

MAY - 2021

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POLITY

Devolution of powers and finances up to the local levels

1. Why and how of creating a district

- » Prelims: Procedure for creating new districts
- » Mains: Advantages and disadvantages in governance associated with the creation of smaller administrative units like districts

Context:

- Malerkotla has been declared the 23rd district of Punjab.

Key Stats:

- According to the 2011 Census, there were 593 districts in the country.
- Between 2001-2011 as many as 46 districts were created by States.
- Currently, there are 718 districts in the country (As per Know India – a website run by the Government).
 - * The surge in number is also due to the bifurcation of Andhra Pradesh into A.P. and Telangana in 2014.

How are new districts carved?

- The power to create new districts or alter or abolish existing districts rests with the State governments.
- This can either be done through an executive order or by passing a law in the State Assembly.

How does it help?

- States argue that smaller districts lead to better administration and governance.
- Example: the Assam government issued a notification to upgrade the Majuli sub-division to the Majuli district for administrative expediency.

What role does the Central government have?

- The Centre has no role to play in the alteration of districts or creation of new ones. States are free to decide.
- The Home Ministry has a role to play when a State wants to change the name of a district or a railway station.

Salient provisions of Indian Constitution

2. 'Accused denied anticipatory bail can be given protection'

- » Prelims: Article 21 of the Indian constitution

Context:

- A Supreme Court judgment has said that an accused denied anticipatory bail can, in exceptional circumstances, still be given protection from immediate arrest if his sudden imprisonment by the State would push his personal affairs and family into crisis.

Details:

- The Chief Justice of India observed that while dismissing the anticipatory bail plea, in exceptional cases where the accused is the sole breadwinner of the family, courts had the power to allow an accused to retain his/her personal liberty for some time in order to make arrangements for his/her family before surrendering in the trial court.
- It was emphasised that the grant or rejection of bail in such cases had a direct bearing on the fundamental right to life and liberty of an individual.
- Judges were urged to pay equal attention to the humane side of criminal law while hearing pleas for anticipatory bail.

What is the need?

- The concept of anticipatory bail germinated from Article 21 of the Constitution.
- According to Article 21 – Protection of Life and Personal Liberty: No person shall be deprived of his life or personal liberty except according to procedure established by law.
- At times, courts may need to look beyond the strict confines of the written text to secure complete justice. The High Courts and the Supreme Court have the powers to do so.
 - * "Even when not inclined to grant anticipatory bail to an accused, there may be circumstances where the High Court is of the opinion that it is necessary to protect the person apprehending arrest for some time, due to exceptional circumstances, until they surrender before the trial court,"

Conclusion:

- It was emphasized that courts must not use this discretion to grant "judicial largesse" to accused persons.
- Such an order to grant protection from arrest despite denying anticipatory bail must necessarily be narrowly tailored to protect the interests of the accused while taking into consideration the concerns of the investigating authority.

Miscellaneous

3. Incorporating limits

- » Prelims: T.K. Viswanathan committee
- » Mains: Balancing the right to free speech with reasonable restrictions to tackle the challenge of hate speech

Context:

- The proposed hate speech provisions under the Indian Penal Code (IPC).

Free Speech:

- Besides not containing abuse, defamation or incitement to violence, responsible speech is increasingly seen as an expression that tends not to discriminate against or incite hatred towards groups based on race, gender, caste, religious belief, sexual orientation, nationality or immigration status.
- The world sees a free speech doctrine as the one that discourages the targeting of any vulnerable section.
- In modern democracies, the right to free speech is restricted. While speech is free, the freedom comes with responsibility.
- The term 'hate speech' and calls for framing laws that seek to punish 'hate speech' arise from the basis on which speech is restricted in modern democracies.

Including 'hate speech' in the Indian Penal Code:

- In 2020, the Home Minister called for a revamp of the criminal justice system and sought views of the states on changes that may be required in four key criminal justice laws—the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), Arms Act and the Narcotics Drugs and Psychotropic Substances Act (NDPS).
- Consequently, there were proposals to incorporate provisions against hate speech in the penal law. This move has been largely welcomed.
- A committee has been appointed by the Home Ministry for recommending changes in criminal law.
 - * This committee is seeking to formulate new provisions that will make hate speech a separate offence.
- While the term 'hate speech' may not be used, the panel is examining recommendations made by the Law Commission and the Expert Committee headed by T.K. Viswanathan (which dealt with cybercrimes especially online hate speech), on adding Sections 153C and 505A to the IPC.
 - * The proposed Section 153C would target speech that gravely threatens any person or group with the intention to cause fear or

alarm, or incite violence towards them, and prescribe a sentence of two years in prison and a fine.

- * Section 505A proposes to punish speech or writing that causes fear or alarm among a group, or provokes violence against it, on grounds of race, religion, gender, sexual orientation, place of birth or disability.

- But, the Committee for Reforms in Criminal Laws has attracted criticisms questioning its ability to gather a wide range of opinion during the pandemic and for not being inclusive.

Way Forward:

- A comprehensive revamping of the criminal justice system can provide measures to check hate speech.
- In the context of the hate speech provisions, the committees' efforts must be directed towards narrowly defining the sections it proposes to formulate and avoid using vague and overbroad terms.
 - * Example: Section 66A of the Information Technology Act was struck down by the Supreme Court because it failed to define some terms that sought to criminalise offensive and annoying messages.
- New sections (if any) should be clear about what is sought to be punished as incitement to violence or advocacy of hatred, posing an imminent threat to public order or a targeted group. Only then will it be a valid curb on free speech.

Miscellaneous

4. Manipur scribe, activist booked under NSA

- » Prelims: National Security Act provisions

Context

- The police in Imphal have booked journalist Kishorchandra Wangkhem and political activist Erendro Leichombam under the National Security Act (NSA) of 1980 over their Facebook posts.

National Security Act:

- The National Security Act is an act that empowers the government to detain a person if the authorities are satisfied that he/she is a threat to national security or to prevent him/her from disrupting public order.
- The National Security Act of 1980 provides for the provision of preventive detention in certain cases.
- The Act empowers the Central Government and State Governments to detain a person to prevent him/her from acting in any manner prejudicial

to the national security of India, the relations of India with foreign countries, the maintenance of law and order, or the maintenance of supplies and services essential to the community.

- The act also gives power to the governments to detain a foreigner in a view to regulate his/her presence or expel from the country.
- A person can be detained for up to 12 months without a charge. A person can be held for 10 days without being told the charges against them. The person can appeal before a high court advisory board but will not be allowed a lawyer during the trial.

Miscellaneous

5. Choksi captured in Dominica

- » Prelims: Interpol and associated facts

Context

- Fugitive diamond manufacturer Mehul Choksi, who had recently fled from Antigua and Barbuda, was captured in Dominica after an Interpol Yellow Notice was issued against him.

* The Yellow Notice is issued by Interpol to track missing persons.

Interpol Notices:

- INTERPOL Notices are international requests for cooperation or alerts allowing police in member countries to share critical crime-related information.
- Red Notice: To seek the location/arrest of a person wanted by a judicial jurisdiction or an international tribunal with a view to his/her extradition.
- Blue Notice: To locate, identify or obtain information on a person of interest in a criminal investigation.
- Green Notice: To warn about a person's criminal activities if that person is considered to be a possible threat to public safety.
- Yellow Notice: To locate a missing person or to identify a person unable to identify himself/herself.
- Black Notice: To seek information on unidentified bodies.
- Orange Notice: To warn of an event, a person, an object or a process representing an imminent threat and danger to persons or property.
- Purple Notice: To provide information on modus operandi, procedures, objects, devices, or hiding places used by criminals.
- Interpol – UNSC Special Notice: To inform Interpol's members that an individual or an entity is subject to UN sanctions.

Salient features of Indian Constitution/ Important Supreme Court Judgements

6. Maratha Reservation Issue

- » Prelims: Indra Sawhney judgement; NCBC and 102nd Constitutional amendment and related articles of the Constitution
- » Mains: Implications of the recent judgement and associated concerns

Context:

- A five-judge Constitution Bench of the Supreme Court unanimously declared the Maharashtra State Reservation for Socially and Educationally Backward Classes (SEBC) Act of 2018, unconstitutional.
- The Maharashtra law provides reservation benefits to the Maratha community taking the quota limit in the State in excess of 50%.
- The law granted reservation to the Maratha community in admissions and government jobs in the state.

Details:

- The Bench, led by Justice Ashok Bhushan, found there were no "exceptional circumstances" or "extraordinary situation" in Maharashtra, which required the State government to break the 50% ceiling limit to bestow quota benefits on the Maratha community.
- All five judges agreed that the Marathas are a dominant forward class and are in the mainstream of national life. The above situation is not extraordinary.
- The SC struck down the findings of the Justice M.G. Gaikwad Commission, which led to the enactment of the Maratha quota law, and set aside the Bombay High Court judgment which validated the Maharashtra State Reservation for Socially and Educationally Backward Classes (SEBC) Act of 2018.

State Government's Argument:

- The state government's argument was that since the population of the backward class is 85% and the reservation limit is only 50%, an increase in reservation limit would qualify as an extraordinary circumstance.
- All five judges disagreed with this argument.

Supreme Court Verdict:

- The High Court, in 2019, reduced the quantum of reservation for Marathas from the 16% recommended by the Gaikwad Commission to 12% in education and 13% in employment.

* The Supreme Court concluded that even the reduced percentages were ultra vires.

- The Supreme Court held that a separate reservation for the Maratha community violated Articles 14 (right to equality) and 21 (due process of law).
- "The ceiling of 50% with the 'extraordinary circumstances' exception, is the just balance — what is termed as the 'Goldilocks solution' — i.e. the solution containing the right balance that allows the State sufficient latitude to ensure meaningful affirmative action to those who deserve it and at the same time ensures that the essential content of equality," Justice S. Ravindra Bhat on the Bench agreed.

Revisiting 1992 Indra Sawhney judgment:

- The Supreme Court declined to revisit its 1992 Indra Sawhney judgment, which fixed the reservation limit at 50%.
- The Indra Sawhney judgment had categorically said "50% shall be the rule, only in certain exceptional and extraordinary situations for bringing far-flung and remote area population into mainstream, 50% rule can be relaxed."
- The court said that the 50% ceiling, although an arbitrary determination by the court in 1992, is now constitutionally recognised.

National Commission for Backward Classes (NCBC)

- It is a constitutional body under the Ministry of Social Justice and Empowerment.

Constitutional Provisions

102nd Constitution Amendment Act inserted new Articles 338 B and 342 A.

- The amendment also brings about changes in Article 366.

Article 338B deals with the structure, duties and powers of the commission

Structure of NCBC

- 338B (2). Commission shall consist of a Chairperson, Vice-Chairperson and three other Members and the conditions of service and tenure of office of the Chairperson, Vice-Chairperson and other Members so appointed shall be such as the President may by rule determine T

- (3) The Chairperson, Vice-Chairperson and other Members of the Commission shall be appointed by the President by warrant under his hand and seal.

