studios in State capitals and 49 studio centres in other cities.

Suggestions:

- With the availability of airwave resources, AIR and DD can be used to broadcast lessons, given that education is one of the three functions of the two agencies under the Prasar Bharati Act.
- If regular radio is not enough, we also have digital radio spawning FM stations leased out to private players for a fee and several FM stations that are run by NGOs, universities and such agencies.
- These agencies can be reinvented to cater to the needs of the education sector.

Significance:

- With AIR and DD being free, the heavy drain on financial resources will be drastically reduced.

Free hours of Internet:

- The Government can request the Internet Service Providers to provide the teachers and students after verification few hours of free Internet usage.

Conclusion:

- These steps will not be easy to implement but the government should take a firm decision that is in the interest of the people.
- Therefore, adequate public financial resources must be allocated for providing access to online educational facilities, in particular, for the

students belonging to the economically weaker sections in order to overcome the prevalent digital divide.

Initiatives in News

2. National Council for Teacher Education (NCTE)

- » Prelims: NCTE
- » Mains: Significance of teacher education in ensuring quality education

Context

- Union Education Minister launches "MyNEP2020" platform of NCTE Portal.

Details:

- The platform seeks to invite suggestions/inputs/membership from the stakeholders for preparing draft for the development of National Professional Standards for Teachers (NPST) and National Mission for Mentoring Program membership (NMM).

About NCTE:

- The NCTE in its previous form was established in 1973 as an advisory body for the Central and State Governments on all matters pertaining to teacher education. It was not a separate institution but a department under the National Council of Educational Research and Training (NCERT).
- It was established as a statutory body in 1995 in accordance with the National Council for Teacher Education Act, 1993.
- It was given statutory authority as envisaged under the National Policy on Education (NPE), 1986 since it could not perform essential regulatory functions effectively in its earlier form.

Objectives:

- Coordinate the academic activities on teacher education
- Develop Curriculum Frameworks and Model Syllabi
- Prepare guidelines for conducting academic activities in TEIs
- Conduct research in the field of Teacher Education
- Provide resource support in the field of Teacher Education

- Develop database on various aspects of Teacher Education

Initiatives in News

3. 'Students' and Teachers' Holistic Advancement through Quality Education (SARTHAQ)'

» Prelims: SARTHAQ; NEP 2020

Context

- The Department of School Education and Literacy unveiled an implementation plan for school education called SARTHAQ in pursuance of the goals and objectives of the National Education Policy (NEP) 2020.

About SARTHAQ:

- SARTHAQ has been developed through wide and intensive consultative process with States and UTs, autonomous bodies and suggestions received from all stakeholders.
- The major focus of SARTHAQ is to define activities in such a manner that they clearly delineate goals, outcomes and timeframe i.e., it links recommendations of NEP with 297 Tasks along with responsible agencies, timelines and 304 outputs of these Tasks.
- SARTHAQ is a working document and is broadly indicative in nature and will be updated from time to time based on inputs/feedback from all stakeholders.
- States and UTs are given the flexibility to adopt this plan with local contextualisation and also modify it as per their needs.
- Outcomes envisaged after the implementation of SARTHAQ:
 - * Curriculum reforms – New National and State Curriculum Frameworks for School Education, Early Childhood Care and Education, Teacher Education and Adult Education will be developed.
 - * Increase in enrolment and retention rates and reduction in the drop-out levels and out of school children.
 - * Access to quality ECCE and Universal Acquisition of Foundational Literacy and Numeracy by Grade 3.
 - * Improvement in Learning Outcomes at all stages with emphasis on teaching and learning through mother tongue/local/regional languages in the early years.
 - * Integration of vocational education, sports, arts, knowledge of India, 21st century skills, values of citizenship, awareness of environment conservation, etc. in the curriculum at all stages.

- * Introduction of experiential learning at all stages.
- * Reforms in Board exams and various entrance tests.
- * Development of high quality and diversified teaching-learning material.
- * Availability of text books in Regional/local/home language.
- * Improvement in quality of Teacher Education Programmes.
- * Improvement in quality of newly recruited teachers and capacity building through Continuous Professional Development.
- * Safe, Secure, inclusive and conducive learning environment for students and teachers.
- * Improvement in infrastructure facilities including barrier free access and sharing of resources among schools.
- * Uniform standards in learning outcomes and governance across public and private schools.
- * Integration of technology in educational planning and governance and availability of ICT and quality e-content in classrooms.

Miscellaneous

4. E9 Initiative

- » Prelims: E9 initiative; UN goal on quality education
- Nine countries including India, China and Brazil explored the possibility of co-creating and scaling up digital learning to achieve UN sustainable goal on quality education.
- Called E9 initiative, the consultation was the "first of a three-phased process to co-create an initiative on digital learning and skills, targeting marginalised children and youth, especially girls. The initiative aims to accelerate recovery and advance the Sustainable Development Goal 4 agenda by driving rapid change in education systems."
- The E9 countries are India, Bangladesh, Brazil, China, Egypt, Indonesia, Mexico, Nigeria and Pakistan.
- This was done in the wake of the COVID pandemic which saw a huge disruption in learning and as per the UNESCO, offers an opportunity to enhance interconnected and digitised economies.

Significance:

- The countries together will drive change in support to teachers; investment in skills; and narrowing of the digital divide.
- This Consultation will highlight progress, share lessons and explore opportunities for collaboration and scale-up to expand digital learning and skills.

HISTORY

World History - Important events

1. Armenian Genocide of 1915

- » Prelims: UN Convention on Genocide of 1948; 1st World War
- » Mains: U.S. Turkey relations- points of conflict

Context

- U.S. President Joe Biden has officially recognised the mass killings of Armenians by Ottoman Turks in 1915-16 as an act of genocide.

What is a genocide?

- According to Article II of the UN Convention on Genocide of 1948, genocide has been described as carrying out acts intended "to destroy, in whole or in part, a national, ethnic, racial or religious group".

Details:

- Before the First World War broke out in 1914, there were 2 million Armenians in the Ottoman Empire.
- Armenians were largely living in the eastern fringes of the Empire. The Ottoman Turks released the Turkish and Kurdish militias upon them.
- Hundreds of thousands of Armenians were deported from eastern Anatolia (today's Turkey) to concentration camps in the Syrian steppe.
- Up to 1.5 million Armenians are estimated to have been killed in the early stage of the First World War within the territories of the Ottoman Empire.

Background:

- In a way, the Armenians were victims of the great power contests of the late 19th and early 20th centuries.
- When the Ottoman Empire was in decline on its fringes by the last quarter of the 19th century, Armenians were seen by the rulers in Constantinople as a fifth column.
- The resentment started building up after the Russo-Turkish war of 1877-78 in which the Turks lost territories.
- In the Treaty of Berlin, big powers dictated terms to the Ottomans, including putting pressure on the Sultan to initiate reforms in the provinces inhabited by Armenians, and to guarantee their security against the Circassians and Kurds.
- The Sultan saw this as a sign of strengthening ties between the Armenians and other rival countries, especially Russia.

- In 1908, the Young Turks wrested control from the Sultan and promised to restore imperial glory. Under the Turks when the administration was run by the famous "Three Pashas", the empire became more Turkic and persecution against the ethnic minorities picked up.
- In October 1914, Turkey joined the First World War on the side of Germany.
- In the Caucasus, they fought the Russians, their primary geopolitical rival. But the Ottomans suffered a catastrophic defeat in the Battle of Sarikamish by the Russians in January 1915. The Turks blamed the defeat on Armenian treachery and Armenians in the Ottoman Army were executed.
- On April 24, the Ottoman government arrested about 250 Armenian intellectuals and community leaders. Most of them were later executed. (April 24 is the Remembrance Day).
- After the fall of the empire, many Ottoman officials were tried and executed for the atrocities committed against Armenians.
- The Three Pashas fled the country and took refuge in Germany.
- But Armenian resistance fighters under the banner of Operation Nemesis continued to hunt down Ottoman officials.
- In 1921 the Grand Vizier and key architect of the atrocities was assassinated on the street of Berlin by an Armenian student.

Turkey's response:

- Turkey has acknowledged that atrocities were committed against Armenians but denies it was a genocide and challenges the estimates that 1.5 million were killed.
- Biden's announcement on the Armenian Genocide Remembrance Day could infuriate Turkey, America's NATO ally.

Modern India and Post Independence India-Important personalities

2. Jagjivan Ram

- » Prelims: Jagjivan Ram
- He was born in Chandwa in Bihar to a Dalit family. His father was in the British army but later left it and acquired farming land in his native place.
- He pursued his schooling at the nearby town of Arrah where he faced discrimination for the first time. He was considered 'untouchable' and had

to drink water from a different pot. Jagjivan Ram protested against this by breaking the pot. The principal then had to remove the separate pot from the school.

- In 1925, Jagjivan Ram met scholar Pandit Madan Mohan Malaviya and was greatly inspired by him. On Malaviya's invitation, he joined the Banaras Hindu University.
- Even at the university, Jagjivan Ram faced discrimination. This inspired him to protest against such social boycott of a section of society. He also organised the scheduled castes to protest against injustice.
- After his stint at BHU, he joined the University of Calcutta from where he secured a B.Sc. degree in 1931.
- He was noted by Subhas Chandra Bose because of his organisational skills. In 1935, he assisted with the formation of the All-India Depressed Classes League. He joined the Congress Party where he was appreciated as a brilliant spokesperson for the Depressed Classes.
- In 1935, he proposed at a session of the Hindu Mahasabha that drinking water wells and temples be open to untouchables.
- He took part in the freedom movement as well and was imprisoned during the Quit India Movement.
- When Jawaharlal Nehru formed the provisional government, Jagjivan Ram became its youngest minister. After independence, he was appointed the country's first labour minister.
- He also held various other portfolios including railways, food and agriculture, transport and communications, irrigation and defence. The Indo-Pakistan War of 1971 was fought when he was the defence minister.
- He also became India's Deputy Prime Minister when Morarji Desai became the Prime Minister after the Emergency.
- Jagjivan Ram was a member of the Parliament uninterrupted from 1936 to 1986 and this is a world record. He also holds another record for being the longest-serving cabinet minister in India (30 years).
- He was a champion of social equality and equal rights for the Depressed Classes.

DISASTER MANAGEMENT

Disaster and disaster management – Forest fires

1. Forest fires in south Mizoram

- » Prelims: Forest Survey of India; Map based facts
- » Mains: Causes of forest fires in India; Recommendations

Context:

- Forest fire in south Mizoram.

Details:

- Forest fires have continued to rage across Mizoram even after 48 hours after its breakout.
 - * According to a satellite data assessment by the Forest Survey of India (FSI), there were as many as 2,671 forest fire points in the state between April 20 and 26, with over 400 points on 26th March alone. NASA's Earth data website also showed a very large concentration of fires in and around the state.
- The forest fire reportedly broke out at Saisih forest area in the outskirts of Lunglei town and spread to Lunglei town.
- The massive forest fires have affected several parts of Mizoram and damaged vast tracts of land. While Lunglei is the worst affected, Serchhip, Lawngtlai and Hnahthial were also hit by the forest fire.
- The Assam Rifles had deployed personnel and firefighting equipment to the district, while the Indian Air Force had deployed two Mi-17V5 helicopters, equipped with Bambi Buckets, to douse the fire.
- According to concerned officials the forest fires have been largely contained.
 - * The fires in the residential areas were contained in the morning, while the forest fires continued.

Possible causes of the forest fire:

- Several factors may have led to the forest fires in south Mizoram.

Deficient moisture:

- According to the Indian Meteorological Department (IMD), the state of Mizoram recorded "large deficiency" in rainfall during the pre-monsoon period from March 1 to April 26 at 74% below normal.

Strong winds:

- The prevalent strong winds have made the flames very strong and are aiding in the rapid spread of the forest fire.

Fuel load:

- The forests in Mizoram have large bamboo plantations and bamboo leaves are highly inflammable.
- When there is less moisture and high fuel load in the form of dry leaves and twigs on the forest floor, fire catches easily and spreads rapidly.

Jhum Cultivation:

- Jhum cultivation is also another possible factor.
 - * Jhum cultivation, also known as the slash and burn agriculture, is the process of growing crops by first clearing the land of trees and vegetation and burning them thereafter.
- During this dry season, certain manmade factors may have led to extensive fires.

Disaster and disaster management – Avalanches

2. Avalanche in Uttarakhand

- » Prelims: Avalanche; Causes and preventive measures

Context

- Avalanche in Uttarakhand.

Background:

Avalanche:

- An avalanche is a rapid flow of snow down a slope, such as a hill or mountain.
- Primarily composed of flowing snow and air, large avalanches have the capability to capture and move ice, rocks, and trees.
- Avalanches can be set off spontaneously, by such factors as increased precipitation or snowpack weakening, or by external means such as humans, animals, and earthquakes.

Details

- Notably, the Joshimath–Malari–Girithidola–Sumna–Rimkhim axis area had experienced heavy rain and snow since the last five days, which is still continuing. This seems to have resulted in the avalanche.
- The avalanche hit a Border Roads Organisation (BRO) detachment and labour camps north of Joshimath.
- Ten bodies were recovered and 384 people rescued in the ongoing search and rescue operations. Eight persons are still unaccounted for.

Disaster and disaster management – Earthquakes

3. Earthquake in Assam

- » Prelims: Seismic zones of India; geological terminology
- » Mains: Vulnerability of India to earthquakes-reasons

Context

- An earthquake with a magnitude of 6.4 struck Assam.

Details:

- The earthquake was felt across northeast India, Bihar, West Bengal, Bhutan and Bangladesh.
- The National Centre of Seismology said the epicentre of the quake, at a depth of 10 km, was Dhekiajuli in Sonitpur district, and initial analysis showed it was located near the Kopili Fault closer to the Himalayan Frontal Thrust.
- The area is seismically very active falling in the highest Seismic Hazard Zone V associated with collisional tectonics where the Indian Plate subducts beneath the Eurasian Plate.
- The last major quake in the region was of magnitude 6.0 on July 29, 1960.

Earthquake:

- An earthquake is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves.

Seismic Zones in India:

- The Bureau of Indian Standards, based on the past seismic history has grouped the country into four seismic zones namely Zone-II, Zone-III, Zone-IV and Zone-V.
- Zone-V is the most seismically active region whereas Zone-II is the least active region.
- Entire northeastern India, parts of the UTs Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Rann of Kutch, parts of North Bihar and the Andaman and Nicobar Islands are classified as Zone-V.

Disaster and disaster management – Flash floods

4. Indonesia flash floods

- » Mains: Vulnerability of India urban areas to flash floods; associated concerns and preventive and mitigative measures

Context

- Landslips and flash floods from torrential rain in eastern Indonesia has killed at least 41 people and displaced thousands.

What are Flash Floods?