Powers

- (5) It shall be the duty of the Commission—
 - * (a) to investigate and monitor all matters relating to the safeguards provided for the socially and educationally backward classes under this Constitution or under any other law for the time being in force or under any order of the Government
 - * (b) to inquire into specific complaints with respect to the deprivation of rights and safeguards of the socially and educationally backward classes;

Article 342A empowers President to specify socially and educationally backward classes in various states and union territories.

- (1) The President may with respect to any State or Union territory, and where it is a State, after consultation with the Governor thereof, by public notification, specify the socially and educationally backward classes which shall for the purposes of this Constitution be deemed to be socially and educationally backward classes in relation to that State or Union territory, as the case may be.
- (2) Parliament may by law include in or exclude from the Central List of socially and educationally backward classes specified in a notification issued under clause (1) any socially and educationally backward class

Article 366 of the Constitution

- '(26C) "socially and educationally backward classes" means such backward classes as are so deemed under article 342A for the purposes of this Constitution;'

On 102nd Constitutional Amendment:

- The Constitution (One Hundred and Second Amendment) Act, 2018 gives constitutional status to the National Backward Classes Commission. The Amendment also gives the President Powers to notify backward classes.
- The Bench unanimously upheld the constitutional validity of the 102nd Amendment.
 - * The Court has ruled that, henceforth, there will only be a single list of socially and educationally backward classes with respect to each State and Union Territory notified by the President of India.
- The Supreme Court held that "the final say in regard to inclusion or exclusion (or modification of lists) of socially and economically backward classes (SEBCs) is firstly with the President

under Article 342A (1), and thereafter, in case of modification or exclusion from the lists initially published, with the Parliament”.

- In the task of identification of SEBCs, the President shall be guided by the Commission set up under Article 338B; its advice shall also be sought by the state in regard to policies that might be framed by it.
- The Centre alone is empowered to identify Socially and Educationally Backward Classes (SEBC) and include them in the Central List for claiming reservation benefits.
- While the identification of SEBCs will be done centrally, state governments retain the power to determine the extent of reservation and make specific policy in the spirit of “cooperative federalism”.
- The President’s prerogative as regards the identification and inclusion of SEBCs in the List would not affect the States’ power to make reservations in favour of particular communities or castes, the quantum of reservations, the nature of benefits and the kind of reservations, and all other matters falling within the ambit of Articles 15 and 16.

Background:

- The Supreme Court was undertaking judicial scrutiny of the 102nd amendment due to the following reasons
 - * A writ petition was filed in the Supreme Court questioning the validity of the Amendment as it violated the federal structure and deprived the States of their powers.
 - * Also the reservation for the Maratha community was challenged in the judiciary. One of the grounds was that the Act creating the Maratha quota through a new category called ‘SEBC’ was unconstitutional because after the introduction of the 102nd Amendment, the State legislature had no power to identify any new backward class.

Central government’s stand:

- In the midst of arguments that the State government’s role in identifying backward classes had been denuded by the 102nd Amendment, the Union government has argued that the Parliament’s intent was only to create a Central List that would be applied only in the Central government and its institutions.
- It had nothing to do with the State Lists of backward classes or the State governments’ powers to declare a community backward.

Concerns:

With regard to limit on reservation:

No constitutional backing:

- The text of Articles 16(4) and 15(4) which confer power on the government to make reservations for the deserving classes contains no limitation on reservation.
- Hence, the idea that reservations ought to be restricted to 50% does not stem from the Constitution but from the Supreme Court Judgement in the Indra Sawhney vs Union of India (1992) case. Hence the limit does not have constitutional backing.

Against the objective of attaining substantive equality:

- Reservation is an important tool to obtain the objective of substantive equality as envisioned in the Indian Constitution. It could impede the ability of States to secure a just social order.

With regard to states’ power in determining backward classes:

Impede the right of certain communities:

- Until now, the central government and each of the State governments produced separate lists declaring communities as socially and educationally backward. As a result, backward communities that were kept out of the central list were entitled to reservation at least for those posts and seats under the control of the State government.
- The recent judgement stating that the state governments cannot exercise the right of classifying communities as backward may lead to a scenario where deserving communities might lose the benefits offered by reservation.

Interpretational errors:

- The bench seems to have overlooked, at least, two essential factors in its observation on the 102nd Amendment and its impact on the states’ right to determine backward classes.
 - * Article 342A clearly mentions the term “Central List” differentiating itself from the existent state lists. Thus the provision in question was intended towards the categorisation of groups as backward for the purposes of reservation to posts and seats under the Union government’s control only. The SC’s observation thus seems like impinging on the plain meaning of the term “central list”.
 - * The Union Minister of Social Justice and Empowerment during the parliamentary debate on the constitutional amendment bill had reiterated that the changes envisaged via the 102nd Amendment did not intend to limit the powers of states in any way.

Against the principle of federalism:

- The Constitutional Bench's interpretation of the 102nd Amendment dispossessing the states from exercising the power to determine backward classes goes against the very essence of federalism, which again is a basic structure of the Indian Constitution.

Conclusion:

- The interpretation of the 102nd Amendment seems to be against values of equality and federalism, considered integral aspects of India's democracy.
- The Union Government has rightly filed a petition to review the judgment with respect to the limits it places on the power of State governments to determine backward classes. If the Supreme Court refuses the plea, the Parliament can amend the Constitution and grant to States the power to determine backwardness.

ECONOMY

Indian Economy and issues relating to growth and development

1. Can the economy survive the second COVID-19 wave?

- » Prelims: Stagflation
- » Mains: Economic challenges posed by the second wave of the COVID-19 pandemic

Context:

- The article analyzes the potential economic impact of the second COVID-19 wave and State-level lockdowns, while comparing it with the first wave.

Comparison of the economic impact of the two waves of the pandemic:

- A key difference between the first and second waves has been that while the nationwide lockdown last year in response to the first wave of the pandemic resulted in a severe supply shock, the second wave has resulted more in a demand shock than supply shock.

Magnitude of economic slowdown:

- The impact of the second wave is likely to be less severe than the first one.
- Businesses and people have started to adapt to lockdowns and the contraction in demand would be much lower this time.
- Though most forecasts are predicting that there won't be an economic contraction this year and are expecting positive growth for India, the growth rate is going to be very low.
- As against the predictions before the second wave, that FY 2021-22 GDP should cross the pre-pandemic 2019-20 GDP in such a scenario is highly unlikely.

Challenges of the second wave:

Prolonged slowdown:

- The slow pace of vaccination and the uncertainty and fear of a third wave would result in the government being hesitant in opening the economy up very quickly.
- A significant section of the population has spent a large amount of their savings to fight COVID-19. Some have also been pushed into debt and poverty hampering their financial situation. Such sections will find it difficult to spend even on essentials. This is likely to have an adverse impact on consumption expenditure based growth revival.

- The second wave has created a lot of uncertainty, pessimism and loss of confidence among households and businesses. It will take time for people to start recovering because it has created a lot of uncertainty. The uncertainty would also disincentivize people with financial resources to spend.
- Hence a V-shaped recovery is highly unlikely and the economic recovery is most likely to take a lot of time.

Doubtful effectiveness of monetary responses:

- As against the previous year, where the RBI announced a large number of monetary measures to mitigate the economic impact of the first wave of the pandemic, there have been very few measures this time around.
- This can be attributed to the fact that there is very little space for an expansionary monetary policy given that India is experiencing bouts of inflation as well as growth slowdown, raising fears of stagflation.
- The fact that the Indian economy is not currently in sync with the global business cycle has resulted in a situation where inflation in the domestic economy has been rising despite a domestic demand slowdown.
 - * In advanced economies, growth is picking up and as a result, inflation is picking up as demand recovers. As a result, global commodity prices on items such as crude oil have been surging and this has had an impact on India's domestic inflation.
- The RBI's attempts to incentivize banks to lend to sectors that have been hit hard have not been very successful because of the risk-averse behaviour of the banks and their lack of willingness to lend.
- Also despite several incentives for businesses to borrow like the ease of approvals, lower interest rates, etc., there has been negligible credit off take growth.
- The risk-averse nature of banks and the lack of interest in businesses to borrow limit the effectiveness of the monetary measures in reviving economic growth.

Limited ability to execute fiscal responses:

- Given that India's debt-to-GDP ratio has risen to around 90% and there has been a collapse in revenues, the ability of the government to employ fiscal responses to revive growth is limited.

Impact on rural areas:

- Compared to the first wave, this time the rural areas have witnessed a larger number of infections and mortalities.
- The reverse migration to rural areas has caused an increase in unemployment and MGNREGA is not able to absorb workers, which has resulted in a huge mismatch between demand and supply.
- There has been a larger number of job losses in the rural sector. Last time, rural employment was in a much better position as compared to urban unemployment. The fear of infections has also led to the deceleration of economic activity in rural areas this time around.
- During the first wave, the robust growth in the agricultural sector had helped limit the national economic contraction to some extent.
- Unlike the last year when the government was able to spend their way out of trouble by spending to create economic activity, this time around it would be difficult to implement such a policy.

Indian Economy and issues relating to growth and development

2. A jobs crisis in the second wave of COVID-19

- » Prelims: Difference between unemployment rate and Labour Force Participation Rate
- » Mains: Challenge of rising unemployment; Economic consequences; Measures required

Background:

- The second wave of COVID-19 pandemic and the localized lockdowns across several States, have resulted in restrictions on movement of people and goods and thus has led to restrained economic activity in India.

Details:

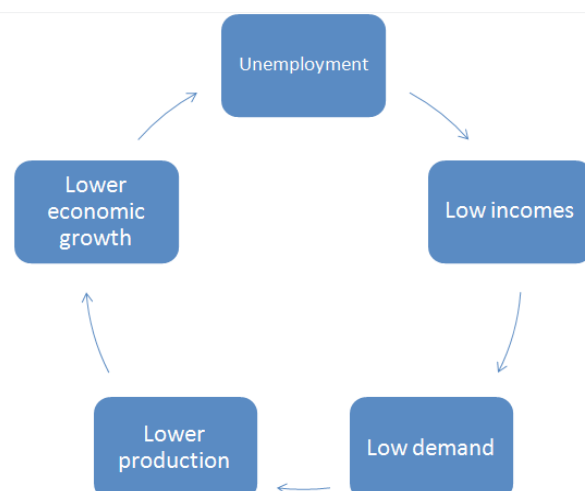
- The restrained economic activity has resulted in large scale job losses in India.
 - * According to the Centre for Monitoring Indian Economy (CMIE), the unemployment rate has shot up to 8% in April 2021 as several States started imposing lockdowns. The month of May has seen the rates rise further.
 - * There have been a mammoth 73.5 lakh job losses in April alone.
 - * As of May 21, the 30-day moving average for overall unemployment was 10.3%, with the relevant figures for urban and rural areas at 12.2% and 9.4%, respectively.
- The salaried class has also witnessed significant loss of jobs since the pandemic began.
- Even states with traditionally low unemployment

rates like Gujarat have also witnessed increases in unemployment rates.