- A flash flood is a rapid flooding of low-lying areas: washes, rivers, dry lakes and depressions.
- It may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm, or melt water from ice or snow flowing over ice sheets or snowfields.
- Flash floods may also occur after the collapse of a natural ice or debris dam, or a human structure such as a man-made dam.
- Flash Floods are highly localized events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.

Concerns:

- Flash floods induce severe impacts in both the built and the natural environment. Especially within urban areas, the effects of flash floods can be catastrophic and show extensive diversity, ranging from damages in buildings and infrastructure to impacts on vegetation, human lives and livestock.
- There is a general lack of flash flood warning capabilities and capacities of the nations across the world.

Additional information:

India's Flash Flood Guidance services for South Asian countries:

- In 2020, India launched Flash Flood Guidance services for South Asian countries — India, Bangladesh, Bhutan, Nepal and Sri Lanka — to issue impact-based forecasting of floods, which are very sudden and of short duration, at watershed and also city level.
- The Flash Flood Guidance is a robust system designed to provide the necessary products in real-time to support the development of warnings for flash floods about 6- 12 hours in advance at the watershed level with a resolution of 4kmx4km for the Flash Flood prone South Asian countries.
- The guidance for flash floods in the form of threats (6 hours in advance) and risks (24 hours in advance) will be provided by the Regional Centre to the National Meteorological and Hydrological Services, National and State Disaster Management Authorities and all other stakeholders for taking necessary mitigation measures to reduce the loss of life and property.

Disaster and disaster management – Heatwaves

5. Heat Waves

- » Prelims: Heat wave- definition, season and vulnerable areas
- » Mains: Mitigation and adaptation strategies

Context

- Heat wave conditions very likely in isolated pockets over Rajasthan, Vidarbha and interior Tamil Nadu.

Details:

- The India Meteorological Department (IMD) has forecast heat wave conditions in some pockets over Rajasthan and in isolated pockets over east Vidarbha, and also in interior Tamil Nadu.

What is a heat wave?

- A heat wave is a period of abnormally high temperatures, more than the normal maximum temperature that occurs during the summer season in the North-Western and South Central parts of India.
- According to the IMD, a heat wave is considered if maximum temperature of a station reaches at least 40 deg celsius or more for the plains and at least 30 deg celsius or more for hilly regions.
- Based on departure from normal:
 - * Heat wave: Departure from normal is 4.5 deg celsius to 6.4 deg celsius
 - * Severe heat wave: Departure from normal is >6.4 deg celsius
- Based on actual maximum temperature:
 - * Heat wave: When actual maximum temperature ≥ 45 deg celsius
 - * Severe heat wave: When actual maximum temperature ≥ 47 deg celsius
- If the above criteria are met at least in 2 stations in a meteorological sub-division for at least two consecutive days, it declared on the second day.
- In India, heat waves occur mainly during March to June and in some rare cases even in July. The peak month is May.
- Heat waves generally occur over the plains of northwest India, Central, East & north Peninsular India during March to June.
 - * It covers Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Madhya Pradesh, Rajasthan, Gujarat, parts of Maharashtra & Karnataka, Andhra Pradesh and Telangana.
 - * Sometimes it occurs over Tamil Nadu & Kerala also.

- Heat waves adversely affect health involving among other issues, dehydration, heat cramps, heat exhaustion and/or heat stroke.

How can risks from Heat Waves be reduced?

- Early warning system and inter-agency coordination –Temperature forecasts and heat alerts must be sent as bulk messages on mobile phones not just by the nodal agency in charge but also by the other relief agencies as well.
- Medical up-gradation and administrative measures –Heat treatment wings must be created in hospitals, and an advisory on how to prevent exposure and other heatwave related injuries must circulate in schools and offices
- Public Awareness and community outreach – Raising public awareness messages on how to protect against extreme heat-wave situations must be done through electronic, print as well as social media, and IEC materials.
- Collaboration with NGOs and civil society organizations – Building temporary shelters, wherever necessary, improving water delivery systems in public areas and other innovative measures to tackle heatwave conditions must be implemented
- Assessing the impact –Feedback for reviewing and updating the plan for heatwave disaster risk reduction must be made a regular feature in Government actions as this can help in preparing early prevention plans in accordance with the developing situation.

Disaster and disaster management – Fire accidents

6. Fire accident in hospitals

- » Mains: Threat posed by fires in public buildings; safety guidelines; Mitigation strategies

Context:

- A fire broke out at Vijay Vallabh Hospital in Mumbai leading to the death of 14 patients.
 - * It was due to short-circuit in the air conditioner in the Intensive Care Unit (ICU)

Fire safety guidelines for hospitals issued by the Centre in 2020:

- States and UTs were directed to carry out regular inspection and re-inspection of hospitals and nursing homes to ensure strict compliance with the implementation of fire safety measures as stipulated in various Act and codes.
- States and UTs were directed to undertake short duration training and awareness programmes for hospital staff/doctors/managers/authorities.

Measures to be taken:

- Fires have been reported in COVID-19 hospitals in states like Maharashtra, Gujarat and Andhra Pradesh. State authorities should be able to document their learnings and put out a checklist to save patients.
- The Supreme Court had earlier directed all the states to carry out a fire safety audit of dedicated COVID-19 hospitals across the country to prevent fire incidents in medical institutions.
- Responding to fire in an Intensive Care Unit (ICU) requires-
 - * periodic maintenance of safety equipment
 - * exhaust system to prevent smoke accumulation
 - * evacuation plan for the sickest patients, who may be attached to life-saving equipment
- If precautionary measures are not met by the hospitals and if it results in serious hospital fires, there is always an option of judicial oversight and systematic inquiries into such mishaps.

Conclusion:

- Patients should be able to go to a hospital without the fear of fires threatening their lives. Therefore, State bureaucracies have to diligently implement existing regulations.

GOVERNANCE

Welfare schemes for vulnerable sections- their performance

1. Making social welfare universal

- » Prelims: Pradhan Mantri Garib Kalyan Yojana
- » Mains: Arguments in favour of universal social security scheme; recommendations.

Background:

- Despite being one of the largest welfare states in the world, India seems to have failed to provide for its most vulnerable citizens during the COVID-19 pandemic.
- India witnessed multiple crises: mass inter- and intra-migration, food insecurity, and a crumbling health infrastructure. As per some estimates the pandemic has pushed an estimated 75 million people into poverty. The second wave of the pandemic has also affected the middle and upper-class citizens.
 - * Economic capital, in the absence of social capital, has proven to be insufficient in accessing healthcare facilities.
- India has over 500 direct benefit transfer schemes for which various Central, State, and Line departments are responsible. However, these schemes have not reached those in need.

Details:

- The author argues for a universal social security system in India.

International best practice:

- A good example of a social protection scheme is the Poor Law System in Ireland.
- The Poor Law System of Ireland not only provides timely assistance but also helps maintain the dignity and respectability of the poor while doing so.
- These have acted as necessary responses to a time of economic crisis rather than being mere handouts to the poor. Today, the social welfare system in Ireland has evolved into a four-fold apparatus that promises social insurance, social assistance, universal schemes, and extra benefits/supplements.

Arguments in favour:

Advancement in technology:

- With the advancements in knowledge and technology, a universal coverage of social welfare is possible in a shorter time frame.

Ease of application:

- Existing schemes cover a wide variety of social protections. However, they are fractionalised across various departments and sub-schemes. This causes problems beginning with data collection to last-mile delivery. Having a universal system would improve the ease of application by consolidating the data of all eligible beneficiaries under one database.

Reduce exclusion errors:

- The universal schemes will also help reduce exclusion errors.
- Generally, social assistance schemes are provided on the basis of an assessment of needs. Having a universal scheme would take away this access/exclusion barrier. For example, PDS can be linked to a universal identification card such as the Aadhaar or voter card, in the absence of a ration card. This would allow anyone who is in need of foodgrains to access these schemes. It would be especially useful for migrant populations.

Potential of such a scheme:

- Making other schemes/welfare provisions like education, maternity benefits, disability benefits etc. also universal would ensure a better standard of living for the people.

Recommendations:

- There is the need to map the State and Central schemes in a consolidated manner. This is to avoid duplication, inclusion and exclusion errors in welfare delivery.
- There is the need for detailed studies to understand costs of welfare access for vulnerable groups. This will help clear the concerns over financial viability of universal social security schemes.
- The implementation of effective universal social security schemes is only possible through a focus on data digitisation, data-driven decision-making and collaboration across government departments.
- The Pradhan Mantri Garib Kalyan Yojana (PMGKY) is one scheme that can be strengthened into universal social security.

Conclusion:

- The pandemic has revealed that leveraging our existing schemes and providing universal social security is of utmost importance. This will help absorb the impact of external shocks on our vulnerable populations.

Government policies and interventions for development

2. The Kerala Model at the crossroads

- » Mains: Kerala Model of economic development—arguments in favour of and against

Context

- The article evaluates the Kerala Model of economic development

Background:

Kerala Model of economic development:

- The 'Kerala Model' is based on the redistributive principle of growth where there is a marked emphasis on development over growth concerns. The state interventions which rely on widespread participation of people are aimed at improving the people's material conditions of living.

Concerns:

- Some economists have argued that the slow-growing State would not have the money to continue financing its welfare programmes.
 - * Economic stagnation in the 1970s and 1980s led many observers to predict the collapse of the Kerala model.

Counter arguments:

Significant economic growth:

- As against the popular misconception that Kerala has not had much economic growth, the author argues that Kerala has witnessed observable growth.
- The author points out to significant growth in agricultural incomes, services sector, secondary sector (which includes manufacturing, construction, etc.). While Kerala's per capita income was almost 10% lower than the all-India figure in 1989-90, it was 65% higher than the all-India figure in 2019-20.

Social development:

- All along Kerala's education and health indicators have continued to improve, and its social security programmes have continued to expand.
- Kerala has registered impressive achievements in human development in the area of health and education.

Investments in infrastructure:

- There have been major investments by the state in infrastructure development.
- Apart from schools and hospitals, KIIFB funding is being used to build economic infrastructure such as roads, bridges, industrial parks, the massive public sector Internet project K-FON, or the Kerala Fibre Optic Network, and TransGrid 2.0 — a project to improve the power transmission network in the State

Kerala Infrastructure Investment Fund Board (KIIFB):

- Kerala has been investing in infrastructure development through the Kerala Infrastructure Investment Fund Board (KIIFB). The KIIFB has been a major funding arm of the Kerala government.
- The KIIFB raised funds from the financial market and made them available to the government to finance infrastructure projects. Repayment of the loans is ensured by the government legally committing to pay a portion of its revenue from the motor vehicle tax and the petroleum cess to the KIIFB every year.

Better prepared:

- The real risks to the state's economy are likely to be associated with shocks to the economy — such as natural disasters (floods), pandemic-induced worldwide recession, job losses in the West Asian countries where a lot of Keralites work, or contractionary fiscal policy by the central government — which could adversely impact economic growth.
- Even then, Kerala will be better prepared to face the eventualities as it has better infrastructure, and a better-educated, more highly skilled and healthier workforce.

Conclusion:

- The role of planning and social oversight in the economic development of the State holds significance and it needs to expand further.

Government Schemes

3. Shaphari scheme

- » Prelims: Facts related to seafood exports from India; Shaphari scheme
- » Mains: Government initiatives to promote exports

Context:

- To bolster confidence in India's frozen shrimp produce, the Centre has kicked off a new scheme to certify hatcheries and farms that adopt good aquaculture practices.

Background:

- Frozen shrimp is India's largest exported seafood item. It constituted 50.58% in quantity and 73.2% in terms of total U.S. dollar earnings from the sector during 2019-20.
- India exported frozen shrimp worth almost \$5 billion in 2019-20, with the U.S. and China being the biggest buyers.
- Andhra Pradesh, West Bengal, Odisha, Gujarat and Tamil Nadu are India's major shrimp producing States, and around 95% of the cultured shrimp produce is exported.

Challenges:

- A combination of factors had hurt export volumes in recent months, including container shortages and incidents of seafood consignments being rejected because of food safety concerns.

Shaphari scheme:

- The scheme has been developed by the Marine Products Exports Development Authority (MPEDA).
- The certification scheme for aquaculture products is called 'Shaphari' – a Sanskrit word that means superior quality of fishery products suitable for human consumption.
- The Shaphari scheme is based on the United Nations' Food and Agriculture Organization's technical guidelines on aquaculture certification and will have two components — certifying hatcheries for the quality of their seeds and, separately, approving shrimp farms that adopt the requisite good practices.
- The entire certification process will be online to minimise human errors and ensure higher credibility and transparency.
- India already has a National Residue Control Programme for food safety issues in farm produce and pre-harvest testing system in place, but Shaphari certification was proposed as a market-based tool for hatcheries to adopt good aquaculture practices and help produce quality antibiotic-free shrimp products to assure global consumers.

Government Schemes**4. Sukanya Samriddhi Yojana**

- » Prelims: Sukanya Samriddhi Yojana
- Sukanya Samriddhi Yojana is a personal finance scheme for the girl child, launched in 2015, under the Beti Bachao, Beti Padhao campaign.
- It is a small deposit scheme for the girl child that provides an income tax rebate.
- The scheme is jointly governed by the Ministry of Women and Child Development, the Ministry of Health and Family Welfare, and the Ministry of Human Resource Development.
- The scheme focuses on encouraging the parents of the female child for building a fund for their future education and marriage expenses.
- The account will remain operative for 21 years from the date of opening of the account or marriage of the girl child after attaining 18 years of age.
 - * To meet the requirement of higher education expenses, partial withdrawal of 50 per cent of the balance would be allowed after the girl child has attained 18 years of age.

Government Schemes**5. Water Conservation by crop diversification**

- » Mains: Initiatives to promote crop diversification
- The Haryana state government has announced an incentive of Rs. 7000 per acre to farmers for promoting crop diversification from paddy to alternate crops such as maize, cotton, millet, pulses, vegetable, gram etc.
- This initiative would incentivize farmers to shift from the water intensive paddy cultivation towards lesser water intensive crops and would provide an impetus to water conservation attempts. The shift to other crops would also be an effective intervention to curtail the decreasing productivity of the fields owing to mono cropping.

Government Schemes**6. IMPRINT India programme**

- » Prelims: IMPRINT India programme
- IMPacting Research, INnovation and Technology (IMPRINT) is a national initiative of the Ministry of Education designed to address all major engineering challenges relevant to India through an inclusive and sustainable mode of translational research.
- IMPRINT India Programme is a joint initiative of the Indian Institutes of Technology (IITs) and the Indian Institute of Science.
- It seeks to develop a road map for research to solve major engineering and technology challenges in 10 technology domains relevant to the country.
 - * These domains include health care, information and communication technology, energy, sustainable habitat, nano-technology hardware, water resources and river systems, advanced materials, manufacturing, security and defence, and environment and climate.

Miscellaneous**7. Stop the Ambassadorships for sale**

- » Mains: Spoils system of US v/s Merit system of India

Spoils System:

- The Spoils System, also called the Patronage System, is a practice in which a political party, after winning an election, rewards its campaign workers, friends (cronyism), relatives (nepotism) and other active supporters by appointment to government posts.