- There has been a steady fall in the number of employees (both salaried and non-salaried) for the third straight month.
- This is a clear indication that the jobs scenario is weakening

Economic consequences of rising unemployment:

- Job losses have a depressing impact on incomes.
 - * Almost 90% of Indian families have seen their incomes shrink over the course of the past 13 months.
- The job losses dampen consumer sentiment and lowers discretionary spending, economic demand and subsequently consumption expenditure which is so very vital for a developing economy like India.
 - * The RBI's monthly bulletin also acknowledges this demand shock which has been a character of the economic impact of the second wave of the pandemic.
 - * The contraction in e-way bills of GST might be indicative of such a contraction in demand for goods.
- The reduction in demand for goods would invariably lead to lower GST collections in the coming months. This would severely impede public expenditure by the government which is so very important for economic revival.
- The reduced income levels would have a detrimental impact on the food security of the poor and vulnerable. This could have a debilitating impact on the health and productivity of the workforce.
 - * Several reports have highlighted the problem of the low-income population cutting back on food intake due to income losses.
- The high levels of unemployment will push the economy into a vicious cycle of low economic growth.



Economic concerns associated with second wave:

Long term impact of the pandemic:

- The poor have been forced to cope with this economic shock by borrowing, largely from informal sources or by selling their assets.
 - * Surveys have shown that the poorest households having taken the largest loans relative to their earnings.
- Experts have noted that the affected people will indulge in building back the depleted savings or will try and pay back the incurred debt by curtailing future consumption and investment.
- This means that even after a lockdown is lifted the consumer spending may remain muted. Hence the economic revival would take longer, thus belying hopes of an economic revival in the aftermath of the first wave of the pandemic.

Impact on agricultural sector:

- Unlike during the first wave when the agricultural sector witnessed positive growth rates and also increased employment opportunities, it is not so during the second one.
 - * The rural hinterland has been far more affected by the pandemic in the second wave as compared with the first wave.
- The agricultural sector has also been witnessing job losses in the second wave. In April 2021, agriculture shed 6 million jobs just in a month's time.

Disproportionate impact on the most vulnerable:

- Women face a double challenge in the form of lower labour participation and a higher unemployment rate for females compared with males (for ages above 15).
- The vulnerable population like the daily wage labourers and small traders have witnessed a loss of employment

High degree of uncertainty:

- Also notably, the labour participation rate (LPR) for April 2021, at 40%, remained lower than the levels seen before last year's lockdown. This is indicative of the high uncertainty associated with the second wave.
 - * The labour force participation rate is a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work; it provides an indication of the size of the supply of labour available to engage in the production of goods and services, relative to the population at working age

Governmental measures taken:

- The Mahatma Gandhi National Rural Employment Guarantee scheme has been broadened to cater to the increased demand for work in rural areas as reverse migration of labour picked up. The
- The Central government's decision to distribute 5 kg of rice and wheat for free to ration card holders across the country will help limit the impact of job losses on nutritional security of the poor and vulnerable.
- The state governments have also taken several measures to mitigate the impact of job losses on the general populace.
 - * Bihar has announced that it would issue an equal measure to the Centre's distribution from the State's resources for free distribution via the Public Distribution System.
 - * Tamil Nadu has announced Rs 4,000 handout per ration card.
 - * Kerala has undertaken distribution of free food kits for vulnerable families
 - * Karnataka has announced a Rs. 1,250-crore relief package, for vulnerable sections like farmers, auto and taxi drivers, construction workers and other informal sector workers.

Indian Economy and issues relating to growth and development

3. Recalibrate growth, reprioritize expenditures

- » Prelims: Real and nominal GDP, Tax Buoyancy
- » Mains: Fiscal impact of the second wave of the pandemic; Measures required

Context

- The article co-authored by C. Rangarajan, former Chairman, Economic Advisory Council to the Prime Minister and a former Governor, Reserve Bank of India analyzes the fiscal impact of the second wave of the pandemic and suggests measures needed in this direction.

Fiscal impact of the pandemic:

- The second wave of COVID-19 and the lockdowns in several states have been eroding economic activities in India. This would have the following implications.

Lower economic growth:

- The GDP growth rate for both nominal as well as real GDP is going to be substantially lower than that projected earlier.

Lowering of tax and non-tax revenue:

- The slow economic growth will lead to a lowering of tax and non-tax revenues.

* The author estimates a shortfall of about Rs. 0.6 lakh crore in the Centre's net tax revenues.

- Given the uncertainty and reluctance on the part of the private players to invest, the budgeted magnitudes for non-tax revenues and non-debt capital receipts premised on implementing the monetization and disinvestment programme are most likely to be unmet.

* The author estimates a shortfall of Rs. 1.5-lakh crore in non-tax revenues and non-debt capital receipts. Hence the total shortfall on the receipts side for the government may be about Rs. 2.1-lakh crore.

Increase in fiscal deficit:

- The most likely change in the budgeted nominal GDP growth (lower) and the shortfall in the receipts from tax, non-tax and non-debt sources will invariably push the fiscal deficit beyond the projected budget estimate of 6.76% of GDP.
- * The author estimates a significant slippage in fiscal deficit which may be close to 7.7% of GDP in 2021-22 if the total expenditures are kept at the budgeted levels.

Recommendations:

- The fiscal projections of the Centre's 2021-22 Budget require recalibration given the inevitable economic impact of the pandemic. Such a revised estimate should project more realistic values to stimulate requisite measures.
- Despite the inevitable chances of fiscal slippage, the government needs to ensure that the total expenditures remain at the budgeted level, given the inevitability of public expenditure in supporting the economy in these challenging times.
- There is a need for reprioritizing government expenditure.
 - * The allocation for the health sector should be increased substantially.
 - * Strong support is needed for the vulnerable groups of the society including migrant labour and the rural and urban unemployed population.
 - * Given the fact that universal vaccination at pace is key to minimizing economic damage, the central government should invest accordingly in vaccine purchase and distribution among the states.

Additional information:

Economic terminology:

Real GDP:

- The real GDP is the total value of all of the final goods and services that an economy produces during a given year, accounting for inflation. It

is calculated using the prices of a selected base year.

Nominal GDP:

- The nominal GDP is the value of all the final goods and services that an economy produced during a given year. It is calculated by using the prices that are current in the year in which the output is produced.

Tax buoyancy:

- Tax buoyancy refers to the responsiveness of tax revenue growth to changes in GDP.
- Tax buoyancy is an indicator to measure the efficiency and responsiveness of revenue mobilization in response to growth in the gross domestic product or national income. A tax is said to be buoyant if the tax revenues increase more than proportionately in response to a rise in national income or output.
- When a tax is buoyant, its revenue increases without increasing the tax rate.

Indian Economy and issues relating to growth and development

4. Tackling rural economic distress

- » Prelims: PDS; MGNREGA
- » Mains: Impact of the second wave of the pandemic on the migrant workers

Background:

- The lockdowns in several states have had a severe impact on the livelihood of the migrant workers most of whom work in the informal sector.

Details:

- The migrant workers and the rural poor have been facing great distress due to lack of work which has pushed many of them into acute poverty. A large population is facing hunger and a cash crunch.

Hunger:

- The 'Hunger Watch' report published by the Right to Food Campaign and the Centre for Equity Studies assessed the impact of the lockdowns on people belonging to low-income categories in the informal sector. The report notes the nutritional insecurity induced by lack of job and income sources.

Reverse migration:

- The migrants rendered vulnerable due to the lockdown in different cities have resorted to reverse migration.
- A large population has got stranded in different parts of the country without work. They are having to deal with a severe shortage of food and cash.

Recommendations:

- There is an urgent need to strengthen the public distribution system (PDS) and the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

Expanding public distribution system (PDS):

- Though the government announced 5 kg free foodgrains for individuals enlisted under the National Food Security Act (NFSA), for May and June 2021, this might not suffice.
- The government should expand PDS coverage and include all eligible households under the scheme.
 - * The PDS system suffers from large exclusion issues. According to a study, about 100 million people are excluded from the ration distribution system owing to a dated database based on the 2011 Census.
- The Centre should also extend the free foodgrains programme to a year instead of the currently announced two months.

Enhancing the support for MGNREGA:

- The current allocation of Rs. 73,000 crore for 2021-22 for MGNREGS is grossly insufficient to meet the increased work demand in rural areas due to the current scale of economic distress. The government must ensure sufficient funds to ensure the uninterrupted implementation of MGNREGS during the current year.
- The notified annual increment of about 4% in MGNREGS wages is very low and the government must aim for at least a 10% hike considering the existing economic distress and the currently high levels of inflation.

Conclusion:

- Given the existing conditions, the Union government should prioritize food and work for all and implement policy reforms to strengthen the public distribution system and the MGNREGS.

Indian Economy and issues relating to growth and development

5. Humanity matters, capitalism needs an upgrade

- » Prelims: Product and process patent; Compulsory licensing
- » Mains: Capitalism and socialism

Context:

- The pandemic has brought to the fore – a clash between the needs of humanity and the principles of capitalism.

Issue:

- The capitalists argue that private producers of vaccines must make profits as compensation for investing in research and production. Also, that

they are not morally compelled to serve them at a loss.

- In this scenario, the government must step in, buy from private producers and subsidize sales to poor people. For this, the government would need revenue.
- Taxes on private companies could be a significant source of revenue for the government.
- If private companies press governments for lower taxes and if the government is also pushed by them, on ideological grounds, to stay out of business, viz. not having any “public sector” production enterprises, governments find both their hands tied behind their backs in crises as they are blamed for breakdowns of public services.
- Similar is the scenario that the Indian government is facing at present.

How does capitalism expand?

- Capitalism expands by converting the commons into private capital.
- Economists justify that people will not care for something unless they own it. Businesses owning land and other natural resources use this as a justification.
 - * Businesses convert natural capital into financial capital and use it for generating profits and more capital for themselves.
- Over-exploitation of natural capital has led to the crisis of environmental sustainability and climate change.
- The concept of ownership of assets for creating wealth had gone too far with slaves being used as economic assets until moralists objected.

Creation of monopolies:

- With slavery being banned by law and the earth's resources being limited, now, capitalism has moved on to convert knowledge into private property.
- Modern regimes of intellectual property rights (IPR) and patent lawyers help capitalists create intellectual property monopolies.
- Communities whose traditions produced the knowledge must pay those who stole it from them, in the name of patents.
 - * People are prevented from using their own knowledge as they are when natural products, such as neem and turmeric, are patented by capitalists.
- The public contributes to the creation of scientific knowledge in many ways, for example, through government research and development grants and subsidies.