- The Spoils System promotes the firing of political enemies and the hiring of political friends which is a lucrative push used by a political party to attract and lure supporters so that they can keep working for the party.
- It is opposed to the merit system, where offices are awarded on the basis of some measure of merit, independent of political activity.
 - * A permanent civil service appointed through a competitive examination is an example of the Merit System.

Issues with the spoils system:

- Spoils system is a common practice of selection in the United States of America.
- The Presidents of the United States appoint ambassadors out of those who have paid big financial contributions to the party.

The appointments have the solid backing of the U.S. Constitution:

Article II:

- The executive power shall be vested in a President of the United States of America.
- Article II, Section 2, of the Constitution provides that the President shall appoint officers of the United States "by and with the Advice and Consent of the Senate."
- It means that the President enjoys wide latitude in selecting a nominee and the Senate is comparably free to choose whether to advise and consent.
- The onus for the quality and integrity of the nominees rests on the President, but the Senate has the right to hold back confirmation of any nominee, including career diplomats.

The Indian way:

- India has a more sophisticated system of appointing "political" ambassadors, not for donation to political parties, but as an avenue to recognise and reward talent.
- In the early years, Maharajas were appointed to several posts.
- And later, politicians were sent abroad when they had to be kept away from the country.
- The Government apparently has the discretion of appointing political ambassadors in up to 30% of the posts. But now, the number of political ambassadors is small, if at all, and the senior posts are open to career diplomats.

Example:

- India has had some very distinguished and successful political ambassadors.

- * Examples are, three political ambassadors in Moscow (Dr. K.S. Shelvankar, D.P. Dhar and I.K. Gujral) and one in Washington (Naresh Chandra); all of them fulfilled certain criteria set by the Government, which included greater acceptability of political ambassadors in major capitals.
- * The most celebrated political ambassador was KushokBakula Rinpoche, a Buddhist monk from Ladakh, who was appointed to Mongolia. He is credited with reviving Buddhism in Mongolia.
- * The Head of State himself used to pay obeisance to him as the Mongolians followed the same Mahayana Buddhism practised in Ladakh.
- * Even after he completed his diplomatic assignment, KushokBakula Rinpoche retained strong ties with Mongolia till he died in his eighties.

Merit System in India:

- The Union Public Service Commission (UPSC) has done a commendable job over the years by insulating recruitments from political patronage and selecting the best and the brightest through open competition and transparent procedures.

Conclusion:

- There are many countries that continue to believe that long careers in the Foreign Service are not necessary for people to be effective ambassadors.
- This is a false notion as career ambassadors work to protect their home country's citizens, repair relationships between nations, and create lasting bonds that help them shape foreign policy which comes with experience and long years of Leadership, Negotiation Skills and Cross-Cultural Awareness. Therefore, it should be less political and more merit-oriented.

Governmental interventions for vulnerable sections

8. Handling the second wave of the pandemic

- » Mains: Socio-economic impact of pandemic and associated lockdowns; recommendations for the second wave

Context:

- Second wave of the COVID-19 pandemic.
 - * Given the fact that India's second COVID-19 wave is more virulent than the first, many States have restarted enforcing shutdowns of various scales.

Details:

- The article analyzes the social and economic impact of the first wave of the pandemic and the subsequent lockdown that were imposed. It also suggests suitable actions to be taken in the face of the ongoing second wave of the pandemic.

Socio-economic impact of the pandemic:

Uneven impact and recovery:

- Even though India's overall economic trajectory had been on the upswing after the first phase of the pandemic, the growth during these times has not been inclusive.
 - * While sectors, including the technological, pharmaceutical and healthcare sectors, saw record growth, sectors including travel and tourism and wellness and hospitality receded to historic lows. While the wealth of India's billionaires increased by 35% even during COVID-19 times, the pandemic decimated the informal and MSME sector and pushed 75 million Indians into poverty.
 - * While the migrant workers faced innumerable miseries during the lockdown workers in white collar sectors like IT, consulting and financial services, were minimally affected. COVID-19 has affected the least affluent the most.
- The economic experts have noted that India's revival from the COVID-19-induced downturn would be a 'K-shaped' curve where only a segment of our population recovers.

Concerns with regard to new lockdown:

- Introducing even partial lockdowns again will constrain the movement of goods and labourers. It will significantly bring down our industrial productivity and create avenues that will widen our economic and social inequalities.

Recommendations:

Regulation:

- Stringent health and safety regulations should be formulated and implemented. Non-essential gatherings should be restricted or banned.

Ensuring economic activity:

- Industries should be allowed to function at maximum possible capacity in multiple shifts.

Preventing distress:

- Given the fact that demand contraction has been the biggest contributor towards the economic downturn during the pandemic, governments can focus on ensuring cash stimulus packages at both individual and institutional levels. This will boost consumption and investments. Government must emphasize direct cash transfer and employment guarantee schemes.

- The government will have to focus on industries and sectors most affected by the pandemic.

Vaccine roll-out:

- India will have to accelerate vaccine production, procurement and distribution. Vaccination should be opened up for all age groups.

Conclusion:

- Given the fact that introducing even partial lockdowns again will widen economic and social inequalities, India should work towards saving lives without compromising on our population's livelihood, or without letting people fall into poverty.

GEOGRAPHY

Geography - Climatology

1. How Asian desert dust enhances Indian summer monsoon

- » Prelims: Mechanism of Indian summer Monsoon-associated terminologies.
- » Mains: Role played by dust on Indian summer monsoon; impact of anthropogenic aerosols..

Context

- Study on the role played by dust in influencing Indian summer Monsoon.

Background:

Critical role played by dust:

- Dust plays a very important role in influencing climatic events. Dust swarms can influence moisture transport, increase precipitation and rainfall. Dust is known to influence monsoons, and hurricanes.
- Dust is known to even fertilize rainforests and help in vegetation growth.

Relationship between desert and monsoon rainfall:

- Deserts across the globe play important roles in monsoons.
 - * The dust aerosols from deserts in West China such as the Taklamakan desert and the Gobi Desert can be transported eastward to eastern China and can influence the East Asia summer monsoon.
 - * The small deserts in the southwest United States are known to influence the North African monsoon.

Details:

- The new study details how dust coming from the deserts in the West, Central and East Asia plays an important role in the Indian Summer Monsoon.
- The new study notes that it is not just the dust from the Middle East [West Asia], but the Iranian Plateau also influences the Indian Summer Monsoon. The hot air over the Iranian Plateau can heat the atmosphere over the plateau, strengthen the circulation over the deserts of the Arabian Peninsula and increase dust emission from the Middle East [West Asia].

Impact of dust on rainfall pattern:

- Dust swarms from the desert when lifted by strong winds can absorb solar radiation and become hot. This can cause heating of the atmosphere, change the air pressure, wind circulation patterns, influence moisture transport and increase precipitation and rainfall.

Reverse effect:

- The Indian Summer Monsoon also has a reverse effect and can increase the winds in West Asia to produce yet more dust.
- A strong monsoon can also transport air to West Asia and again pick up a lot of dust, which the researchers have termed as a positive feedback loop.

Anthropogenic aerosols:

- With respect to the impact of anthropogenic dust from vehicles, mining, construction on monsoons, while some studies have found that the anthropogenic aerosols emitted from the Indian subcontinent can decrease summer monsoon precipitation, other studies have found that absorbing aerosols such as dust can strengthen the monsoon circulation.
- The concerned study used the carbon model to simulate the impact of anthropogenic aerosols on India and the results showed that anthropogenic aerosol can strengthen Indian summer monsoon rainfall.

Significance of studying dust:

- Many studies have shown that the dust emission scheme is extremely sensitive to climate change and the understanding of the concerned mechanisms and effects of dust will help understand the monsoon systems in the face of global climate change.

Way forward:

Need to study minor components:

- Different deserts have different chemical compositions and this can influence the dust's properties.
 - * Dust from the Middle East [West Asia] has more absorbing ability of solar radiation than dust from North Africa and this difference in absorbing ability might influence monsoon systems.
- Given the emerging evidence of the unique characteristics of dust from different deserts as against the previous understanding that dust from deserts across the globe have the same components, there is the need to study the minor components of desert dust aerosols.
- This would involve the use of high spatial resolution remote sensing to identify source regions and create a better dust emission map.

Understanding the impact of anthropogenic activity:

- There is the need to study new drying lakes and understand how dust from them can play a role in the monsoons.

Geography - Climatology

2. IMD's monsoon forecast

- » Prelims: El Niño–Southern Oscillation (ENSO); Indian Ocean Dipole.
- » Mains: Improvements in IMD's forecasting and its significance.

Context

- The India Meteorological Department (IMD) has forecast a 'normal' monsoon for the current year.

Details:

- As per the IMD's norms, normal monsoon implies that India will get 96% to 104% of the 88 cm that it gets from June–September.
 - * 88 cm is the Long Period Average (LPA), which is a mean of monsoon rainfall from 1961–2010.
 - » The months of July and August, account for around two-thirds of the monsoon rains and are the most important months for sowing in India.
- Notably, there is a good chance of 'above normal' rain in central and southern India.
- The 'normal' monsoon forecast for the current year is primarily predicated on 'neutral' surface temperatures in the Central Equatorial Pacific.
 - * A warming El Niño is unlikely
 - » El Niño is the warm phase of the El Niño–Southern Oscillation (ENSO) and is associated with a band of warm ocean water that develops in the central and east-central equatorial Pacific. The ENSO is the cycle of warm and cold sea surface temperature (SST) of the tropical central and eastern Pacific Ocean. El Niño is accompanied by high air pressure in the western Pacific and low air pressure in the eastern Pacific. El Niño adversely impacts monsoon rainfall over the Indian subcontinent.
 - * The Indian Ocean Dipole is expected to be unfavourable for excess rains
 - » The Indian Ocean Dipole (IOD) is an irregular oscillation of sea surface temperatures in which the western Indian Ocean becomes alternately warmer (positive phase) and then colder (negative phase) than the eastern part of the ocean. The IOD affects the strength of monsoons over the Indian subcontinent.

Changes in IMD's forecasting:

Dynamic model:

- There has been the IMD's increasing reliance on dynamical monsoon models.
- Unlike the traditional statistical models, which are based on a fixed set of meteorological variables that have historically been correlated with variations in monsoon rainfall, the dynamical models generate forecasts based on evolving weather patterns.

More forecasts:

- Up until now, the IMD used to follow a two-stage monsoon forecast system, wherein after the prognosis in April, it used to give an updated estimate in late May or early June.
- This year onwards there will be forecasts for June and September too, to be given in May and August, respectively. Historically, predicting rain for June and September is challenging as it corresponds to the monsoon's entry and exit.

Forecasts for monsoon core zone:

- The IMD forecasts used to include an estimate of how much rain is likely in: northwest India, northeast India, central India and southern peninsula.
- Now onwards there will also be forecasts for what is called the monsoon core zone, which represents most of the rainfed agriculture region in the country.

Way forward:

- The forecasts apart from their emphasis on the agricultural sector should now get urban-focused too because of the natural disasters that accompany even 'normal' monsoons in Indian cities. The forecast should form a critical aspect of India's disaster preparedness.
- There should be more focus on incorporating the IMD forecasts down to municipal and block-level planning.
- The IMD must continue to widen its focus to aid business and services sectors which are in need of weather products.

Geography - Climatology

3. IMD's pre monsoon phase forecast

- » Prelims: Heat waves in India- definition and predominant season; Western disturbances- Impact and associated region and period.
- » Mains: Types of rainfall

Context

- The India Meteorological Department's (IMD) weather forecast for the pre-monsoon phase.

Details:**Heat waves:**

- Heat wave conditions are very likely in isolated pockets over Gujarat and coastal Odisha.
 - * A heat wave is a period of excessively hot weather, which may be accompanied by high humidity, especially in oceanic climate countries.
 - * While definitions vary, a heat wave is usually measured relative to the usual weather in the area and relative to normal temperatures for the season. The Indian Meteorological Department (IMD) has given the following criteria for Heat Waves:
 - » Heat Wave need not be considered till the maximum temperature of a station reaches at least 40°C for Plains and at least 30°C for Hilly regions.
 - » When the normal maximum temperature of a station is less than or equal to 40°C, Heat Wave Departure from normal is 5°C to 6°C and Severe Heat Wave Departure from normal is 7°C or more.
 - » When the normal maximum temperature of a station is more than 40°C, Heat Wave Departure from normal is 4°C to 5°C and Severe Heat Wave Departure from normal is 6°C or more.
 - » When the actual maximum temperature remains 45°C or more irrespective of normal maximum temperature, heat waves should be declared.
 - * In India Heat waves typically occur from March to June, and in some rare cases, even extend till July. On an average, five-six heat wave events occur every year over the northern parts of the country.

Rainfall:

- The India Meteorological Department (IMD) has predicted a wet spell over several parts of the country, including central, south and northeast India, from April 26 to 30.
- The IMD has forecasted thunderstorms with lightning and gusty winds in isolated areas.

Western disturbance:

- A fresh feeble western disturbance is also likely to affect the Western Himalayan region, causing isolated rainfall/snowfall with thunderstorm and gusty winds over Jammu, Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad, Himachal Pradesh and Uttarakhand.
 - * A western disturbance is an extra tropical storm originating in the Mediterranean region that brings sudden winter rain to the northern parts of the Indian subcontinent.

It is a non-monsoonal precipitation pattern driven by the westerlies.

Trough formation:

- A north-south trough (low pressure area) runs from Marathwada to south coastal Tamil Nadu across north interior Karnataka, Telangana and Rayalaseema in lower tropospheric levels. Under its influence, scattered to fairly widespread rainfall or thunderstorm is very likely over the associated regions.
 - * A trough is an elongated region of relatively low atmospheric pressure. It is an extension of isobars from a low pressure area in the surface levels.
 - * Troughs may be at the surface, or aloft. Near-surface troughs sometimes mark a weather front associated with clouds, showers, and a wind direction shift.

Geography- Study of space**4. Narrow-Line Seyfert 1 (NLS1) galaxy**

- » Prelims: Narrow-Line Seyfert 1 (NLS1) galaxy; red shift phenomenon.

What's in News?

- Astronomers have discovered a new active galaxy identified as the farthest gamma-ray emitting galaxy that has so far been stumbled upon.
- This active galaxy called the Narrow-Line Seyfert 1 (NLS1) galaxy, which is about 31 billion light-years away, opens up avenues to explore more such gamma-ray emitting galaxies.
- Scientists from ARIES, an autonomous institute of the Department of Science & Technology (DST), Government of India, in collaboration with researchers from other institutions, studied around 25,000 luminous Active galactic nuclei (AGN) from the Sloan Digital Sky Survey (SDSS) and found a unique object that emits high-energy gamma rays located at a high red shift (more than 1). They identified it as a gamma-ray emitting NLS1 galaxy, which is a rare entity in space.
 - * SDSS is a major optical imaging and spectroscopic survey of astronomical objects in-operation for the last 20 years. It was founded by the University of Chicago.

Significance:

- The detection of gamma-ray emission from NLS1 challenges the idea of how relativistic jets are formed because NLS1s are a unique class of AGN that are powered by black hole of low mass and hosted in spiral galaxy.

- As of today, gamma-ray emission has been detected in about a dozen NLS1 galaxies, which are a separate class of AGN identified four decades ago.
- All of them are at redshifts lesser than one, and no method was present till date to find NLS1 at redshifts larger than one.
- This discovery opens up a new way to find gamma-ray emitting NLS1 galaxies in the early Universe.

Geography- Study of space

5. Wolf-Rayet stars

- » Prelims: Wolf-Rayet stars or WR stars.

Context

- Supernova explosion traced to one of the hottest kind of stars.

What's in News?

- Indian astronomers have tracked a rare supernova explosion and traced it to one of the hottest kind of stars called Wolf-Rayet stars or WR stars.
- A team of astronomers from Aryabhata Research Institute of Observational Sciences (ARIES), Nainital, with some international collaborators have conducted optical monitoring of a stripped-envelope supernova called SN 2015dj hosted in the galaxy NGC 7371 which was spotted in 2015.
- They calculated the mass of the star that collapsed to form the supernovae as well as the geometry of its ejection.
- The scientists also found that the original star was a combination of two stars – one of them is a massive WR star and another is a star much less in mass than the Sun.

WR Star:

- The rare Wolf-Rayet stars are highly luminous objects a thousand times that of the Sun.
- They are massive stars and strip their outer hydrogen envelope which is associated with the fusion of helium and other elements in the massive core.
- They are a heterogeneous set of stars with unusual spectra showing prominent broad emission lines of ionised helium and highly ionised nitrogen or carbon.
- The surface temperatures of known Wolf-Rayet stars range from 30,000 K to around 210,000 K, hotter than almost all other kinds of stars.
- They were previously called W-type stars.

Geography - Mapping

6. Marib region

- » Prelims: West Asian places in news.
- Marib is the capital city of Marib Governorate, Yemen. It was the capital of the ancient kingdom of Saba.
- It is located east of Yemen's modern capital, Sanaa, and is in the region of the Sarawat Mountains.

Context

- Fighting for the key Yemeni region of Marib has intensified between the pro-government and Houthi rebel fighters.
- The Houthis have been trying to seize oil-rich Marib, the government's last significant pocket of territory in the north.

Geography - Mapping

7. Umngot River

- » Prelims: Umngot river; rivers of north east India.
- Umngot, considered India's clearest river, flows through the Indian State of Meghalaya.

Context

- A 210 MW hydroelectric project has been proposed on Umngot.
- The dam is proposed on the upstream of the river Umngot in the West Jaintia Hills district of Meghalaya.
- The Meghalaya State Pollution Control Board (MSPCB) which had scheduled a public hearing for the proposed project has been obstructed from conducting the public hearing by the villagers of East Khasi Hills district.

MISCELLANEOUS

1. Press freedom index

- » Prelims: World Press freedom index

Context

- India has been ranked 142nd on the press freedom index.
 - * In 2016, India's rank was 133, which has steadily climbed down to 142 in 2020.

World Press Freedom Index:

- World Press Freedom Index is published every year since 2002 by Reporters Without Borders (RSF), a French non-governmental organisation.
- The Index ranks 180 countries and regions according to the level of freedom available to journalists.
- It is a snapshot of the media freedom situation based on an evaluation of pluralism, independence of the media, quality of legislative framework and safety of journalists in each country and region.
- It does not rank public policies even if governments obviously have a major impact on their country's ranking, nor is it an indicator of the quality of journalism in each country or region.

Key Findings:

- The report says India is one of the world's most dangerous countries for journalists trying to do their job properly.
- It states that the journalists in the country are exposed to every kind of attack, even police violence against reporters, ambushes by political activists, and reprisals instigated by criminal groups or corrupt local officials.

2. Chandler Good Government Index

- » Prelims: CGGI- parameters
- » Mains: Focus areas for improving governance in India
- India has been ranked 49th in the Chandler Good Government Index (CGGI).
- The CGGI classifies 104 countries in terms of government capabilities and outcomes. The index focuses on seven pillars: leadership and foresight; robust laws and policies; strong institutions; financial stewardship; attractive marketplace; global influence and reputation; and helping people rise.

- The report notes civil service innovation and capacity building as being key focus areas for the Indian government.

3. Copyright war

- » Prelims: Copyrightability of softwares

Context

- The recent U.S. Supreme Court ruling in the copyright case between Google and Oracle.

Background of the case:

Oracle's acquisition of Sun Microsystems:

- Oracle's acquired Sun Microsystems, which had developed the Java language.
- Consequently, it came to own the copyright in Java SE (standard edition), a platform that programmers use to build programs that work on any personal computer.

Oracles' charge:

- Oracle had accused Google of violating the country's copyright law.
 - * 'Copyright' is a legal term. Copyright acts as a safeguard to protect an original creation legally. All created works are Copyrighted. Computer Programming Code can be registered as 'literary works' under the Copyright Act.
- Oracle's charge was that Google copied a part of the Java SE program while developing the Android platform for programmers.

Case in the lower judiciary:

- Prior to Google bringing the case to the Supreme Court, the Federal Circuit, an appeals court, had ruled in Oracle's favour.
- The lower courts had focused on two major questions. The copyrightability of the code and whether the copying constituted fair use.
- In ruling in Oracle's favour, the Federal Circuit had held that the portion of the copied code is copyrightable and that Google's act did not constitute fair use.

Fair use:

- According to the U.S. Copyright Office, "Fair use is a legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances."
- Activities such as "criticism, comment, news reporting, teaching, scholarship, and research"

may qualify under fair use. Such activities can be exempt from copyright infringement charges.

- Section 107 of the U.S. copyright law provides a framework to judge fair use. It contains four factors, in the following order — the purpose of the use, the nature of the copyrighted work, the substantiality of the portion used in relation to the whole work, and the effect of the usage upon the potential market.

Details:

U.S. Supreme Court ruling:

- The Court noted that Google had in fact copied roughly 11,500 lines of code from the Java SE program.
- The Supreme Court decided to sidestep the question on copyrightability of the code, assuming it to be copyrightable, and ruled that Google's copying of a part of the code constituted fair use, and therefore it did not violate the copyright law.

Judiciary's take on the issue:

- The court while considering the nature of the copyrighted work, noted that what lines Google copied, were merely the lines of an API (application programming interface), which allows programmers to call upon prewritten computing tasks for use in their own programs. It termed Google's move as being transformative, as it allowed programmers to work in a different computing environment" (which is Android) using a familiar programming language (Java).

Implication of this ruling:

- The Supreme Court's differentiation between the type of code Google copied, i.e., software interface, and other creative codes is bound to be welcomed by the software industry, given that this decision gives more legal certainty to software developers' common practice of using, re-using, and re-implementing software interfaces written by others, a custom that underlies most of the internet and personal computing technologies in use today.
- Notably, however the copyrightability of the codes remains unanswered and this could lead to future litigations and uncertainty.

Additional information:

- In India, the Copyright Act 1957 protects the Intellectual Property Rights (original expression) of computer software. Computer programs are literary works as per the definition in the Indian Copyright Act.
- Computer software can have copyright unless it leads to a technical effect. The computer software with a technical effect has a registration for a patent under the Indian Patent Act 1970.

4. Cynodonts

» Prelims: Tiki formation; Cynodonts

Context

- The Tiki formation in Madhya Pradesh, considered a treasure trove of vertebrate fossils, has now yielded a new species and two genera of cynodonts.

Details:

- The researchers from the Indian Institute of Technology Kharagpur, who studied about 10 teeth samples collected from Tihki, Madhya Pradesh, have announced the finding of a new species, naming it Rewaconodon indicus.
- The team has also identified two new genera under the cynodont species. The first was named Inditherium floris and the second was named Tikiodon cromptoni.

Cynodonts:

- The cynodonts are small rat-like animals that lived about 220 million years ago.
- Cynodonts are important in evolutionary studies as this group ultimately gave rise to the present-day mammals.
- Cynodonts and living mammals both belong to a group of egg-laying vertebrates (amniotes) called synapsids. The close relationship of cynodonts with living mammals is seen in their bones. They also have differentiated teeth, a secondary palate in their mouths, which, like humans, allowed them to breathe and eat at the same time.

5. Aahaar Kranti

- » Mains: Issue of 'hunger and diseases in abundance'; Nutritional knowledge
- Aahaar Kranti is a movement to raise awareness of the importance of a nutritionally balanced diet in India.
- It's an effort to rouse the people to the value of India's traditional diet, to the healing powers of local fruits and vegetables, and to the miracles of a balanced diet.
- The mission is run by Vijnana Bharati (Vibha) and Global Indian Scientists' and Technocrats' Forum (GIST).
- The 'AahaarKranti' movement is designed to address the peculiar problem being faced by India and the world called 'hunger and diseases in abundance'.
 - * Studies estimate that India produces as much as two times the amount of calories that it consumes.
 - * However, many in the country are still malnourished.

* The root cause of this strange phenomenon is a lack of nutritional awareness in all sections of our society.

- There is a need for a nutritionally balanced diet also in the context of the current COVID-19 pandemic. A healthy body would be able to handle the infection much better with greater immunity and higher resilience.
- The United Nations has also declared 2021 as the International Year of Fruits and Vegetables.
- The programme will focus on training teachers, who, in turn, will pass on the message to the multitudes of students, and through them to their families and finally the society at large.
- In terms of objectives, it will seek to promote better awareness, better nutrition and better agriculture; the messages will be imparted through the curriculum in the form of 'what's and why's' of nutrition, or through the forms of games or as instructions such as 'how to'.

6. Codex Committee on Spices and Culinary Herbs (CCSCH)

- » Mains: Codex alimentarius
- The Codex Committee on Spices and Culinary Herbs (CCSCH) is responsible for elaborating standards for spices and culinary herbs in their dried and dehydrated state in whole, ground, and cracked or crushed form.
- The Committee was established in 2013.
- India is the host country and the Spices Board is the Secretariat for organising the sessions of the committee.
- Since its inception, the Codex Committee has been successful in developing harmonised global Codex standards for spices and herbs.

Codex Alimentarius Commission:

- Set up in 1963, the Codex Alimentarius Commission (CAC) is an intergovernmental body established jointly by the UN's Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO), within the framework of the Joint Food Standards Programme to protect the health of consumers and ensure fair practices in the food trade.
- The Commission has 189 members including the European Union.
- India is a member of the Codex Alimentarius Commission since 1964.

Codex Alimentarius:

- The Codex Alimentarius is a collection of internationally adopted food standards and related texts presented in a uniform manner.

- These food standards and related texts aim at protecting consumers' health and ensuring fair practices in the food trade.
- The publication of the Codex Alimentarius is intended to guide and promote the elaboration and establishment of definitions and requirements for foods to assist in their harmonization and in doing so to facilitate international trade.
- The Codex Alimentarius includes standards for all the principal foods, whether processed, semi-processed or raw, for distribution to the consumer.
- It includes provisions in respect of food hygiene, food additives, residues of pesticides and veterinary drugs, contaminants, labelling and presentation, methods of analysis and sampling, and import and export inspection and certification.
- Codex standards and related texts are not a substitute for, or alternative to national legislation. Every country's laws and administrative procedures contain provisions with which it is essential to comply.

7. Community Mental-Health Digital platform MANAS

» Mains: Mental health

Context

- Community Mental-Health Digital platform MANAS launched.

About MANAS:

- MANAS App is a well-being App that stands for Mental Health and Normalcy Augmentation System.
- It is endorsed as a national program by the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC).
- MANAS is a comprehensive, scalable, and national digital wellbeing platform and an app developed to augment the mental well-being of Indian citizens.
- MANAS App integrates the health and wellness efforts of various government ministries, scientifically validated indigenous tools with gamified interfaces developed/researched by various national bodies and research institutions.
- MANAS was initiated by the Office of the Principal Scientific Adviser to the Government of India. It was jointly executed by NIMHANS Bengaluru,

AFMC Pune and C-DAC Bengaluru.

8. '#FOSS4GOV Innovation Challenge'

» Prelims: Free and open source software

Context

- MeitY announces #FOSS4GOV Innovation Challenge to accelerate adoption of Free and Open Source Software (FOSS) in Government.

Background:

- India is well positioned to become a vibrant hub for Free and Open Source Software (FOSS) innovations, due to the large number of 4G data subscribers in India, 96% of whom access the digital world via open-source based mobile operating systems (primarily Android).
- Some of India's largest-government projects (including Aadhaar) and many technology start-ups have also been built using FOSS.
- Acknowledging the huge potential of FOSS, the Government of India had issued a Policy on Adoption of Open Source Software in 2015.

What's in News?

- To increase awareness about the usage of FOSS in governance and government functioning, and adoption of FOSS, a virtual roundtable discussion 'Free and Open Source Software (FOSS) in Government' was organized by the Ministry of Electronics and Information Technology (MEITY) in collaboration with Omidyar Network India in April 2021.
- The Ministry also announced a #FOSS4GOV Innovation Challenge to accelerate adoption of Free and Open Source Software (FOSS) in Government.

What is the #FOSS4GOV Innovation Challenge?

- The #FOSS4GOV Innovation Challenge calls upon FOSS innovators, technology entrepreneurs and Indian Startups to submit implementable open source product innovations in CRM and ERP with possible applications for Govtech in Health, Education, Agriculture, Urban Governance, etc.
- This is a challenge for local developers to create open-source customer relationship management and enterprise resource management software worthy of use by Indian government agencies.
- Participants are eligible for incubation support, prize money, mentorship by domain experts, institutional support from eminent organizations for incubation of ideas and listing of solutions on GeM.

9. Gender Samvaad

- » Mains: Increasing women participation in economic domain
- Gender Samvaad was a joint attempt between DAY-NRLM and the Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE) to create a common platform to share experiences emerging from this effort.
- The event was organised by the Ministry of Rural Development, Govt. of India.
- The attempt is to generate greater awareness on gender related interventions under DAY-NRLM across the country and best practices, with a focus on hearing voices from the states and the field.
- Gender Samvaad provides states with opportunities to:
 - * Understand best practices/initiatives that other states have been undertaking to improve women's agency, in establishing strong institutions for public service delivery, and in protecting and providing redress to vulnerable groups within women.
 - * Understand gender interventions globally.
 - * Engage with experts and other colleagues on suggestions regarding how to handle issues/implementation barriers.
 - * Contribute to the creation of a 'gender repository' with resource materials on best practices for gender interventions across the country/other countries.
 - * Build advocacy around the need to focus on gender issues across SRLMs and the NRLM.

10. World Health Day

» Prelims: WHO

Context

- 7th April is observed as World Health Day.