Product v/s Process Patents and Compulsory Licensing:

- India has been a spoiler in the global Trade-Related Aspects of Intellectual Property Rights (TRIPS) regime which was promoted by the World Trade Organization in 1995 for uniform global IPR rules.
 - * TRIPS is founded on the principle of “product patents”.
 - * India had a different approach to IPR based on “process patents”.
- Product patents allow inventors of new drugs to have exclusive rights to produce and sell them for some years.
 - * Producers can use their monopoly to fix higher prices and recover their investments in drug development. The quantum of production is limited to keep prices high.
 - * The process patents route forced Indian producers to invent better processes for producing larger volumes at lower costs of generic versions of the medicine.
 - » While this benefited citizens of poorer countries including India, Indian generic drug producers became threats to the pricing power of innovator drug producers from the West.
 - * TRIPS has a provision to enable governments to enforce ‘compulsory licensing’.
 - » During an emergency, an innovator company can be demanded to allow domestic, lower-cost producers to increase the supply of the drug in an emergency, with compensation (to the inventor).
 - » Ex: This provision was used by the South African government to get drugs for AIDS produced by Indian low-cost producers while fighting the AIDS pandemic. Western companies do not like this provision.
 - * This is the same provision that South Africa and India want to invoke now to enable the production of the U.S. invented COVID-19 vaccines.

Public sector versus private:

- Many economists do not like public sector enterprises. Private is better than public by the limited metric of shareholder returns/profits.
- On the other hand, the purpose of governments is to improve the all-round well-being of all citizens; not merely to provide products to customers who can pay good prices for them.
- The COVID-19 crisis has revealed the inadequacy of capitalism to fulfil societal needs.

Concerns:

- Money-driven capitalist values are far from human values.
- Money has become the supreme measure of success in all spheres: the wealth of individuals, the size of companies, and the scales of nations’ economies.
- With artificial intelligence algorithms in social media, capitalist enterprises are able to manipulate human minds. Their investors have become the richest people on the planet.
- New mRNA technologies on which some new COVID-19 vaccines are based provide the means to manipulate the composition of human bodies. Thus, allowing capitalists to create even more wealth for themselves off human beings.

Way forward:

- The COVID-19 crisis will not end capitalism. But capitalism must mutate to survive.
- The sustainable health of complex systems must be considered.
- Companies must rethink the purpose of their existence. It is imperative now that more human and less money values are adopted.
- If capitalist enterprises are not willing to fulfil public purposes, governments must create more public-spirited enterprises to provide public goods equitably to all citizens.

Indian Economy and issues relating to growth and development

6. An issue of lives versus livelihoods

- » Mains: Balancing the objective of limiting the spread of the pandemic and protecting the livelihoods from the impact of lockdowns

Context:

- In the backdrop of a surge in the number of COVID-19 cases in India, strict to moderate lockdowns are being imposed yet again.

Concerns:

- Curfews and lockdowns have led to large scale termination of informal workers in many establishments and exodus of workers back to their villages.
- The conditions faced by these workers include the immediate termination of their livelihoods in terms of jobs, loss of accommodation and near insolvency.
- Of those employed in the informal category, large numbers include migrants who face a bleak future, with a lack of sustainable income and savings to ensure food, transportation back to villages or any other emergency.

- With multiple issues of serious sufferings on account of COVID-19 related distress, the country has less time to discuss the fate of migrants on their path of reverse migration.

Issues:

- The presence of the rural migrants benefited the urban economy by providing cheap labour to manufacturing units and cheap services to households. However, these jobs provided did not entail further obligations on the part of the employers or the state, given that the footloose migrants never had any legal status as a working population.
- There have been no attempts to have an official estimate of the flow of migrant workers either incoming or reverse.
- No solid measures have been taken to redress the miseries that await the returning migrants.
 - * The recent official announcement of free ration of 5 kg cereals to 80 crore families is the only sop visible.
- The prevalent pieces of legislation do not provide any evidence of addressing the issue, especially in the current crisis.
- The Contract Labour (Regulation and Abolition) Act, 1970 conferred legal status on casual labour by providing a mechanism for registration of contractors engaging 20 or more workers.
- While it was never effective, the Occupational Safety, Health and Working Conditions Code, 2020 has replaced all such Acts. Seeking to regulate the health and safety conditions of workers in establishments with 10 or more workers, the Code has replaced 13 prevailing labour laws. However, this has been ineffective to a large extent.

Way Forward:

- It is necessary to draft and ensure legal safeguards for the migrant workers.
- The situation must not be justified as a step to save lives when it does not work for large sections of migrant people who also experience a loss of their livelihoods at the same time.
- The present situation demands administrative oversight and execution of laws and policies that could provide basic safeguards to migrant workers.

Indian Economy and issues relating to growth and development

7. Rent issues as an ignored COVID stress point

- » Mains: Issues faced by the migrant workers during the pandemic

Context:

- Rent issues in the times of Covid-19 within informal rental housing markets.

Issues faced by migrant workers:

- Many migrants have left cities and have gone back to their villages mentioning rent payments as the main reason.
- Most daily-wage earners had not received their wages and indebtedness had increased post-lockdown in the first wave. Rent was a majority component of debt.
 - * Even in cases where the rent was deferred, it led to a piling up of debts for domestic workers.
- With pending rent, with no wages and salaries, many domestic workers had to borrow from informal moneylenders, where the rate of interest in a few cases was exorbitant.
- Some domestic workers borrowed from their employers, on the condition of paying it off with their work over the next few months, which meant a further paucity in income.

Concerns:

- Media attention and administrative focus is more towards food and income support, the issue of rent does not get much attention.

Way forward:

- It is imperative that we learn from the lessons of the first wave and protect the rental housing of informal workers early, effectively, and expansively.
- First, a moratorium should be announced with instructions clearly expressed for enforcement mechanism and a clear distinction has to be drawn between deferment and rent waivers.
 - * Support has to be sorted from worker unions and organizations for aid enforcement.
 - * The state should offer partial compensation to the owners rather than shifting the onus on the workers.
- Second, cash transfers being conceptualized by many State governments must treat rent on par with food and income support.
 - * The amount of cash transfer for rent support should be on the basis of the rental market conditions.
- Third, States can also aid workers through limited waivers on utility expenses.
 - * For example, the electricity bills and penalties charged on non-payment were quite a burden for domestic workers.

Conclusion:

- Going forward we need to bring together food, income and rent so that no person is forced to leave the city of their dreams and aspirations.

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

8. SC: personal guarantors liable for corporate debt

- » Prelims: IBC provisions
- » Mains: Salient aspects of the recent judgement; its significance

Context:

- The Supreme Court has upheld the legal validity of the government notification allowing financial creditors, to initiate insolvency proceedings against personal guarantors of stressed corporate entities under the Indian Bankruptcy and Insolvency Code (IBC).

Background:

- The central government had released a notification in November 2019 allowing lenders to initiate insolvency proceedings against personal guarantors along with the stressed corporate entities for whom they gave guarantee.
- This was challenged before several High Courts by a group of petitioners, mostly personal guarantors to stressed companies.
- Given the multiple appeals in different High Courts, the Supreme Court had transferred the petitions from the High Courts to itself on a request from the government.

Salient aspects of the judgement:

- The bench noted an “intrinsic connection” between personal guarantors and their corporate debtors and hence the need to hold the personal guarantors accountable too.
 - * The personal guarantors are usually promoters of big business houses.
- The Court also noted that the intimate connection between the personal guarantors and their corporate debtors necessitates a common forum for adjudication under the IBC.
 - * Section 60(2) of the Code requires the bankruptcy proceedings of corporate debtors and their personal guarantors to be held before a common forum — the National Company Law Tribunal (NCLT).
- The Court has clarified that the discharge of a principal borrower from the debt by operation of law, or due to liquidation or insolvency proceeding, does not absolve the guarantor of his or her liability thus implying that the liability of the guarantor is not co-extensive with that of the corporate debtor.

Significance of the judgement:

More effective outcomes:

- Involving the personal guarantors in the liquidation process will also facilitate the Committee of Creditors to frame realistic

resolution or liquidation plans, keeping in mind the prospect of realizing some part of the creditors' dues from personal guarantors.

- A common forum for adjudication will help the NCLT have a better overview of the case and hence will aid in more effective verdicts at the appellate stage.
- The judgement is expected to boost banks' recovery efforts involving bad loans. The inclusion of the guarantors in insolvency proceedings would push the guarantors to arrange for the payment of the debt to the creditor bank in order to obtain a quick discharge from insolvency proceedings.

Rectifying a loophole in the IBC framework:

- The personal guarantors and related parties in some insolvency cases had been able to escape insolvency proceedings against them despite indications of collusion between the borrowers and the guarantors. This judgement will now help rectify such a loophole in the IBC.

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

9. RBI to pay Rs. 99,122 cr. surplus to Centre

- » Prelims: Bimal Jalan Committee
- » Mains: Fiscal challenges to the government during the pandemic

Context:

- The Reserve Bank of India's board has approved a transfer of significantly higher-than-expected surplus to the government for the July-March accounting period.

Details:

- The RBI announced a surplus transfer of Rs. 99,122 crore for the 9-month period from July 2020 to March 2021. The government had budgeted to receive a surplus of about Rs. 50,000 crore from the RBI to be accounted for in the budget estimates for 2021/22.
 - * The bank will be moving to an April to March accounting year from 2021/22, from the current July to June year.
- The surplus reflects the central bank's income from its open market operations as well as receipts from foreign reserve sales.
- The RBI maintains a Contingency Risk Buffer at 5.50% in line with recommendations of the Bimal Jalan Committee report and transfers the surplus to the government.

Economic challenges to the government:

- Though the higher-than-expected dividend or surplus transfer by the RBI is a welcome relief to the government, it may still not be sufficient to

meet the revenue estimates of the government for the current year.

COVID to hit tax revenue:

- The lockdowns in several states have resulted in subduing the economic activities and this is going to result in a significant drop in GST revenues anticipated in May and June of 2021.
- The high commodity prices fuelling inflation, despite the lower demand would only dent the margins of corporates in many sectors, compressing the growth in direct tax collections as well.

Difficult disinvestment target:

- The government is likely to find it challenging to meet its privatisation and disinvestment target of \$24 billion given the high degree of uncertainty surrounding the second wave and lack of interest by the private players.

Cut in public expenditure:

- The lower than expected revenue inflow may pressurize the government to cut public expenditure. The lowering of public expenditure, especially when it is a necessity to spend to spur investment and growth would prove detrimental to the Indian economy both in the shorter as well as the longer term.

Disrupted economic recovery:

- The economic growth rates have hit record low levels last year and the second wave has only dented the economic recovery.

Indian Economy - Agriculture Related

10. Weather fluctuations may trigger pest attack on sugarcane crops in U.P.

- » Prelims: Sugarcane production in India
- » Mains: Pest challenges in agriculture

Context:

- Concerns of pest attack on sugarcane crop in Uttar Pradesh.

Background:

- Uttar Pradesh has the maximum area under sugarcane cultivation. However, the highest sugar recovery can be obtained in Maharashtra.
- Uttar Pradesh is India's largest producer of sugarcane, accounting for 51 per cent of the total cultivated area, 50 per cent of the crop and 38 percent of sugar production

Details:

- The frequent fluctuations in weather conditions in recent times have raised the risk of pest attacks for the sugarcane crop in Uttar Pradesh.
 - * The excess moisture in the atmosphere and day-to-day fluctuations in the weather

has aided the spurt in the population of various pests such as pyrilla, grasshopper, fall armyworm and black bug. These pests mainly infest the sugarcane crop.