About World Health Day:

- The day is observed to mark the formation of the World Health Organisation (WHO) on this day in 1948.
- The celebrations are led by WHO worldwide to spread awareness about health-related issues and problems.
- The theme for World Health Day 2021 is "Building a fairer, healthier world for everyone".

11. World Heritage Day

» Prelims: UNESCO

Context

- World Heritage Day, also known as International Day for Monuments and Sites, is being observed on 18 April every year.

About World Heritage Day:

- The day is dedicated to the conservation and promotion of cultural heritage through various activities undertaken by the International Council on Monuments and Sites (ICOMOS).
- In 1982, ICOMOS suggested United Nations Educational, Scientific and Cultural Organization (UNESCO) that April 18 should be celebrated as the International Day for Monuments and Sites.
- UNESCO approved the proposal during the 22nd General Conference in 1983.
- The day is observed to raise awareness about the cultural heritage that we see around us. It is also aimed at promoting historical monuments and sites through which we can actually preserve the cultural integrity of a community as well.
- The theme for World Heritage Day 2021 is "Complex Pasts: Diverse Futures"

12. The row over Myanmar refugees in Mizoram

- » Prelims: Map based facts; Free Movement Regime; Foreigners Act, 1946; 1951 Refugee Convention and its 1967 Protocol
- » Mains: Differences between refugees and immigrants; challenges posed by illegal immigration

Context

- The Ministry of Home Affairs (MHA) has written to the Chief Secretaries of Nagaland, Manipur, Mizoram and Arunachal Pradesh to take appropriate action as per law to check illegal influx from Myanmar into India.

Background:

- Following the military coup in Myanmar, at least 1,000 people from the adjoining Chin State of Myanmar are said to have crossed over to Mizoram, fearing a military crackdown.
 - * Most of the refugees were deserters from Myanmar's police and fire services department. They had to flee after joining the civil resistance movement.
 - * Most of the refugees waded across the Tiau River that runs along much of Mizoram's 510-km border with Myanmar.

Details:

- The MHA directive comes as the military coup and subsequent crackdown in Myanmar has led to several persons crossing over into India.
- MHA said that the State governments had no powers to grant refugee status to any foreigner.
- It also reiterated that India is not a signatory to the United Nations Refugee Convention of 1951 and its 1967 Protocol.

- MHA has also issued an advisory to Chief Secretaries of Mizoram, Nagaland, Manipur and Arunachal Pradesh and also to the Border Guarding Force (BGF) along the India-Myanmar border to stay alert and take appropriate action to prevent a possible influx into Indian territory.
- Guidelines have been sent to states to sensitize the law enforcement and intelligence agencies for taking appropriate prompt steps for identifying illegal migrants, their restrictions to specific locations as per provisions of law, capturing their biographic and biometric particulars, cancellation of fake Indian documents and legal proceedings including initiation of deportation proceedings as per provisions of law.

Concerns:**History of influx:**

- Extremism, counter-insurgency and sectarian violence have driven people out of Myanmar into India in the past as well.
- More than 1,200 Buddhists and Christians from Myanmar's Arakan State had taken refuge in Mizoram's Lawngtlai district in 2017. They fled their homes after the Myanmar Army clashed with the extremist Arakan Army. Thousands of Chins are said to be living in Mizoram for more than 40 years now.
- Manipur, too, has been dealing with the influx issue, for a long time. The villages of the Kuki-Zomi have often had people crossing over from Myanmar.

Porous border:

- Much of the border with Myanmar is without any fence. The tough terrain along the border comes in the way of maintaining airtight vigil along the border.
 - * Despite the potential of fences in stemming influx of refugees, some are against the idea of fencing the border, insisting that a fence would make "free movement" of border residents into each other's country difficult. There are more than 250 villages with about 3,00,000 people living within 10 km of the India-Myanmar border.
- India and Myanmar had in 2018 agreed to streamline the movement of people within 16 km of the border on either side called the Free Movement Regime (FMR).

Free Movement Regime (FMR):

- It has a visa-free movement regime for people living within 16 km on either side of the border known as FMR.
- "Free movement regime" is a bilateral agreement with Myanmar that allows free movement of Indian and Myanmar citizens within 16 km of the border.

- This regime has been in place keeping in view the traditional social relations among the border people. It helps genuine people living in close proximity to the border.

Differences between State government and central government:

- The Centre's directive is at complete odds with the State government's stand.
- The Mizoram government favours providing refuge to the Chins, who are ethnically related to the majority Mizos in the State, but the Ministry of Home Affairs has made it clear that "India is not a signatory to the 1951 UN Convention relating to the Status of Refugees and the 1967 Protocol thereon". The Ministry has pointed out that State governments have no powers to grant "refugee status to any foreigner".
- Mizoram is caught between a humanitarian urge and India's policy on refugees.

Ambiguity in the legal framework:

- The main reason why our policies towards illegal immigrants and refugees is confused is because as per Indian law, both categories of people are viewed as one and the same and are covered under the Foreigners Act, 1946.
 - * It offers a simple definition of a foreigner as a person who is not a citizen of India.
- There are fundamental differences between illegal immigrants and refugees.

Refugees and immigrants:

- Immigrants and refugees are both foreigners that travel to a new country.
- Immigrants generally travel voluntarily because of economic opportunity while refugees travel because of fear of persecution.
 - * Illegal immigration is a threat to the socio-political fabric of any country. Illegal immigration has potential security implications.
- A refugee is a displaced person who has been forced to cross national boundaries and who cannot return home safely.
- Such a person may be called an asylum seeker until granted refugee status by the contracting state.
- India is legally ill-equipped to deal with them separately due to a lack of legal provisions.
- Also, India is not a party to the 1951 Refugee Convention and its 1967 Protocol, the key legal documents pertaining to refugee protection.
- The absence of such a legal framework leads to policy ambiguity whereby India's refugee policy is guided primarily by ad hocism having its own political utility.

- It increases the possibility of the domestic politicisation of refugee protection and complicates its geopolitical faultlines.
- It opens the door for geopolitical considerations while deciding to admit refugees or not. It neither protects the refugees nor helps stop illegal immigration into the country.

Way forward:

- The recent events have revived the domestic debate about refugee protection in India. Refugee flows to India are unlikely to end any time soon given the geopolitical, economic, ethnic and religious contexts of the region. There is the urgent need to address the issue of refugee protection in India and put in place appropriate legal and institutional measures.

PRACTICE QUESTIONS

1. Consider the following statements:

1. Personal law subjects like marriage, divorce, inheritance come under the Concurrent List.
2. The term, 'Uniform Civil Code' is not mentioned in the Indian Constitution.
3. Goa is the only Indian state to have a Uniform Civil Code (UCC) in the form of common family law.

Which of the given statement/s is/are correct?

- A. 1 and 3 only
- B. 2 only
- C. 1, 2 and 3
- D. 3 only

2. Which of the following countries border Niger?

1. Nigeria
2. Chad
3. Ghana
4. Mali

Choose the correct option:

- A. 1, 3 and 4 only
- B. 3 and 4 only
- C. 1, 2 and 4
- D. 1, 2 and 3 only

3. Consider the following statements with respect to Most Favored Nation (MFN) status:

1. It requires a country to provide any concessions, privileges, or immunities granted to one nation in a trade agreement to all other World Trade Organization member countries.
2. MFN provides exclusive trading privileges.
3. India revoked the MFN status given to Pakistan in 2019.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1 only

4. Heart of Asia-Istanbul Process was established to:

- A. Broker the Nagorno-Karabakh ceasefire between Armenia and Azerbaijan.
- B. Address the shared challenges and interests

of Afghanistan and its neighbours and regional partners.

- C. Put an end to the Kurdish-Turkish conflict.
- D. Broker a peace deal between the Houthis and Saudi Arabia.

5. Consider the following statements:

1. A recognised political party can have 40 star campaigners.
2. A registered unrecognised political party cannot have any star campaigners.
3. The Election Commission of India has defined "star campaigner" in the Model Code of Conduct.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. 2 and 3 only
- D. 1 and 3 only

6. Consider the following statements with respect to Dadasaheb Phalke Award:

1. It is India's highest film honour conferred for outstanding contribution to the growth and development of Indian cinema.
2. It is a part of the National Film Awards.
3. It is presented annually by the Ministry of Information and Broadcasting.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 and 3 only

7. Consider the following statements with respect to BIMSTEC:

1. It was formed through the Bangkok Declaration.
2. Nepal and Pakistan are not members of BIMSTEC.
3. The platform helps India fulfil its 'Neighbourhood First' and 'Act East' policies.

Which of the given statement/s is/are correct?

- A. 1 and 3 only

- B. 2 and 3 only
- C. 1, 2 and 3
- D. 2 only

8. Consider the following statements:

1. Vishuva Milan is celebrated annually to mark the formation of the state of Odisha.
2. Odisha was the first Indian state formed on a linguistic basis post-independence.
3. Madhusudan Das and Gopabandhu Das are credited for having played a crucial role in the unification of different Odia-speaking tracts.

Which of the given statement/s is/are INCORRECT?

- A. 2 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. None of the above

9. Consider the following statements with respect to PM KUSUM Scheme:

1. The scheme was launched by the Ministry of Agriculture and Farmers' Welfare.
2. Under the scheme, the farmers have the option to sell additional power to the grid through solar power projects set up on their barren lands.
3. The first farm based solar power plant under the scheme was set up in Haryana.

Which of the given statement/s is/are correct?

- A. 1 and 3 only
- B. 2 only
- C. 1 only
- D. 1 and 2 only

10. Consider the following statements with respect to Rabha Tribe:

1. Hamja is a folk dance performed by the Rabha tribes.
2. Baikho Dera is the main festival of the Rabhas.
3. Rabha people are found in India, Bhutan, Bangladesh and Nepal.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

11. Consider the following statements:

1. The United Nations has declared 2023 as the International Year of Millets.
2. India, Nigeria and China are the largest producers of millets in the world.
3. Millets are photo-insensitive and resilient to climate change.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 and 3 only
- C. 3 only
- D. None of the above

12. Consider the following statements with respect to the Model Code of Conduct (MCC):

1. MCC comes into force from the date of election until the date that the results are out.
2. They are a set of guidelines issued by the Election Commission of India.
3. MCC does not have a statutory backing.

Which of the given statement/s is/are INCORRECT?

- A. 3 only
- B. 1 and 3 only
- C. 1 only
- D. None of the above

13. Which of the following statements is/are correct with respect to Bose-Einstein condensate?

1. It is observed at very low temperatures very close to absolute zero (-273.15°C)
2. It is characterized by relatively higher density.
3. It is also sometimes referred to as the fifth state of matter.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

14. Which of the following statement/s is/are correct with respect to Diphtheria?

1. It is caused by strains of bacteria called *Corynebacterium diphtheria*.
2. It can lead to death if not treated with diphtheria antitoxin and proper antibiotics.
3. It is a vaccine preventable disease.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1,2 and 3

15. Which of the following pairs is wrongly matched?

- A. Mojave desert: Africa
- B. Patagonian desert: South America
- C. Great Sandy: Australia
- D. Taklamakan desert: Asia

16. Which of the following statement/s is/are correct with respect to the International Criminal Court?

- 1. It is based in Hague, Netherlands
- 2. It has the jurisdiction to prosecute individuals for the international crimes of genocide, crimes against humanity and war crimes
- 3. The Rome Statute serves as the court's foundational and governing document.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

17. Consider the following statements with respect to Rashtriya Arogya Nidhi (RAN):

- 1. The scheme provides financial assistance to poor patients living below poverty line and suffering from life-threatening diseases relating to heart, kidney, liver, etc. for their treatment at government hospitals.
- 2. Financial assistance to such patients is provided only through the Direct Benefit Transfer (DBT) mechanism and no other means.
- 3. It is a central sector scheme.

Which of the given statement/s is/are INCORRECT?

- A. 2 and 3 only
- B. 1 and 2 only
- C. 2 only
- D. 3 only

18. The Global Gender Gap Report is published by:

- A. World Economic Forum
- B. Welthungerhilfe and Concern Worldwide

- C. United Nations Development Programme (UNDP)
- D. International Monetary Fund

19. Consider the following statements with respect to Stand-Up India Scheme:

- 1. People belonging to the scheduled caste or scheduled tribe or women are eligible to avail loans under the scheme.
- 2. Under the scheme, an amount ranging from Rs 10 lakhs to Rs.1 crore is provided as a loan, inclusive of working capital for setting up a new enterprise.
- 3. Loans under the scheme are available for only greenfield projects.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 only

20. Consider the following statements with respect to Central Board of Direct Taxes (CBDT):

- 1. It is a statutory authority functioning under the Central Board of Revenue Act, 1963.
- 2. All its members except for the chairman are selected from the Indian Revenue Service (IRS).
- 3. It is administered by the Department of Revenue under the Ministry of Finance.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

21. Which of the following ideal/s in the Preamble to the Indian Constitution has/have been borrowed from the Russian Constitution?

- 1. Justice
- 2. Liberty
- 3. Equality
- 4. Fraternity

Choose the correct option:

- A. 1 only
- B. 2 and 3 only
- C. 1, 3 and 4 only
- D. 1 and 3 only

22. Consider the following statements with respect to Bogibeel Bridge:

1. The Bogibeel project was a part of the 1985 Assam Accord.
2. It is a combined road and rail bridge built over River Barak in Assam.
3. It is India's second longest railroad bridge.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 and 3 only
- C. 2 only
- D. None of the above

23. Consider the following statements with respect to the Central Bureau of Investigation:

1. The Central Bureau of Investigation (CBI) draws its legality from the Delhi Special Police Establishment (DSPE) Act, 1946.
2. CBI functions under the Department of Personnel, Ministry of Personnel, Pension & Public Grievances.
3. CBI was established based on the recommendations of the Santhanam Committee on Prevention of Corruption.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1, 2 and 3
- C. 2 only
- D. 1 and 3 only

24. Consider the following statements with respect to Ordinances:

1. An ordinance is a law that is promulgated by the President of India only when the parliament is not in session.
2. An ordinance can be retrospective in nature.
3. Ordinance ceases to exist if parliament takes no action within six weeks from its reassembly.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

25. Consider the following statements with respect to none of the above (NOTA):

1. NOTA option is meant only for universal adult

suffrage and direct elections.

2. The Election Commission has no power to call a fresh election even if NOTA secures highest votes.
3. NOTA option was first used in 2013 assembly elections held in Chhattisgarh, Mizoram, Rajasthan and Madhya Pradesh.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 2 only

26. Consider the following statements with respect to Commando Battalion for Resolute Action (COBRA):

1. COBRA is a special operation unit of the National Security Guard.
2. It is proficient in guerrilla tactics and jungle warfare.
3. It was originally established to counter the Naxalite problem.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 3 only

27. Consider the following statements with respect to Central Vigilance Commission:

1. It was established based on the recommendations of the Santhanam Committee on Prevention of Corruption.
2. It submits its report to the Home Ministry.
3. The members of CVC are appointed by the President of India on the recommendations of a committee consisting of Prime Minister, Union Home Minister and Leader of the Opposition in Lok Sabha.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

28. Consider the following Reports and Organisations:

1. World Economic Outlook – World Economic

Forum

2. Global Gender Gap Report – United Nations Development Programme (UNDP)

3. World Cities Report – United Nations Population Fund

4. Global Corruption Report – Transparency International

Which of the given pairs is/are correctly matched?