- * These insects by feeding on the leaves of sugarcane plants impacts sugarcane growth and decreases yield and sugar content.
- The state government has issued an advisory to make relevant arrangements for prevention of insects and pests attacks and has also advised field inspections to gauge the extent of the threat.
- The department officials have been asked to destroy the affected plants and not to use them as cane seeds for sowing.
 - * Black bug is mostly found in the ratoon plant.
 - » Ratoon is a new shoot or sprout springing from the base of a crop plant, especially sugar cane, after cropping.

Indian Economy - Agriculture Related

11. How whiteflies came, saw and conquered India's crops

- » Mains: Pest challenges in agriculture and recommendations

Context:

- Concerns over the spread of the whiteflies in India.

Details:

- The invasive whitefly is now distributed throughout India except Jammu & Kashmir.
 - * Most of the whitefly species are native to the Caribbean islands or Central America.

Concerns:

Rising number of invasive species:

- The increasing import of plants and increasing globalization and movement of people has aided the spread of exotic varieties and their subsequent growth into invasive species.

Damage to crops:

- Whitefly reduce the yield and also damage crops.
- These invasive whiteflies have been found to have expanded their host range on valuable plants species like coconut, banana, mango, sapota, guava, cashew, oil palm, and important medicinal plants.

Nature of whiteflies:

- A recent study has noted that the host range of all of the invasive whiteflies has been increasing due to their polyphagous nature (ability to feed on various kinds of food) and prolific breeding.

Ineffectiveness of available insecticides:

- Whiteflies have been difficult to control by using available synthetic insecticides.

Recommendations:

Continuous monitoring:

- The administration should ensure continuous monitoring of the occurrence of invasive species, their host plants and geographical expansion is needed.

Phytosanitary regulations:

- Given the threat of invasive species, the state should ensure stricter phytosanitary measures at relevant places to reduce the chances of incoming exotic species.

Awareness among the citizens:

- The state should also work towards increasing the awareness among the general populace about the threat posed by exotic species. This will help reduce the chances of general populace indulging in illegal or unintentional import of exotic species.

Use of biological control methods:

- Given the fact that whiteflies are difficult to control by using synthetic insecticides, naturally occurring insect predators, parasitoids and entomopathogenic fungi (fungi that can kill insects) could be used as novel biological control of the invasive whiteflies.
 - * Entomopathogenic fungi specific to whiteflies are isolated, purified, grown in the lab or mass-produced can be applied into the whitefly infested field in combination with the release of lab-reared potential predators and parasitoids.
- Biological control based methods are not just environmentally friendly but also economically feasible.

Governmental schemes / Programmes/initiatives

12. National Programme on Advanced Chemistry Cell Battery Storage

- » Prelims: Advanced Chemistry Cell (ACC) Battery Storage and National Programme on Advanced Chemistry Cell Battery Storage
- » Mains: Challenges in India's ambitious clean energy targets

Context:

- Cabinet approved PLI scheme for Advanced Chemistry Cell (ACC) Battery Storage.

Background:

- ACCs are the new generation of advanced storage technologies that can store electric energy either as electrochemical or as chemical

energy and convert it back to electric energy as and when required.

- Consumer electronics, electric vehicles, advanced electricity grids, solar rooftop, etc. which are major battery consuming sectors are expected to achieve robust growth in the coming years.
- It is expected that the dominant battery technologies will control some of the world's largest growth sectors.
- While several companies have already started investing in battery packs, the capacities of these facilities are too small when compared to global averages.
- There still is negligible investment in manufacturing, along with value addition, of ACCs in India.
- All the demand of the ACCs is currently being met through imports in India.
- The scheme is expected to reduce import dependency.

About the National Programme on Advanced Chemistry Cell Battery Storage:

- It is basically a ₹18,100 crore Production-Linked Incentive (PLI) scheme for building Tesla-style giga factories to manufacture batteries.
- The plan is to set up 50 giga watt hour (GWh) manufacturing capacity for advanced chemistry cell batteries by attracting investments totaling ₹45,000 crore.
 - * One GWh (1,000-megawatt hour) of battery capacity is sufficient to power 1 million homes for an hour and around 30,000 electric cars.
- The scheme, coming under the department of heavy industry, may boost India's green energy credentials.
- As part of the scheme, each selected ACC battery storage manufacturer would have to commit to set up an ACC manufacturing facility of minimum 5GWh capacity and ensure a minimum 60% domestic value addition at the project level within five years.
- The incentive will be paid out on the basis of sales, energy efficiency, battery life cycle, and localization levels.
- The beneficiary firms have to achieve a domestic value addition of at least 25% and make the mandatory investment of ₹225 crore /GWh within 2 years (at the mother unit level) and raise it to 60% domestic value addition within 5 years.

Significance:

- Such battery storages will cater not only to electric vehicles but also to the consumer electronics industry and electricity grids.

- This gains importance given India's ambitious clean energy targets and the intermittent nature of electricity from clean energy sources such as solar and wind.
- In such a scenario, storage holds the key for providing on-demand electricity from wind and solar projects.

Governmental schemes / Programmes/Initiatives

13. A collage of laws that leaves the worker out in the cold

- » Prelims: Social Security Code 2020 provisions
- » Mains: Lacunae in the Social Security Code 2020

Background:

Social Security Code 2020:

- India's Parliament in September 2020 passed a Social Security Code.
- The Social Security Code 2020 merges existing social security laws. It amalgamates and rationalizes the provisions of eight existing central labour laws.
- The code attempts to include informal workers within the ambit of social security administration.

Impact of the pandemic on the informal workers:

- The COVID-19 pandemic has destroyed the lives and livelihoods of millions in India, more so for the low-paid, informal workers, who constitute 91% of the workforce. The loss of jobs and income cuts have pushed this vulnerable section further into debt and poverty.
- In such a scenario, the lack of a comprehensive social security cover for the informal workers is a major concern.
 - * Despite existing social security schemes run by State governments under the Unorganized Workers' Social Security Act, 2008, still, a large number of informal workers are outside the ambit of any social security even after 13 years.

Concerns associated with the new Social Security code:

- The article, analyzing the effectiveness of the new social security code in ensuring the much needed social security for the needy, notes that the code fails to ensure universalization of social security.

Exclusion of certain benefits for unorganized workers:

- Even under the new code, employees provident fund, employees state insurance (ESI), maternity benefit, gratuity continue to be entirely for organized sector workers.

Hurdles for informal workers:

- The lack of awareness among informal workers regarding social security schemes is a critical impediment in the universalization of social security.
- The legal framework as proposed in the Code and Rules requires the informal workers to register as beneficiaries to receive social security benefits. The informal worker will have to register on the specified online portal to be developed by the central government. This could act as a major impediment for the workers.
 - * Online registration poses a significant challenge as most informal workers lack digital literacy and connectivity.
 - * Informal workers also find it difficult to furnish documentary papers required as part of the registration process.
 - » Given that most informal workers are footloose casual workers on the move from one place to another in search of livelihoods, they may find it difficult to provide address proof.
 - » Given the absence of tangible employer-employee relations in informal employments, such workers may find it difficult to provide proof of livelihood and income details.
- Thus the requirement of registration may deter informal workers from completing the registration and they may continue to remain outside the social security ambit.

Lack of concrete measures:

- The code proposes that both the central and state governments will formulate schemes for unorganized workers as and when they deem fit. The absence of definite and unambiguous provisions in the present code would further complicate the achievement of universal registration.

Lack of an integrated structure:

- Despite the footloose nature of unorganized workers, the code does not provide for inter-state arrangement and cooperation. Without an integrated structure, the implications of this code would be too varied across states to be administered and would render the whole process to become complicated and ineffective.
- Previous attempts at providing holistic social security cover for the unorganized workforce in a simple and effective manner have been lost in the Centre-State labyrinth and jurisdictional or institutional overlap.

Lack of an all-inclusive approach:

- The code fails to imbibe an all-inclusive approach by continuing to adopt a labour market classification based social security benefit programmes.
- It fails to consider the unorganized workforce as one unit.

Thresholds of the number of workers employed:

- Key benefits like maternity benefit, employee provident fund and gratuity continue to be available for workers in those establishments that have employees above a certain threshold.
- Hence these critical provisions have not been made universal and continue to remain inaccessible for a vast majority of informal workers.
- Also such clauses disincentive the employers to formalize the existing workforce, thus depriving the economy of the benefits of formalization.

Conclusion:

- The universalization of social security remains an unfulfilled aspiration in the new code on social security.
- There is an urgent need to recognize that India is ageing without social security, and the demographic dividend of the young workforce that could support the ageing ends in 15 years.

Governmental schemes / Programmes/initiatives

14. Provide food, rations to stranded workers: SC

- » Mains: Issues being faced by migrant workers; Recommendations to alleviate these challenges

Context:

- A two judge bench of the Supreme Court is hearing a case on the plight of the migrant labourer families during the second wave of the pandemic.

Background:

- The lockdowns in several states have left many migrant workers unemployed.
- The loss of jobs and incomes has pushed a large proportion of the population into poverty and nutritional insecurity.

Details:

- Noting the difficulties being faced by the migrant labour population, the bench has emphasized the need for immediate government support for the stranded migrant labourer families.
- It has directed the concerned authorities to undertake the distribution of dry rations and cooked food and also explore the proposals to provide life support for migrant workers.

Important observations of the bench:

Lack of national database on migrant workers:

- The Court lamented the inordinate delay in completing a national database to identify and register migrant workers.
- Such a database would make it easier for the government to identify and provide essential support and benefits to the migrant workers under its different schemes. The lack of proper registration and identity cards would render the implementation of welfare schemes difficult on the ground level.
- The bench impressed upon the Central government and the State Governments to complete the process of registration of organised workers as early as possible.
- The court noted that the immediate handing out of dry rations and cooked food during the second wave should not depend on the completion of registration of workers and the database.

Need to ensure inclusion of even those without ration cards:

- Noting that the central government's Atmanirbhar scheme ensured providing of dry rations only to migrant workers covered under the Food Security Act, that is, people with ration cards, the court observed that the unorganised labourers, wandering from one place of work to another in mega cities, could not be expected to have ration cards.
- In this direction, the SC has asked the States to file affidavits indicating the mechanism by which the states plan to distribute dry ration to migrant workers who do not possess a ration card.
- The Bench directed that "wide publicity" should be given to welfare schemes for migrant workers, including locations of community kitchens, so that needy persons would benefit.

Cash transfers:

- Despite the potential advantage of a direct cash transfer to the migrant labourers, the court refused to entertain the plea to direct States to provide direct cash transfers to migrant workers, saying this was a matter of policy concerning individual States or UTs.
 - * Direct cash transfers would allow the destitute workers to purchase essentials.
 - * Given that such money would generate demand in the economy, it is bound to help in economic revival as well.

Governmental schemes / Programmes/initiatives

15. The end of the road for India's GST?

- » Prelims: Goods and Services Tax (GST) Council- composition and mandate
- » Mains: Lacunae in the current GST framework

Context:

- The upcoming 43rd meeting of the Goods and Services Tax (GST) Council.

Background:

- The GST Council is mandated to meet at least once every quarter, but it had not met for the last two quarters, due to the pandemic.

Lacunae in the current GST framework:

- The article laments the fact that the GST system which was propounded to be the panacea for India's economy to deliver economic efficiency gains, improve tax buoyancy and collections, boost GDP growth and bring in greater formalisation of the economy has failed in realizing its objectives.
 - * The 15th Finance Commission report too acknowledges that GST has been unable to deliver on its early promises.
- The article points out some of the major lacunae in the GST system.

Technical:

- Multiple rates
- High tax slabs
- Complexity of tax filings
- Non-inclusion of petroleum products in the GST regime

Impediments to cooperative federalism:

- The GST which is premised on the principle of 'cooperative federalism' has been marred by severe erosion of 'trust' and 'trustworthiness' between the States and the Centre.
- The GST system has failed to factor in India's unique political economy and its ramifications in the functioning of the GST council where the decisions which have to be ideally based on economic reasons are also being impacted by the political calculations. This serves as a major impediment to the functioning of the GST council.

GST Compensation issue:

- The States have lost fiscal autonomy due to the adoption of the GST system. States are dependent on GST collections for nearly half of their tax revenues.
- The States were guaranteed a 14% growth in their tax revenues every year, which minimised their risks of loss of fiscal autonomy and compensated for their loss of fiscal sovereignty. The failure to

compensate the states adequately has been a point of concern between the states and the centre over the last few years.

- * States are still owed Rs. 63,000 crore from last year's dues and GST cess collections are unlikely to meet this year's compensation dues as well, following the spate of lockdowns across several States.

- Also, this revenue compensation guarantee ends in July 2022.

Conclusion:

- India's GST system was to be based on the spirit of cooperative federalism which would yield significant economic benefits to all the stakeholders. The promised economic gains remain largely unfulfilled.
- While technical fixes such as simplification of GST rates and tax filing systems could be addressed easily, the more fundamental challenges like the lack of guaranteed revenues and incentives for States to continue in a GST regime and the growing mistrust between the states and the centre would be a difficult challenge to address.
- The article cautions that the end of India's grand GST experiment seems inevitable unless there is a radical shift in India's federal politics, backed by an extension of revenue guarantee for the States for another five years.

Governmental schemes / Programmes/initiatives

16. Govt. puts off decision on tax relief for COVID-19 supplies

- » Prelims: Goods and Services Tax (GST) Council- composition and mandate; IGST; GST Compensation Cess

Context:

- The 43rd Goods and Services Tax (GST) Council meeting.

Important Recommendations:

- A number of specified COVID-19 related goods have been recommended for full exemption from IGST, even if imported on a payment basis, for donating to the government or on the recommendation of state authority to any relief agency.
 - * Earlier, IGST exemption was applicable only when these goods were imported "free of cost" for free distribution.
- Special session proposed to decide GST Compensation Cess levy extension beyond July 2022.

Details:

- The GST Council failed to agree on immediate tax breaks for critical pandemic relief supplies, including COVID-19 vaccines.
- With the rising cases of Black Fungus, amphotericin-B (medicine required for it) has been included in the exemption list, for tax-free imports.
- It has constituted a Group of Ministers to recommend tax rates for individual items.
- Small taxpayers would get minor relaxations in compliance.
- For the current year's estimated shortfall in compensation cess collections to meet States' dues, the Centre will raise ₹1.58 lakh crore to recompense States via back-to-back loans, like it was done in FY 2020-21.

International Trade and International Organizations

17. Intellectual property waiver for Covid-19 vaccines

- » Prelims: TRIPS agreement of the WTO
- » Mains: The call for temporary waiver on TRIPS obligations- Significance and challenges; Recommendations.

Context:

- The United States under the Biden administration has announced support for waiving patents on COVID-19 vaccines and will pursue negotiations for the same at the World Trade Organization.

Background:

Patents:

- A patent is an exclusive monopoly granted by a government to an inventor for a limited, pre-specified time. It provides an enforceable legal right to prevent others from copying the invention.
- Patents can be either process patents or product patents.
 - * A product patent ensures that the rights to the final product are protected, and anyone other than the patent holder can be restrained from manufacturing it during a specified period, even if they were to use a different process.
 - * A process patent enables any person other than the patent holder to manufacture the patented product by modifying certain processes in the manufacturing exercise.
- India moved from product patenting to process patenting in the 1970s. But due to obligations arising out of the TRIPS Agreement, India had to amend the Patents Act in 2005, and switch to a product patents regime across the pharma, chemicals, and biotech sectors.

Proposal for a temporary waiver:

- In October 2020, India and South Africa had asked the WTO to waive certain conditions of the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement that could impede their access to affordable medical products to combat Covid-19.
- The countries had asked the TRIPS Council to recommend a waiver on the implementation, application and enforcement of four sections in the second part of the agreement. These sections — 1, 4, 5, and 7 — pertain to copyright and related rights, industrial designs, patents, and the protection of undisclosed information.
- The demand had also been raised by human rights bodies and global advocacy groups. However, the appeals to do away with intellectual property rights have been unsuccessful so far in the face of lobbying by powerful pharmaceutical companies.

Details:

- The U.S. administration has stated that though it believes strongly in intellectual property protections, it supports the waiver of those protections for the COVID-19 vaccine given the need of the hour to end the pandemic.
- The move is aimed to get as many safe and effective vaccines to as many people as fast as possible.
- United States Trade Representative has said that the US will pursue "text-based negotiations" on the waiver at the World Trade Organization (WTO).
 - * Text-based negotiations involve negotiators exchanging texts with their preferred wording and then thrashing out a consensus on the working.

Significance:

Movement towards global consensus:

- The opposition to IP related waivers has come from the developed nations and their industries. The U.S. support for the temporary waiver would go a long way in building a global consensus for the proposed IP waiver.
 - * The European Union, which had earlier opposed the waiver, has now stated its intent to discuss the US-backed proposal.

Push for global vaccine production:

- Doing away with intellectual property rights will help scale up vaccine production.
- The IP waiver might open up space for large scale production of COVID-19 vaccines with emergency use authorisations (EUA) — such as those developed by Pfizer, Moderna,

AstraZeneca, Novavax, Johnson & Johnson and Bharat Biotech—in middle-income countries.

- * Most production is currently concentrated in high-income countries; production by middle-income countries has been happening through licensing or technology transfer agreements.
- Hence, this will be a big step in overcoming vaccine shortage.

Ensure cheaper vaccines:

- Doing away with intellectual property rights will pave the way for cheaper versions of the vaccine to enter the market.
- The waiver would allow any company which possesses the required technology and infrastructure to produce vaccines. This will lead to cheaper and more generic versions of COVID-19 vaccines. It will mean that vaccines will be more affordable.

Ensure universal vaccination:

- Vaccine experts and human rights groups have warned that the longer Covid circulates in developing nations, there is the greater chance of more vaccine-resistant, deadly mutations of the virus emerging. An Oxfam International report warns that mutations could render current COVID vaccines ineffective in a year or less.
- This necessitates the need to vaccinate all. Open sharing of technology and intellectual property could increase global vaccine coverage.

Challenges:

Time-consuming process:

- The negotiations at WTO may take time given the consensus-based nature of the institution and the complexity of the issues involved.
- * All 164 WTO members must agree on the draft, and any one member can veto it.

Questions over production capacity:

- It must be noted that the mere elimination of IP protections may not necessarily speed up the production of the vaccines.
- Ramping up production capacities will be a lengthy process and most analysts expect this to take at least a few months.

Supply chain constraints:

- Besides patents, there are other roadblocks to scaling up the production of vaccines and ensuring their distribution. The International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) has pointed to challenges in scaling up the production and distribution of Covid-19 vaccines.

- Challenges include trade barriers, bottlenecks in supply chains, scarcity of raw materials and ingredients in the supply chain, and the unwillingness of rich countries to share doses with poorer nations.
- The scarcity of raw materials has been a growing issue for ramping up production; several manufacturers have been relying on specific suppliers, and alternatives are limited.
- * Countries like the US had blocked exports of critical raw materials used in the production of some Covid-19 vaccines using regulations like the American Defence Production Act. This led to a delay in the production of COVID vaccines by some companies in India.

Economic ability of developing states to acquire vaccines:

- Given the propensity of high-income countries to acquire “most of the supplies” there is the overwhelming possibility of global vaccine inequality. This could impact the very basis of calls for a temporary waiver of IP rights- ensuring global access to quality vaccines.
- * The United States has been reportedly having an excess of over 80 million doses of various vaccines while the developing world continues to face vaccine shortages.

Arguments against the move:

Dis-incentivize further research:

- Pharma companies including Pfizer and AstraZeneca have opposed the proposed waiver arguing that eliminating IP protections would undermine the global response to the pandemic, including the ongoing efforts to tackle new variants. It could dis-incentivize research into the ever-evolving SARS-CoV-2.

Minimal impact on vaccine production:

- The mere elimination of IP protections may not necessarily speed up the production of the vaccines given the lack of currently available production capacity.

Questions over quality:

- The pharma companies of the western nations have been arguing that the lifting of patents would be a compromise on control of safety and quality standards for vaccine manufacturing.
- The pharma companies argue that the waiver could create confusion that could potentially undermine public confidence in vaccine safety and create a barrier to information sharing.

Flexibilities available in TRIPS:

- Arguments against a temporary waiver for IP rights contend that there are already existing flexibilities available in TRIPS that can be utilized by middle-income countries. The temporary waiver would amount to a large dilution of IP rights and may lead to similar calls in future thus permanently impacting the IP rights under the TRIPS arrangement.

Counter arguments:

Financial viability of pharma companies not at stake:

- WHO Director-General has argued that the waiving of the patents do not mean the innovators will not get anything — they stand to get a royalty for the products they manufacture.

Previous case of generic medicine production:

- The argument that middle-income countries do not have the capacity to speedily produce vaccines goes against earlier moves towards a patents regime for generic drugs. Experts said the same reasoning can be used now for the production of vaccines.
- A number of companies from different countries have said they are ready to produce the vaccines if a temporary waiver is provided.
 - * Countries including Canada, South Korea, and Bangladesh have shown interest in making COVID-19 vaccines if they can get a patent waiver.

Concerns over quality do not hold:

- The quality of the vaccines can always be assessed and regulated.
- The continued association of western companies with Indian companies for manufacturing their vaccines in India is indicative of the quality of products produced in India.
 - * Between 1972 and 2005, India had adopted process patenting rather than product patenting, and built up a huge generic industry. India which is a significant producer of generic drugs on a global scale has enabled companies like Cipla to provide Africa with anti-HIV drugs in the 1990s.