- A. 4 only
- B. 2 and 4 only
- C. 1 and 3 only
- D. 2, 3 and 4 only

29. Consider the following statements:

1. National Legal Services Authority, alongside other Legal Services Institutions, conducts Lok Adalats.
2. Lok Adalats have statutory status.
3. The decision made by the Lok Adalats is ultimate and binding on all parties.

Which of the given statement/s is/are INCORRECT?

- A. 1 and 3 only
- B. 1 only
- C. 2 only
- D. None of the above

30. GI Tagged Bhavani Jamakkalam is a GI Tagged product of which state?

- A. Tamil Nadu
- B. Karnataka
- C. Andhra Pradesh
- D. Kerala

31. Consider the following statements with respect to IMPRINT India Initiative:

1. It is an initiative of the Ministry of Electronics and Information Technology.
2. It is designed to address all major engineering challenges relevant to India through an inclusive and sustainable mode of translational research.
3. The programme is a joint initiative of the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc).

Which of the given statement/s is/are correct?

- A. 1 only

- B. 2 and 3 only
- C. 1, 2 and 3
- D. None of the above

32. Fast patrol vessel PS Zoroaster was gifted by India to which country?

- A. Seychelles
- B. Sri Lanka
- C. Maldives
- D. Mauritius

33. Consider the following statements with respect to African swine fever:

1. It is a respiratory disease that infects domestic and wild pigs.
2. It is caused by Type A influenza virus.
3. It does not affect humans and spreads from animals to other animals only.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 only
- D. 1, 2 and 3

34. Consider the following statements:

1. G-Secs are tax-free debt instruments issued by the government to borrow money.
2. Treasury bills are short term instruments issued by the central government only.
3. Dated securities are long-term instruments having maturity between 5 years and 40 years.

Which of the given statement is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 2 only
- D. None of the above

35. Consider the following statements with respect to Project RE-HAB:

1. Project RE-HAB is a sub-mission under National Honey Mission.
2. Project RE-HAB was launched to prevent elephant-human conflict.
3. It was launched by Khadi and Village Industries Commission (KVIC).

Which of the given statement/s is/are correct?

- A. 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. None of the above

36. Which of the following best describes SARTHAQ initiative?

- A. It is an implementation plan for school education developed by the Department of School Education.
- B. It is a set of guidelines issued by the Education Ministry to promote industry-specific need-based research in the educational institutions to keep up the competitiveness of the Indian industry in the global market.
- C. It is an initiative of the Ministry of Women and Child Development for generating awareness and also improving the efficiency of welfare services for the girl child.
- D. It is an initiative of the Ministry of Women and Child Development to provide skills and right competencies to women so that they can take up gainful employment.

37. Consider the following statements:

- 1. Neutrinos are fundamental particles belonging to the lepton family.
- 2. Neutrinos have a higher mass than neutrons.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

38. Consider the following statements:

- 1. The Constitution guarantees the freedom of conscience and free profession, practice and propagation of religion as the Fundamental Right of an individual.
- 2. The right to freedom of religion is, in general, subject to public order, morality, health and the other provisions of the Constitution.
- 3. Despite the right to religious freedom, the State can pass laws providing for social welfare and reform.

- 4. The state can regulate or restrict any secular activity associated with religious practice.

Which of the given statement/s is/are INCORRECT?

- A. 3 only
- B. 1 and 4 only
- C. 2 only
- D. None of the above

39. Consider the following statements with respect to United Nations Convention on the Law of the Sea (UNCLOS):

- 1. It defines a distance of 12 nautical miles from the baseline as Territorial Sea limit and a distance of 200 nautical miles as Exclusive Economic Zone limit.
- 2. An Exclusive Economic Zone is an area of the sea over which a sovereign state has full sovereignty over the waters.
- 3. Both India and the U.S are signatories to UNCLOS.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1 and 3 only

40. Consider the following statements with respect to NanoSniffer:

- 1. It is the world's first microsensor based Explosive Trace Detector (ETD).
- 2. It is a 100% Made in India product in terms of research, development & manufacturing.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

41. The Umngot river is associated with which of the following Indian states?

- A. Nagaland
- B. Mizoram
- C. Meghalaya
- D. Sikkim

42. Which of the following is wrongly matched?

- A. Marib region: South Sudan
- B. Nagorno-Karabakh region: Azerbaijan
- C. Aleppo: Syria
- D. Kirkuk: Iraq

43. The 'muon g-2' experiment is being carried out in which of the following countries?

- A. China
- B. U.S.
- C. Japan
- D. France

44. Which of the following statements is/are correct with respect to brucellosis?

- 1. It is a zoonotic infection.
- 2. The disease is caused by a group of bacteria.
- 3. People are infected by eating raw or unpasteurized dairy products.

Options:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

45. Consider the following statements about the GATI initiative:

- 1. It aims to establish a Gender Equality framework in STEM.
- 2. It incorporates a system of grading institutes depending on the enrolment of women and the advancement of the careers of women faculty and scientists.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

46. B. N. Srikrishna Committee was set up to:

- A. Review the ownership guidelines and corporate structure for Indian Private Sector Banks.
- B. Study and identify key data protection issues and recommend methods for addressing them.

C. Develop a governance framework for Non-Personal Data.

D. Look into revenue shortfall being faced by the states after the GST roll-out, and suggest steps for augmenting collections.

47. Which of the following statements best describes the 'Shaphari' scheme?

- A. A certification scheme for aquaculture products.
- B. A Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters.
- C. A Scheme for Formalization of Micro Food Processing Enterprises.
- D. A Scheme for ensuring sustainable capture of fishery to harness marine and inland water resources.

48. Which of the following cities are associated with the nuclear weapons programme of Iran?

- 1. Natanz
- 2. Arak
- 3. Fordow

Choose the correct option:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

49. Consider the following statements:

- 1. The Chief Election Commissioner (CEC) as well as the other Election Commissioners are appointed by the President.
- 2. The Chief Election Commissioner and the two other election commissioners have equal powers and receive equal salary, allowances and other perquisites.
- 3. In case of difference of opinion amongst the Chief Election Commissioner and/or two other election commissioners, CEC's decision prevails.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

50. Consider the following statements:

1. The Central government has the power to authorise anyone to use any patents or patent applications for the "purposes of government".
2. The Central government can issue a compulsory licence in circumstances of national emergency or extreme urgency or in case of public non-commercial use.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

51. Consider the following statements with respect to Additional Tier-1 (AT-1) bonds:

1. AT-1 bonds are unsecured, perpetual bonds that banks issue to shore up their core capital base to meet the Basel norms.
2. They carry call options that allow banks to redeem them after five or 10 years.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

52. Consider the following statements:

1. Rabi crops are sown in summer and are harvested in winter.
2. Wheat, mustard and barley are Rabi crops.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

53. Consider the following statements with respect to Raisina Dialogue:

1. It is an inter-government security forum.
2. It is hosted by the Ministry of External Affairs and Observer Research Foundation (ORF).
3. It is designed to explore prospects and opportunities for Asian integration as well as Asia's integration with the larger world.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 only

C. 2 and 3 only

D. 1, 2 and 3

54. Consider the following statements:

1. Indian Rhino Vision 2020 aimed at attaining a population of 3,000 wild greater one-horned rhinos in seven of Assam's protected areas by the year 2020.
2. Pobitora Wildlife Sanctuary has the highest density of greater one-horned rhinos.
3. Kaziranga National Park is a UNESCO World Heritage Site and a tiger reserve hosting greater one-horned rhinos.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 and 3 only
- C. 2 only
- D. None of the above

55. Consider the following statements with respect to Jallianwala Bagh Massacre:

1. The Lieutenant-Governor of Punjab at the time of the Jallianwala Bagh Massacre was General Reginald Dyer.
2. Lord Chelmsford was India's Viceroy at the time of the incident.
3. The gatherers wanted to peacefully protest the arrest and deportation of two national leaders, Satyapal and Saifuddin Kitchlew.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 and 3 only
- C. 3 only
- D. None of the above

56. Which of the following magazines were started by Dr. B. R. Ambedkar?

1. Mooknayak
2. Equality Janta
3. Bahishkrit Bharat
4. Udbodhana
5. Hindoo Patriot

Choose the correct options:

- A. 1 and 3 only
- B. 2, 4 and 5 only
- C. 1, 4 and 5 only
- D. 1, 2 and 3 only

57. Koundiya wildlife sanctuary is located in:

- A. Karnataka
- B. Tamil Nadu
- C. Kerala
- D. Andhra Pradesh

58. Consider the following statements with respect to Uranium:

1. Natural uranium consists of nearly 99% U-238 and only around 0.7% of U-235.
2. U-235 is a fissile material that can sustain a chain reaction in a nuclear reactor.
3. Nuclear reactors require Highly Enriched Uranium with enrichment of up to 90% or more.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 3 only

59. Consider the following statements with respect to public debt:

1. It is the total liabilities of the central government contracted against the Consolidated Fund of India.
2. It excludes liabilities contracted against Public Account.
3. Government securities (G-Secs) and treasury bills are sources of public debt.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 and 3 only

60. Consider the following statements with respect to International Covenant on Economic, Social and Cultural Rights (ICESR):

1. It is part of the International Bill of Human Rights, along with the Universal Declaration of Human Rights (UDHR).
2. India is not a signatory to ICESR.

Which of the given statement/s is/are correct?

- A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

61. State of World Population Report is published by:

- A. United Nations Population Fund
- B. World Bank
- C. UN-Habitat
- D. United Nations Development Programme

62. Consider the following statements:

1. Bond yields are directly proportional to the interest rates in the economy.
2. Rising bond yields lower equity valuations.
3. A bond's price moves inversely with its yield or interest rate of such bond.

Which of the given statement/s is/are INCORRECT?

- A. 3 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. None of the above

63. Consider the following statements with respect to National Internet Exchange of India (NIXI):

1. It was set up for peering of internet service providers among themselves for the purpose of routing the domestic traffic within the country.
2. It is statutory body functioning under the Ministry of Communications.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

64. Consider the following statements:

1. Tangkhuls are a major ethnic group living in the Indo-Burma border area occupying the Ukhrul and Kamjong districts in Manipur.
2. Highest number of Particularly Vulnerable Tribal Groups are found in Manipur.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only

- C. Both 1 and 2
- D. Neither 1 nor 2

65. Consider the following statements about Konyak Tribes:

1. They are one among the Naga Tribes.
2. Aoleng is the spring festival of the Konyaks.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

66. 'Heparin' recently in news is:

- A. A blood thinner that has long been used in patients vulnerable to blood clots in their legs, lungs, heart or other body parts.
- B. A class of proteins present in the serum and cells of the immune system, which function as antibodies.
- C. An experimental antiviral made by American pharmaceutical firm Gilead Sciences that was first developed to treat Ebola.
- D. A vaccine candidate to be developed by Bharat Biotech India (BBIL) against the novel coronavirus.

67. Consider the following statements:

1. The double mutant strain of SARS-CoV-2 reported in India is scientifically named B.1.617.
2. Studies have shown reduced efficacy of vaccines against the double mutant strain of SARS-CoV-2.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

68. Consider the following statements about the Indian Ocean Dipole (IOD):

1. It is an atmosphere-ocean coupled phenomenon in the Indian Ocean.
2. It is characterised by a difference in sea-surface temperatures.
3. It is the rapid upwelling of deep and shallow ocean currents near the eastern coast.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 3 only
- C. 1, 2 and 3
- D. 1 and 2 only

69. Which of the following statements is/are correct with respect to the Great Indian Bustard?

1. It is the largest land bird in its native range.
2. It is the State bird of Rajasthan.
3. It has been designated as critically endangered by the International Union for Conservation of Nature and Natural Resources.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

70. What is/are the advantages of placing the Aditya mission satellite in the Lagrangian point 1 (L1) of the Sun-Earth system:

1. Reduce fuel consumption
2. Provides an uninterrupted view of sun.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

71. Which of the following statement/s is/are correct with respect to pharmaceutical exports from India?

1. On a continental basis, Africa remains the largest market for Indian pharmaceuticals.
2. Drug formulations and biological remained the second-largest commodity exported by India.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

72. Which of the following statement/s is/are correct with respect to cynodonts?

1. These are small rat-like animals that lived about 220 million years ago.
2. Cynodonts are important in evolutionary studies as this group ultimately gave rise to the present-day mammals.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

73. Consider the following:

1. The 11th-century temple located in Odisha built in red stone is a symbol of Kalinga style architecture.
2. The temple was built by King Jajati Keshari belonging to Soma Vansh.
3. The central deity of the temple is worshipped both as Shiva and Vishnu.

The temple being talked about is:

- A. Lingaraj temple
- B. Shree Jagannath Temple
- C. Konark Sun Temple
- D. Siddheswara Mahadeva temple

74. Consider the following statements with respect to the industrial applications of Oxygen:

1. It is used as a bleaching chemical in paper manufacturing.
2. It is used for decarburization in steel production.
3. It is used as a raw material in the manufacturing of urea.

Which of the given statement/s is/are correct?

- A. 1 and 3 only
- B. 1, 2 and 3
- C. 2 only
- D. 1 and 2 only

75. Consider the following statements:

1. Meghalaya has the highest number of species of bats in the country.
2. The disc-footed bat is endemic to Nongkhylliem Wildlife Sanctuary in Meghalaya.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

76. Consider the following statements:

1. Panchayati Raj was constitutionalised through the 74th Constitutional Amendment Act.
2. Rajasthan was the first state to introduce the panchayat system in India after independence.
3. Ashok Mehta Committee recommended the establishment of a 3-tier structure Panchayati Raj system.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 2 only
- D. 1, 2 and 3

77. Consider the following statements with respect to Ingenuity helicopter:

1. It made the first powered flight on a planet other than Earth.
2. It is a solar-powered helicopter.
3. Its objective is to assist Perseverance in its mission to search for signs of extra-terrestrial life.