Ineffectiveness of available flexibilities:

- The developing countries may face institutional and legal difficulties when using flexibilities available in the TRIPS Agreement.

Recommendations:

Negotiations should include all COVID-19 related interventions:

- Notably, the proposal for temporary waiver was for all COVID-19 interventions, including testing diagnostics and novel therapeutics. The IP waiver negotiations should include other interventions going forward.

Ensuring equitable access:

- Given the available evidence pointing to the ill effects of inequitable vaccine access, there should be an increased emphasis on ensuring more equitable distribution of the vaccine doses available.

Conclusion:

- In view of the ongoing global health crisis and the need for extraordinary measures in extraordinary circumstances of the Covid-19 pandemic, the temporary waiver of IP rights seems to be the right way forward in the global fight against the pandemic.
- If patents are waived, it will definitely be a shot in the arm to increase the scale and speed of vaccine rollout across the world.

International Trade and International Organizations

18. Walk the talk on TRIPS waiver

» Prelims: Patents Act; Compulsory licensing

Background:

Supreme Court's observations:

- The Supreme Court bench, while considering the suo-moto case in Re-Distribution of Essential Supplies and Services during Pandemic, had opined that since COVID-19 was a public health emergency, the situation was apt for invoking emergency powers under the Patents Act to increase the affordability and accessibility of the medicines and vaccines.
- The bench had asked the Centre why it was not considering options like compulsory licensing and government authorization using powers under Sections 92 and 100 of the Patents Act.
 - * Section 92 of the Patents Act is a special provision enabling the Central Government to issue compulsory licenses for the manufacture of patented drugs in a public health emergency.
 - * Section 100 of the Patents Act enables Central Government to use patented inventions for government purposes.

Government's affidavit:

- The Centre had told the Supreme Court that it is not in favour of exercising emergency powers under the Patents Act, at this stage based on the following arguments.
 - * Since India is in discussion with WTO members on a temporary TRIPS waiver, any exercise of statutory powers under the Patents Act could be counter-productive for India's demand at WTO.

- * The availability of raw materials and essential inputs is the main constraint in the current scenario and therefore any additional licenses may not result in increased production.

Concerns:

- Though a temporary waiver on TRIPS provisions is a necessity, it is uncertain when the TRIPS waiver would be adopted, or what conditions it would be subjected to. Thus the government's stand to wait for a WTO waiver does not warrant merit.
- India is failing to utilize the existing flexibilities under the Patents Act of 1970, such as compulsory licenses, which are consistent with the TRIPS agreement. This would not require India to wait for a WTO waiver.
- The government's stand on the issue of compulsory licensing is not only contradictory with India's position at the WTO but also severely undermines it. This could prove to be counter-productive for India as and when the negotiations at WTO begin.

Recommendations:

- India must take a consistent stand on IPRs on COVID-19 medical products both internationally and domestically.
- The government needs to make aggressive use of Sections 92 and 100 of the Patents Act to license all patents necessary to make COVID-19 medical products, without waiting for a private party to apply for a licence.
- The government should consider not only transferring Covaxin's technology to domestic pharmaceutical companies, to boost national supplies, but also offer it to foreign corporations.

Significance of such an approach:

- Such an approach would help demonstrate India's resolve to walk the talk on the TRIPS waiver and also put pressure on developed countries to transfer their vaccine technology to developing countries.
- Though the usefulness of compulsory licenses for COVID-19 vaccines in the absence of technology transfer is questionable, it can be used to augment the supply of drugs and other therapeutics which too are critical in the fight against the pandemic.
- An assertive posture on compulsory licenses would also have the advantage of forcing several domestic pharmaceutical companies to offer licenses voluntarily.

Miscellaneous

19. BRICS Employment Working Group (EWG) Meeting

- » Prelims: BRICS Employment Working Group (EWG)
- » Mains: Social Security Agreements- associated terminology and significance

Context:

- First BRICS Employment Working Group (EWG) Meeting amongst BRICS Countries.

Details:

- The first BRICS Employment Working Group (EWG) Meeting was held in the virtual format in New Delhi.
- India has assumed BRICS presidency in 2021.
- Prime agenda for the discussions:
 - * Promoting Social Security Agreements amongst BRICS Nations
 - * Formalization of labour markets
 - * Participation of women in labour force
 - * Gig and platform workers – Role in labour market
- Apart from the member nations' representatives, representatives from the International Labour Organization (ILO) and International Social Security Agency (ISSA) also participated.
- On the issue of Social Security Agreement (SSA), the Member Nations resolved to enter into dialogue and discussion with each other and take it forward towards signing of the agreements.

What are Social Security Agreements (SSA)?

- SSA is a bilateral agreement between India and a foreign country designed to protect the interests of cross border workers.
- The agreement provides for avoidance of 'double coverage' and ensures equality of treatment to workers of both countries from a social security perspective.
- Generally benefits such as detachment, exportability of pension, totalization of benefits and withdrawal of social security benefits are available under these SSAs.
 - * Under Detachment or elimination of dual contribution, employees moving on employment to any SSA country are exempt from making social security contributions in the host country for a specified period (specific to each SSA), provided they continue to make social security contributions in their home countries.

* Under the Exportability of Pension clause, the employees may choose to receive benefits of social security in their home country or any other country where they are currently residing (subject to the respective SSA) without any reduction of those benefits, i.e. benefits can be exported.

* Under the Totalization of Benefits clause, the period of service rendered by an employee in the host country is to be counted for checking the "eligibility" of social security payment in the home country and vice-versa.

- It may be noted that withdrawal of PF and pension benefits is allowed only once the employee attains the age of 58 years (for non-SSA countries) or depending upon the conditions stipulated in the respective SSA (if any).
- To protect the interest of International Workers, India has signed bilateral Social Security Agreements with 19 countries, out of which 16 are operational.

Need for SSAs:

- The globalization of the economy and development of international trade and business has considerably increased the international movement of individuals across geographies.
- While cross-border issues arise in the areas of tax, immigration and social security, of late, social security issues too have been gaining importance as they relate to the retirement benefits of the individual venturing beyond borders for employment.
- Till 2008, foreign nationals exercising employment in India were not covered under the Provident Fund (PF) regulations, since PF contributions were not mandatory where the employees' pay exceeded the wage ceiling.
- On the contrary, Indian nationals working abroad were required to contribute to the social security scheme of the respective country.
- However, these contributions were generally lost due to limited tenure overseas or in failing to fulfill the minimum qualifying period of contribution or residence.

Infrastructure

20. Rupsi airport

- » Prelims: Rupsi airport; airports in North East India
- » Mains: Significance of increasing physical infrastructure in North East India and measures taken in this direction

Context:

- Rupsi airport near Gauripur, about 15 km from district headquarters Dhubri has been re-opened for commercial flights under the subsidised UDAAN scheme for regional connectivity.

* Rupsi is Assam's 7th airport and 15th in the northeast including Pakyong in Sikkim.

History of the airport:

- The airport was built for warplanes in 1939.
- It was one of South Asia's largest airports at that time and was used by Allied aircraft for supplying arms, manpower and ammunition to forces in Burma and China during World War II.
- India's Partition in 1947 began eroding the airport's importance. It has been out of use since 1983.
- Gauripur near Dhubri also lost its importance as the regional communication hub soon after Independence.
 - * Dhubri used to be the gateway to the northeast during the British area. It was a strategic river port (the Brahmaputra flows by Dhubri town) and an important stop on the pre-1947 railway line.
 - * The river port was closed after the India-Pakistan war in 1965 and the railway service suspended in 1988.

Significance:

- Regional connectivity is set to improve in the western part of the State of Assam.
- Rupsi is vital not only for western Assam. It could also cater to the people of western Meghalaya, Cooch Behar and Alipurduar districts of West Bengal and south-western Bhutan, besides fuelling small-scale industries.

Other interventions with respect to infrastructure in the region:

- Railway service to Dhubri was resumed in 2011 after gauge conversion.

- The river port at Free India Ghat (Dhubri town) was revamped in 2018. This could help incentivize regular inland water service via Bangladesh which can ensure significant economic and social benefits for the region.

INTERNATIONAL RELATIONS

International Relations: India's Foreign Policy

1. A COVID blot on India's foreign policy canvas

- » Mains: Consequences of the pandemic on India's foreign policy; Post pandemic foreign policy approach
- The article talks about how COVID-19 could impact India's great power/leading power aspirations.

Details:

- The second wave of COVID-19 has prompted India to accept foreign aid after a gap of 17 years. This is bound to have far-reaching strategic implications for India.
- The direct consequence of the pandemic is that it could affect India's global image, its leadership and claim to regional primacy.
- As a consequence, India's leading power aspirations could be dented, and its domestic political contestations accentuated. These in turn would have an impact on the content and conduct of India's foreign policy in the years to come.

Regional primacy:

- COVID 2.0 has quickened the demise of India's regional primacy.
- The country's geopolitical decline is likely to begin in the neighbourhood itself – a strategic space which India has been forced to cede to China over the past decade or so.
- South Asian states are likely to favour China, if they haven't already.
- While the Indo-Pacific is geopolitically keen and ready to engage with India, the pandemic could adversely impact India's ability and desire to contribute to the Indo-Pacific and the Quad.
- Eventually, the Indo-Pacific balance of power could turn in Beijing's favour.
- For instance, COVID-19 will prevent any ambitious military spending or modernisation plans and limit the country's attention on global diplomacy and regional geopolitics, be it Afghanistan or Sri Lanka or the Indo-Pacific.
- With reduced military spending and lesser diplomatic attention to regional geopolitics, New Delhi's ability to project power and contribute to the growth of the Quad will be uncertain.

- India's traditional primacy in the region was built on a mix of material aid, political influence and historical ties. Its ability to materially help the neighbourhood could shrink in the wake of COVID-19, and its historical ties alone may not be enough to hold on to a region hungry for development assistance and political autonomy.
- While the outpouring of global aid to India shows that the world realises India is too important to fail, the international community might also reach the conclusion that post-COVID-19 India is too fragile to lead and be a 'leading power'.

Domestic politics:

- Domestic political contestations in the wake of COVID-19 could also limit India's strategic ambitions.
- General economic distress, a fall in foreign direct investment and industrial production, and a rise in unemployment have affected the country.
- Upcoming elections could fan communal tensions in the country, triggering more political violence.
- A depressed economy, politically volatile domestic space combined with a lack of elite consensus on strategic matters would hardly inspire confidence in the international system about India.

India-China equations:

- From competing with China's vaccine diplomacy a few months ago, India today is forced to seek help from the international community.
- The pandemic also waters down the claims that India could compete with China as a global investment and manufacturing destination.
- The rise of China and India's COVID-19-related troubles could prompt the U.S to move closer to Beijing.
- The world, despite its anti-China rhetoric, will continue to do business with Beijing.