Which of the given statement is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

78. In which of the following states are Bru (Reangs) recognised as a Particularly Vulnerable Tribal Group?

1. Assam
2. Tripura
3. Manipur
4. Mizoram

Choose the correct option:

- A. 2 and 3 only
- B. 1 and 4 only
- C. 2 only
- D. None of the above

79. Consider the following statements with respect to Khajuraho Group of Monuments:

1. It is a group of Hindu and Jain temples and a UNESCO World Heritage Site.
2. They are known for their nagara-style architectural symbolism.
3. All the temples are made of sandstone.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1, 2 and 3
- C. 2 and 3 only
- D. 2 only

80. Consider the following statements with respect to Asset Reconstruction Companies (ARC):

1. SARFAESI Act provides the legal basis for setting up ARCs in India.
2. There is no specific limit on the extent of debt an ARC can take over from banks.
3. The ARC can take over only secured debts which have been classified as a non-performing asset.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 only

81. Which of the following measures can help increase the value of Rupee vis-a-vis the U.S. dollar in the Forex market?

1. Lowering the RBI's U.S. dollar Forex reserves
2. Increasing the RBI's U.S. dollar Forex reserves
3. Open market operations to inject more rupee liquidity into the financial market
4. Open market operations to suck out rupee liquidity from the financial market
5. Restrictions on the import of gold
6. Encouraging Foreign capital inflows

Options:

- A. 1, 4, 5 and 6 only
- B. 2, 3, 5 and 6 only
- C. 1 and 4 only
- D. 5 and 6 only

82. What are the possible implications of rupee appreciation in the short term?

1. Lower import cost of crude oil
2. Favourable impact on inflation
3. Adverse impact on export-oriented sectors
4. Adverse impact on inbound investment

Options:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 1, 2, 3 and 4
- D. 1 and 3 only

83. Which of the following correctly describes the RESPOND programme of ISRO?

- A. Addressing the socio-economic needs of the deprived sections through scholarship support
- B. Establishing links with premier academic institutions to carry out research and developmental projects
- C. Establishing collaborations with third world countries to support their development process
- D. Addressing the needs of the agricultural sector through the use of space technology

84. The proposed Bilateral Trade and Investment Agreement (BTIA) is an economic agreement between India and which of the following?

- A. European Union
- B. Japan
- C. Russia
- D. U.S.

85. Consider the following statements:

1. U.S. Commission on International Religious Freedom (USCIRF) recommends to the US State Department, the names of countries as well as non-state actors engaging in or tolerating violation of religious freedom.
2. USCIRF recommendations are non-binding.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

86. Arrange the following from West to East:

1. Hambantota Port
2. Trincomalee Port
3. Colombo Port
4. Galle Port

Choose the correct option:

- A. 3, 4, 1, 2
- B. 3, 1, 2, 4
- C. 2, 1, 4, 3
- D. 3, 2, 4, 1

87. Consider the following statements about the World Press Freedom Index:

1. It is published annually by Reporters without Borders (RSF).
2. It is an indicator of the quality of journalism in each country or region.
3. It does not rank public policies.

Which of the given statement/s is/are INCORRECT?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 only
- D. 2 only

88. Consider the following statements with respect to Pressure Swing Adsorption (PSA):

1. It is a technology used to separate some gas species from a mixture of gases under pressure.
2. It makes use of cryogenic distillation techniques of gas separation.
3. The process takes place at very low temperatures.

Which of the given statement is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

89. The Sabang Port signifies India's close defence relations with which country?

- A. Oman
- B. Mauritius
- C. Indonesia
- D. Myanmar

90. Which of the following is NOT the mandate of the Competition Commission of India?

1. Eliminate practices having an adverse effect on competition.
2. Promote and sustain competition.
3. Protect the interests of consumers and ensure freedom of trade.
4. Intervene in the foreign exchange market to deal with currency fluctuation.

Options:

- A. 1 only
- B. 2 and 3 only
- C. 4 only
- D. 1, 2, and 3

91. Solar dehydration helps in:

- A. Preserving natural produce and reducing food wastage.
- B. Stabilising electricity grids during voltage fluctuations.
- C. Restricting the impact of solar radiation on satellites and other space assets.
- D. Reducing water evaporation from irrigation canals and dams.

92. A Non-Fungible Token (NFT) is associated with which technology?

- A. Internet of Things (IoT)
- B. 5G Communication
- C. Blockchain
- D. AI-driven Automation

93. "Momentum for Change: Climate Neutral Now" is an initiative launched by:

- A. The Intergovernmental Panel on Climate Change
- B. The UNEP Secretariat
- C. The UNFCCC Secretariat
- D. The World Meteorological Organization

94. Uttarakhand is vulnerable to which of the following disasters?

1. Earthquakes
2. Landslides
3. Cloud bursts
4. Glacial bursts

5. Forest fires

Choose the correct option:

- A. 1 and 4 only
- B. 2, 3 and 4 only
- C. 1, 4 and 5 only
- D. 1, 2, 3, 4 and 5

95. India draws its human rights obligations from:

- 1. Protection of Human Rights Act, 1993
- 2. Universal Declaration of Human Rights adopted by the UN
- 3. Rights guaranteed by the Constitution

Choose the correct option:

- A. 1 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2, and 3

96. Which of the following statements is/are correct?

- 1. ASEAN grouping is open for membership to all countries in the Asia-Pacific region.
- 2. No ASEAN country shares a land border with India.
- 3. India is one of the founding members of ASEAN.

Choose the correct option:

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. None of the above

97. Which country is known for having 'self-defence forces' in the place of regular armed forces?

- A. Switzerland
- B. Norway
- C. Japan
- D. Finland

98. With reference to the British colonial rule in India, consider the following statements:

- 1. Mahatma Gandhi was instrumental in the abolition of the system of 'indentured labour'.
- 2. In Lord Chelmsford's 'War Conference', Mahatma Gandhi did not support the resolution on recruiting Indians for World War.
- 3. Consequent to the breaking of the Salt Law by the Indian people, the Indian National Congress was declared illegal by the colonial rulers.

Which of the statements given above are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

99. Which of the following is/are In situ bioremediation techniques?

- 1. Bioventing
- 2. Biopiles
- 3. Biosparging
- 4. Bioreactors
- 5. Bioaugmentation

Options:

- A. 1, 2, 3 and 4 only
- B. 1, 3 and 5 only
- C. 2, 3 and 4 only
- D. 3, 4 and 5 only

100. With reference to Detritus Food Chain (DFC), which of the following statements is/are correct?

- 1. It is made up of decomposers which are heterotrophic organisms, mainly fungi and bacteria.
- 2. In a terrestrial ecosystem, a much larger fraction of energy flows through the detritus food chain than through the Grazing Food Chain (GFC)

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

101. Consider the following statements with respect to Eutrophication:

1. As the lake's fertility increases, plant and animal life burgeons
2. As silt and organic debris pile up, there is reduction in lake's temperature

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

102. 'Evil Quartet' is related to

- A. Ozone layer depletion
- B. Industrial revolution and its impact on environment
- C. Loss of biodiversity
- D. Oil exploration risks for the marine life

103. With reference to Ecological Succession, which of the following statements is/are correct?

1. Primary succession is faster than secondary succession.
2. At any time during primary or secondary succession, a particular seral stage of succession cannot be converted to an earlier stage.
3. Lichens, fungus are examples of Pioneer species

Options:

- A. 1 and 2 only
- B. 3 only
- C. 2 and 3 only
- D. None

104. Which of the following statements is/are correct?

1. National parks are given a greater degree of protection, with human activity greatly restricted as compared to wildlife sanctuaries
2. National Park can be created for a particular species, whereas the Wildlife sanctuary is not primarily focused on a particular species

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

105. Special Report on the Ocean and Cryosphere in a Changing Climate is released by

- A. World Economic Forum (WEF)
- B. Climate Action Network (CAN)
- C. German watch
- D. Intergovernmental Panel on Climate Change (IPCC)

106. Consider the following pairs

Disease	Pollutant
1. Itai-itai	cadmium
2. Minamata	Mercury
3. Pneumoconiosis	Coal

Which of the above pairs is/are correctly matched?

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

107. Which of the following statements is/are correct?

1. Grasslands rarely receive enough rain to support trees. They do not possess soil nutrients to feed large, grassy expanses.
2. Taiga is a region of subarctic forest south of the Arctic Circle.
3. Tundra is the treeless environment of the Arctic Circle.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

108. Which of the following can be found as pollutants in the drinking water in some parts of India? (2013)

1. Arsenic
2. Sorbitol
3. Fluoride
4. Formaldehyde
5. Uranium

Select the correct answer using the codes given below.

- A. 1 and 3 only
- B. 2, 4 and 5 only

- C. 1, 3 and 5 only
- D. 1, 2, 3, 4 and 5

109. How did the Defense Production Act of the USA affect India during the pandemic?

- A. US violated India's EEZ under its provisions.
- B. US raised the prices of defence exports to India.
- C. US placed export controls on raw materials for COVID-19 vaccines.
- D. US withdrew from joint defence production projects with India.

110. Which of the following statements is/are correct?

- 1. Compulsory licensing (CL) is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patent-protected invention itself.
- 2. It is one of the flexibilities in the field of patent protection included in the WTO's agreement on intellectual property — the TRIPS.
- 3. When a CL is issued, the patent owner loses rights over the patent and need not be compensated for copies of the products made under the compulsory licence.

Options:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2, and 3

111. Which of the following statements is/are correct?

- 1. The National Cyber Crime Reporting Portal has been set up under the Ministry of Electronics and Information Technology to allow reporting of cybercrimes.
- 2. Indian Cyber Crime Coordination Centre (I4C) has been established under the Ministry of Home Affairs to act as a nodal point in the fight against cybercrime.
- 3. I4C has envisaged the Cyber Crime Volunteers Program to bring together citizen volunteers on a single platform to help them contribute to the fight against cybercrime by flagging any unlawful content for facilitating law enforcement agencies.

Options:

- A. 1 only
- B. 1 and 2 only

- C. 2 and 3 only
- D. None of the above

112. Which of the following statements is/are INCORRECT?

- 1. India has procured the C-17 Globe master from the USA.
- 2. It is manufactured by Boeing.
- 3. It is a large military transport aircraft used for tactical and strategic airlift missions to transport troops, cargo including heavy weaponry, medical evacuation and airdrop duties.

Options:

- A. 1 only
- B. 2 only
- C. 1 and 3 only
- D. None of the above

113. The 'Deep Time' project that aimed at studying how people adapt to extreme changes in living conditions and environment caused by isolation and darkness was held recently in which country?

- A. Switzerland
- B. France
- C. USA
- D. Germany

114. Siachen Glacier is situated to the – [UPSC 2020]

- A. East of Aksai Chin
- B. East of Leh
- C. North of Gilgit
- D. North of Nubra Valley

115. 'Bambi Bucket', often seen in news, is used for/as

- A. Collecting and analysing neutrinos in underground particle detectors
- B. A virtual bucket that filters suspicious content on the internet
- C. Aerial firefighting with the bucket fitted to helicopters
- D. Holding nuclear warheads that are mounted on fighter jets

116. Which of the following statement/s is/are correct?

1. India has been ranked 49th in the Chandler Good Government Index (CGGI) that was launched in 2021.
2. Finland takes the top spot on the CGGI list and European nations feature prominently in the top twenty.
3. The Ministry of Personnel, Public Grievances & Pensions has launched its own Good Governance Index (GGI) to determine the status of governance in the country.

Options:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2, and 3

117. Which of the following statement/s is/are incorrect?

1. Helicopters need compact and powerful aero-engines for operating at extreme conditions.
2. To achieve this, single-crystal blades having complex shape and geometry manufactured out of nickel-based superalloys capable of withstanding high temperatures of operation are used.
3. Recently, DRDO achieved this major technological breakthrough and India joined an elite list of a few countries such as the U.S., the U.K., France and Russia which have the capability to design and manufacture such single crystal component.

Options:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. None of the above

118. Japan is funding which of the following projects in India?

1. Dedicated Freight Corridor project
2. Metro rail projects
3. Mumbai-Ahmedabad high speed rail link
4. Kundankulam nuclear power plant

Options:

- A. 1 only
- B. 2 only
- C. 1, 2 and 3 only
- D. 1, 3 and 4 only

119. Project DANTAK of Bhutan, involving Indian support, deals with?

- A. Carbon sequestration for reducing greenhouse gases
- B. Border security along Bhutan-China border
- C. Creating critical road and essential infrastructure
- D. Conservation of snow leopard and tiger population

120. In India, which of the following can be considered as public investment in agriculture?

1. Fixing Minimum Support Price for agricultural produce of all crops.
2. Computerization of Primary Agricultural Credit Societies.
3. Social Capital Development.
4. Free electricity supply to farmers.
5. Waiver of agricultural loans by the banking system.
6. Setting up of cold storage facilities by the government.

Select the correct answer using the code given below:

- A. 1, 2 and 5 only
- B. 1, 3, 4 and 5 only
- C. 2, 3 and 6 only
- D. 1, 2, 3, 4, 5 and 6

121. Consider the following statements:

1. Tata Iron and Steel Company Limited (TISCO) was the very first iron and steel company in India.
2. Steel is a regulated sector, the Government sets annual targets for steel production.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

122. With reference to Asian Development Bank (ADB), which of the following statements is/are correct?

1. It is a regional development bank which is headquartered in Tokyo, Japan.
2. ADB is modeled closely on the World Bank, and has a similar weighted voting system where votes are distributed in proportion with members' capital subscriptions.

3. South Asia Economic Focus Report released by ADB analyzes economic and development issues in developing countries in Asia.

Options:

- A. 1 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

123. Which of the following is/are correctly matched?

- 1. Meghdoot App warn people about lightning
- 2. Damini App provide forecast to farmers
- 3. Mausam App communicate the weather information and forecasts in a lucid manner

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 only
- D. None

124. Jaivik Kheti Portal is a unique initiative by the Government of India:

- A. to assist corporates and farmers for contract farming
- B. to create awareness about the latest technological developments in the agriculture and allied sectors
- C. to promote organic farming
- D. to integrate regulated markets in the country through a common e-platform

125. What is the use of Biochar in farming? [UPSC 2020]

- 1. Biochar can be used as a part of the growing medium in the vertical farming
- 2. When biochar is a part of the growing medium, it promotes the growth of nitrogen fixing microorganisms.
- 3. When biochar is a part of the growing medium, it enables the medium to retain water for a longer time.

Which of the above-given statements is/are correct?

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

126. Which of the following statements is/are incorrect?

- 1. Election Commission of India forbids publishing results of opinion polls from the date of notification of elections until the end of polling.
- 2. In the case of a multi-phase election, results of exit polls can be published only after the voting is over in each phase.

Select the option from below:

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

127. 'Tianhe', recently seen in the news, is related to:

- A. A nasal spray viewed as a potential cure against Covid-19 infection
- B. Chinese Space program
- C. Naval Exercise between India & Singapore
- D. A computer malware

128. Which of the following is/are statutory bodies?

- 1. Competition Commission of India
- 2. NITI Aayog
- 3. National Human Rights Commission
- 4. Special Officer for Linguistic Minorities

Select the correct option from below:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 1, 2 and 3 only
- D. 1, 3 and 4 only

129. Which of the following is the duty of the Competition Commission of India?

- 1. Eliminate practices having an adverse effect on competition
- 2. Promote and sustain competition
- 3. Protect the interests of consumers
- 4. Ensure freedom of trade in the markets of India.

Select the correct option from below:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. All of the above

130. Amnesty International is: [UPSC 2015]

- A. an agency of the United Nations to help refugees of civil wars
- B. a global Human Rights Movement
- C. a non-governmental voluntary organization to help very poor people
- D. an inter-governmental agency to cater to medical emergencies in war-ravaged regions

131. Which of the following regions fall under seismic zone 5?

- 1. Entire northeastern India
- 2. Parts of Jammu and Kashmir and Himachal Pradesh
- 3. Andaman & Nicobar Islands
- 4. Rann of Kutch in Gujarat
- 5. Delhi-NCR region

Options:

- A. 1, 2, 3 and 4 only
- B. 2, 3, 4 and 5 only
- C. 1, 3, 4 and 5 only
- D. 1, 2, 3, 4 and 5

132. Which of the following statements about remdesivir is/are correct?

- 1. The drug prevents the virus from producing a particular enzyme RNA-dependent RNA polymerase (RdRp) that is necessary for the virus to replicate itself.
- 2. The drug has also been shown to shorten the duration of patient hospital stays.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

133. With reference to Red Herring Prospectus, which of the following statements is/are correct?

- 1. It is the preliminary registration document prepared by merchant bankers for prospective IPO-making companies in the case of book building issues.
- 2. It contains details of either price or number of shares being offered or the amount of issue.

Options:

- A. 1 only
- B. 2 only

- C. Both 1 and 2
- D. Neither 1 nor 2

134. Python-5 recently seen in news is a

- A. Anti-Tank Guided Missile
- B. Air-to-Air Missile
- C. Surface to Air Missile
- D. Surface to Surface Missile

135. With reference to the Indian Regional Navigation Satellite System (IRNSS), consider the following statements: [UPSC 2018]

- 1. IRNSS has three satellites in geostationary and four satellites in geosynchronous orbits.
- 2. IRNSS covers the entire India and about 5500 sq. km beyond its borders.
- 3. India will have its own satellite navigation system with full global coverage by the middle of 2019.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. None

ANSWER KEYS

1	A
2	C
3	C
4	B
5	C
6	C
7	A
8	A
9	B
10	D
11	D
12	C
13	D
14	D
15	A
16	D
17	A
18	A
19	C
20	C

21	A
22	B
23	B
24	D
25	C
26	B
27	C
28	A
29	D
30	A
31	B
32	A
33	D
34	B
35	C
36	A
37	A
38	D
39	A
40	C

41	C
42	A
43	B
44	D
45	C
46	B
47	A
48	D
49	B
50	C
51	D
52	B
53	C
54	D
55	A
56	D
57	D
58	B
59	C
60	A

61	A
62	D
63	A
64	B
65	C
66	A
67	D
68	D
69	D
70	C
71	B
72	C
73	A
74	D
75	A
76	C
77	C
78	C
79	B
80	C

81	A
82	C
83	B
84	A
85	C
86	A
87	D
88	C
89	C
90	C
91	A
92	C
93	C
94	D
95	D
96	D
97	C
98	B
99	B
100	C

101	A
102	C
103	B
104	A
105	D
106	D
107	B
108	C
109	C
110	B
111	C
112	D
113	B
114	D
115	C
116	D
117	D
118	C
119	C
120	C

121	A
122	B
123	C
124	C
125	D
126	C
127	B
128	B
129	D
130	B
131	A
132	C
133	A
134	B
135	A

MAINS PRACTICE QUESTIONS

GS Paper 1

Geography

1. Discuss the role played by dust in influencing climatic phenomenon with special emphasis on the Indian summer monsoon. Illustrate with appropriate diagrams. (10 marks, 150 words)

Social Issues

1. Current forms of racism and discrimination are complex and often covert. Elucidate. Also suggest necessary measures to combat these new manifestations of racism and discrimination. (10 marks, 150 words)
2. India has been witnessing growing inequalities and the COVID-19 pandemic has only accelerated the trend. Discuss the reasons for the same and the concerns associated with it. Also suggest the measures needed to address the issue of economic inequality in India. (15 marks, 250 words)
3. Medical termination of pregnancy laws should recognise the primacy of women's agency. Elucidate. (10 Marks, 150 Words)
4. Discuss the Supreme Court's judgment in the Navtej Singh Johar & Ors. v. Union of India case and evaluate its significance in protecting the right to equality of homosexuals. (10 marks, 150 words)

GS Paper 2

International Relations

1. India should use its influence to ensure peace within Afghanistan and the wider region. Discuss (10 Marks, 150 Words)
2. Though confrontation and competition between the U.S. and China will dominate this century, interdependence between the two superpowers is also a reality which the two countries will have to admit. Elucidate. (10 marks, 150 words)
3. Pakistan's double U-turn on resuming trade with India highlights the internal differences within ministries, between business and political communities, and the emphasis on politics over economy and trade. Discuss. (10 marks, 150 Words)
4. India needs to clinically address the issue of refugee protection and introduce appropriate legal and institutional measures. Discuss. (15 Marks, 250 Words)
5. In the light of indications of backchannel talks taking place between India and Pakistan since 2020, discuss the significance of such efforts and also elucidate the need for engagement between the two neighbours in the current circumstances. (10 marks, 150 words)
6. India-Pakistan animosity hurts regionalism and South Asian growth. Comment. Also discuss how the recent thaw in relations is not just good for the two states but for all the nations constituting the South Asian Association for Regional Cooperation (SAARC). (10 marks, 150 words)
7. In the light of the recent Track-II dialogue held between India and China, discuss the criticality of managing the three issues of the boundary question, trade, and the increasing impact of third-party and multilateral engagements on the two-way relationship to arrive at a new and more realistic state of relations between the two emerging powers. (15 marks, 250 words)
8. In the light of the cold war-like situation between the U.S. and China, analyze the critical role that could be played by the so called middle powers - India, Japan, Turkey and Iran in the evolving global geopolitical scenario. (15 marks, 250 words)
9. In the post-pandemic period, developing economies should rise to meet the U.S.-led liberal hegemonic world order by mutual sharing of knowledge and more ground-breaking inclusive treaties. Examine. (10 Marks, 150 Words)
10. Vaccine shortages around the country have triggered questions about the government's policy on the export of Covid-19 vaccines. Is it justified? Critically evaluate. (10 Marks, 150 Words)

11. Evaluate India's contribution to the 'Liberation of Bangladesh' War and what has been its biggest outcome today? (250 words; 15 marks)
12. Explain the need for India and Pakistan to evolve a policy to ensure that the prisoners are guaranteed their rights and are repatriated at the earliest. (10 marks, 150 Words)

Polity and Governance

1. Will the Fifteenth Finance Commission's recommendations go a long way in strengthening the pillars of fiscal federalism? Critically evaluate. (10 Marks, 150 Words)
2. The spoils system of hiring a person to a government post promotes corruption and inefficiency. Comment (10 Marks, 150 Words)
3. What is the doctrine of 'pith and substance'? Explain with relevant case laws. (10 Marks, 150 Words)
4. The National Policy on Rare Diseases, 2021, though a good start, falls short of expectations. Comment. (10 marks, 150 words)
5. The Lok Adalats, though have played a significant role in easing the case burden on the Indian judiciary and easing dispute settlement for the litigants, continue to face some challenges. Elucidate. (15 marks, 250 words)
6. Examine how Places of Worship (Special Provisions) Act enforces our commitment to secularism. What are the issues surrounding the law? (15 Marks, 250 Words)
7. In the light of the recently issued, The Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, discuss the concerns associated with the functioning of tribunals in India and also suggest the remedial measures needed to realize the true potential of tribunals in the constitutional set up of India. (10 marks, 150 words)
8. The proposed Personal Data Protection Bill, 2019 though marks an improvement over the existing data protection regime, there is ample scope for improvement to ensure a stronger and more effective data protection regime. Discuss. (15 marks, 250 words)
9. Though the Election Commission of India, through the conduct of free and fair elections has helped maintain the integrity of the electoral process, the unlimited and arbitrary powers enjoyed by it need to be addressed given the dangers associated with such a scenario. Comment. (15 marks, 250 words)
10. Re-promulgation of ordinances is a fraud on the Constitution and a subversion of democratic legislative processes. Elucidate. (10 Marks, 150 Words).
11. A balance needs to be struck between the government's legitimate role and the police chief's operational autonomy. Examine. (10 Marks, 150 Words)
12. In the unprecedented pandemic, vaccine development and vaccine administration are time-consuming. Suggest non-vaccine interventions to prevent, monitor and treat Covid-19. (10 marks, 150 Words)

Health

1. India's fight against the resurgence of the coronavirus is a challenge requiring strengthened data and better science. Discuss. (10 Marks, 150 Words)
2. What do you understand by 'breakthrough infection'? Will vaccines offer lasting protection against Covid-19? Critically evaluate. (15 Marks, 250 Words)
3. The COVID-19 vaccination policy of India has raised concerns of vaccine inequity. Discuss. (250 words; 15 marks)

Education

1. Coronavirus presents an opportunity to redefine the future of education by re-assessing our priorities. Discuss how educators and policymakers can bridge the existing gaps and evolve a paradigm shift in learning practices. (15 marks, 250 Words)

GS Paper 3**Economy**

1. Has inflation targeting helped India keep inflation in check and maintain price stability? Critically evaluate. (10 Marks, 150 Words)
2. The Finance Ministry's announcement of keeping the inflation target unchanged at 4% for the coming five years is a welcome move. Comment. (10 marks, 150 words)
3. Agriculture can only be reformed by radically enhanced state capacities and qualitatively better regulatory oversight. Analyze.
4. Given the socio-economic impact of the first wave of the pandemic and the subsequent lockdown that was imposed, suggest what measures may be required in the face of the second wave of the COVID-19 pandemic. (10 marks, 150 words)
5. Discuss the major challenges being faced by the Indian farmers with respect to forward linkages of the agricultural sector. Also suggest measures to address these challenges. (15 marks, 250 words)
6. Enumerate the initiatives being taken by the Government to encourage domestic production in India. Also analyze the significance of such initiatives especially in the post pandemic phase. (10 marks, 150 words)
7. Discuss the key features of the National Hydrogen Energy Mission. What challenges must India address to enhance commercial-scale operations of Hydrogen? (15 Marks, 250 Words)
8. Roping in retired HC judges to clear the backlog of cases should not be at the cost of regular appointments. Elucidate. (250 words; 15 marks)
9. Examine the recent issues seen in appointments to tribunals. (250 words; 15 marks)
10. Illustrate the journey of Panchayati Raj in India and with suitable examples suggest ways to strengthen the system. (250 words; 15 marks)
11. The proposal for a minimum global corporate income tax could be a game-changer. Critically evaluate. (250 words; 15 marks)
12. With a fast-moving pandemic, no one is safe, unless everyone is safe. In the light of the statement, discuss how a temporary TRIPS waiver benefits the society at large. (15 marks, 250 Words)

Environment & Ecology

1. Climate justice is imperative for India for leveraging its green commitment to ensure its developmental and global aspirations of climate change. Elucidate. (15 Marks, 250 Words)
2. The hard scientific reality is that the three-way compatibility between temperature goals, carbon neutrality, and equity would be very hard to achieve. Discuss in the light of the growing international chorus for global adoption of carbon neutrality. Also suggest what should be India's plan in this regard with suitable arguments. (15 marks, 250 words)
3. The 'net-zero' emission target presents a conundrum for fast-growing developing countries such as India. In the light of this statement, discuss an equitable way to achieve net-zero greenhouse gas emissions. (15 Marks, 250 Words)
4. Given that India can neither limit itself to only modest steps until richer countries do more given the context of a global climate crisis, nor can India go ahead and announce a 2050 net-zero commitment which could seriously compromise India's development needs, there is the need for a more balanced approach when it comes to climate action. Elucidate. (15 marks, 250 words)
5. Discuss the causes of groundwater depletion and its socio-economic and ecological consequences. Suggest measures to conserve groundwater. (10 Marks, 150 Words)
6. The U.S.-India Climate and Clean Energy Agenda 2030 Partnership has the potential to aid sustainable post-pandemic development. Discuss (250 words; 15 marks)

Internal Security/Security

1. Cyberattacks done by faceless persons who are non-combatants as per international law requires careful examination and emphasises the need for global regulation. Discuss. (10 Marks, 150 Words)
2. Though the government's dual strategy of a sustained military campaign against the guerrillas and the simultaneous developmental work has to an extent put the Maoists on the back foot, the insurgent outfit continues to remain a significant threat to India's internal security. Discuss. (15 marks, 250 words)
3. The world increasingly powered by Virtual Reality and Artificial Intelligence has given rise to the double imperatives of closing the digital divide and creating child-safe digital spaces. Discuss. (15 Marks, 250 Words)
4. The recent encounter between security forces and the Maoists in Sukma reiterates the threat posed by the Maoists to India's Internal Security. Discuss the concerns associated with the Maoist movement and the lacunae in the governmental efforts to address the same. (10 marks, 150 words)

Science & Technology

1. In the light of the second wave of COVID-19 infections in India and the reports of the scarcity of COVID-19 vaccines and drugs in India, the country should focus on scaling up the production of COVID-19 vaccines. Suggest the steps that can be taken. Also enumerate the supporting legal provisions in this regard. (10 marks, 150 words)
2. India has done relatively well with respect to legislation regarding patents by offering the world a host of TRIPS-compliant flexibilities in its statute. Elucidate. (10 marks, 150 words)

Disaster Management

1. The second wave of the COVID-19 pandemic has had a devastating impact on India caused by the collapse of its healthcare system. In this context, examine the policy failure on the part of the Central and State governments. (250 words; 15 marks)

INTERVIEW TRANSCRIPT

Candidate Details:

- Name: Abhilash Mishra
- AIR: 05 (CSE-2016)
- Chairman of the Interview Board: Shri Vinay Mittal
- Optional Subject: Public Administration
- Personal Details:
- Hobbies: Playing cricket
- Education: B. Tech in Mechanical Engineering
- Work experience: Indian Oil Corporation Limited (Four years)
- Home town: Allahabad, Uttar Pradesh

Questions asked by the interview board:

On optional subject

- O Why Public Administration over Mechanical Engineering as an optional?
- What were the favorite subjects in Mechanical Engineering?

On the economy

- Food Security Act and its implementation.
- Farm loan waiver. Is it the right decision?

On the railways

- Merger of Rail Budget with Union Budget - merits and demerits.
- Is there a need to infuse capital into the Indian Railways?
- How do we promote freight in Railways?
- How do we accelerate environmental clearance for Railways?

On international relations

- Do countries have the right to restrict immigration? (USA)
- Why is India bothered about the H1B visas?

On culture

- Why was Jallikattu banned?
- Are there any other similar cultural practices in the world?

On social issues

- What is gender? What are the issues associated with it?

On Hobbies

- What was your role while playing cricket?
- What is Chinaman bowling? Are there any Chinaman bowlers from India?