Impact on India's foreign policy:

- Post-COVID-19, India's diplomatic bandwidth for expansive foreign policy goals would be limited.
- Less aggression could potentially translate into more accommodation, reconciliation and cooperation especially in the neighbourhood, with Pakistan on the one hand and within the broader South Asian Association for Regional Cooperation (SAARC) framework on the other.

- These developments could moderate the sharp edges of India's pre-existing geopolitical articulations.
- The strategic consequences of the pandemic are bound to shape and structure India's foreign policy choices as well as constrain the foreign policy agency.

Way Forward and Conclusion:

- COVID-19 would also open up new regional opportunities for cooperation especially under the ambit of SAARC.
- India might do well to get the region's collective focus on 'regional health multilateralism' to promote mutual assistance and joint action on health emergencies such as this.
- Classical geopolitics should be brought on a par with health diplomacy, environmental concerns and regional connectivity in South Asia. COVID-19 has opened such an opportunity.

International Relations: Relations between India and neighbouring countries

2. India-Pakistan trade relations

- » Prelims: MFN status
- » Mains: Significance of trade relations between India and Pakistan

Context:

- The rejection by the Pakistan government of the recent proposal made to it by the Pakistani Economic Coordination Committee (ECC) to import sugar, cotton and cotton yarn from India.

Background:

Restriction in bilateral trade:

- In 2019, India and Pakistan undertook trade-restrictive measures against each other.
 - * After the Pulwama terror attack, India withdrew the Most Favoured Nation (MFN) status of Pakistan and imposed a customs duty hike of 200% on imports.
 - * When India revoked the autonomy of Jammu and Kashmir, Pakistan suspended bilateral trade with India.

Details:

- Despite the disappointment with the Pakistan decision, the article expresses a possibility of resumption of trade relations between the two countries in the coming times based on the following reasons.

History of ups and downs:

- Even though trade curbs have been applied several times in the past, such measures have been reversed to create a trade enhancing

environment when the relations stabilized.

- There have been growing indications of back channel talks between the two neighbours and the recent developments like the extension of the ceasefire agreement between the two nations are indicative of a thaw in their otherwise troubled and strained relationship.

Pressure of the pandemic:

- The Pakistan government had lifted the trade ban on the import of medicines and raw material from India to avert a health crisis.
- Now there is a demand for the inclusion of more items like sugar, cotton and yarn. These are critical not just for domestic consumption but also for the domestic industries which have had to face the wrath of the pandemic.

Continued trade despite restrictions:

- The available data indicate that there has been substantial trade between the two countries in the recent past.
 - * During 2020-21 (April-February), the recorded bilateral trade was \$280 million, of which India's exports to Pakistan were \$278 million and imports were \$2 million with even banned items like sugar being exported to Pakistan.
 - * A sizeable number of items have been traded between the two countries. This is despite the complete ban on trade by Pakistan on both exports and imports.
- Thus, even under restrictive trade conditions, there has been unimpeded trade between the two countries.
 - * Informal channels for trade have functioned for decades and are a ready option for traders from both countries.

Significance of bilateral trade:

- The trade in essential agricultural commodities could help stabilise domestic prices and take care of seasonal shortages and food security in the home country.
- A robust bilateral trade augurs well for several important domestic and export industries in both countries.
- There are significant costs of non-cooperation on the economic front. Given the interdependencies between India and Pakistan, restrictions on trade only shift trade to informal channels. The informal channels cost more and are not dependable.
- The increased trade relation and economic interdependence could also play a critical role in easing the strained bilateral relation.

Conclusion:

- Given the potential benefits of a robust trade relation, India and Pakistan must initiate a process for a gradual deepening of the bilateral trade. This could begin with a positive list for trade, which has to be expanded over the years to move towards complete normalisation.
- Business organisations and chambers of commerce should play an important role in creating a strong lobby that could help revive the trade dialogue between the two nations.

International Relations: Relations between India and neighbouring countries

3. Democracy at stake in Nepal

- » Prelims: Kalapani; Map based information
- » Mains: India Nepal bilateral relations

Context:

- Nepal is facing its severest political crisis in decades. The country has seen repeated dissolution of Parliament in 2020 and 2021.

India's role:

- Even when India's political and diplomatic culture saw a departure from best past practices, it was expected that its official regime would always support multiparty democracy, progressive political action and changing fundamentals.
- In helping an unpopular and illegitimate regime in Kathmandu, India might not be benefitted nor will Nepal.
- India is being seen as backing an autocratic and unconstitutional regime, surviving in caretaker mode.
- In this backdrop, India should correct its course and not support an autocratic regime. It must facilitate reposing faith in Nepal's democracy and due processes.
- There should be a trade-off between the developmental aspirations of Nepal and the strategic concerns of India, in the light of changing geopolitical dynamics in the Himalayan region.
- The Kalapani-Limpiyadhura map issue, boundary issues can be resolved through serious political dialogue.

Issue:

- While dissolution is not new to Nepal, dissolutions after the new Constitution of 2015 coming into force, that places safeguards against dissolution, raises concerns.
- The repeated dissolution of Parliament is a dangerous game plan by national and international forces to dismantle the federal republican democratic Constitution and restore the old Hindu monarchical state.

- With Parliament dissolved and with a President seen as favourable to him, Prime Minister (now caretaker Prime Minister) K.P. Sharma Oli will have the power to rule without being accountable.

Way Forward for Nepal:

- Nepal should work towards regaining its lost glory and avail its true development potential.
- It should decline harmful assistance of neighbours involved in geostrategic rivalries.
- On the domestic front, an increased focus should be on the country itself, instead of leveraging on vulnerabilities and the making of disruptive partnerships.
- In a functional democracy, statecraft is not supposed to be selfless until it relies on progressive policy and governance with an aim to further the mission of the greater common good.
- Despite all the flaws, Nepal should protect its democracy that is now at stake because of actions by political opportunists.

International Relations: Relations between India and neighbouring countries

4. China completes Tibet highway

- » Prelims: Brahmaputra river facts
- » Mains: India China relations

Context:

- China has completed the construction of a strategic highway through the Brahmaputra Canyon.

China's Border Infrastructure push – Strategic significance:

- The strategically significant highway through the world's deepest canyon is in Tibet along the Brahmaputra river.
 - * It passes through the Grand Canyon of the Yarlung Zangbo river, as the Brahmaputra is called in Tibet.
 - * It enables greater access to remote areas along the disputed border with Arunachal Pradesh in India.
 - * The construction began in 2014 and is part of a wider infrastructure push in border areas in Tibet.
- In November 2020, China began work on a strategically important railway line — its second major rail link to Tibet that will link Sichuan province with Nyingchi.
 - * The first one was the Qinghai-Tibet railway that opened in 2006.
 - * The Chinese President called it a major step in safeguarding national unity and a significant

move in promoting the economic and social development of the western region.

- * The railway would act as a 'fast track' for the delivery of strategic materials in the time of crisis.

- Another part of the border infrastructure push is the construction of new civilian settlements, along with the expansion of existing smaller hamlets, along border areas, some of which lie in disputed territories claimed by India and Bhutan, to strengthen China's control over the land.
- In 2017, the Tibet Autonomous Region (TAR) government launched a plan to build moderately well-off villages along China's borders with India, Bhutan and Nepal.

Concerns:

- In 2020, satellite images emerged showing a new village called Pangda built 2-3 km into what Bhutan sees as its land.
- In 2021, a village built 4-5 km into what India sees as its territory in Arunachal was seen via satellite images.
 - * Indian officials said this land has been under China's effective control since 1959 and there were military barracks there earlier.

Conclusion:

- The civilian settlements, along with the new infrastructure connectivity, are seen as aimed at bolstering China's control over the areas.

International Relations: India's bilateral relations with Iran

5. India in touch with Iran over Farzad B, says govt.

- » Prelims: Farzad B gas field
- » Mains: India Iran relations

Context:

- In a setback to India, Iran awarded a contract for developing the giant gas field – Farzad-B in the Persian Gulf to a local company.

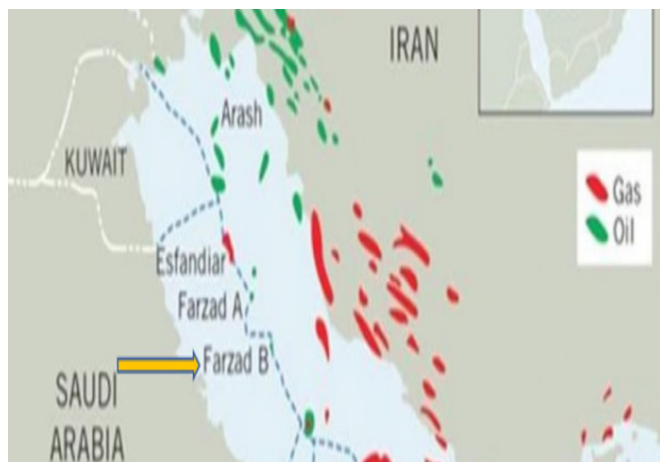
Background:

- ONGC Videsh Ltd (OVL), the overseas investment arm of state-owned Oil and Natural Gas Corp (ONGC), India, had in 2008 discovered a giant gas field in the Farsi offshore exploration block.
- The Indian consortium has so far invested around \$400 million in the block.
- A Development Service Contract (DSC) of the Farzad-B gas field was negotiated till November 2012, but could not be finalized due to difficult terms and international sanctions on Iran.
- In April 2015, negotiations restarted with Iranian authorities to develop the Farzad-B gas field under a new Iran Petroleum Contract (IPC). However, the negotiations remained

inconclusive.

- As U.S. sanctions against Iran were reinstated after the United States withdrew from the JCPOA in May 2018, the negotiations broke down.

Location:



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

6. U.S. to waive sanctions on firm behind Russia's

Nord Stream 2

- » Prelims: Nord stream
- » Mains: US-Russia relations and its impact on India's interests

Context:

- The U.S. government is considering waiving sanctions on the company behind Russia's Nord Stream 2 pipeline to Europe.

Details:

- It is believed that the administration under President Joe Biden still opposed the Nord Stream 2 pipeline but felt it was important to send a signal about its commitment to ties with Germany, which were badly damaged under former President Donald Trump.

Nord Stream 2 System:

- The under-construction pipeline will run along the already-completed Nord Stream 1 system, and the two together will supply an aggregate of 110 billion cubic metres of gas to Germany per year.
- The pipeline falls in German and Danish territory.
- This would take the Russian gas to Europe via Germany, under the Baltic Sea.



Why is the Pipeline Controversial?

- Since it was first planned, Nord Stream 2 has drawn criticism from the US.
- The US believes that the project would increase Europe's dependence on Russia for natural gas, thus boldening its President Vladimir Putin.
 - * Currently, EU countries already rely on Russia for 40% of their gas needs.
 - * Ukraine also has issues with the project.
 - * Relations between Ukraine and Russia have seriously deteriorated in the aftermath of the Crimean conflict in 2014.
 - * There is an existing land pipeline between Russia and Europe that runs through Ukraine, which feels that once Nord Stream 2 is completed, Russia could bypass the Ukrainian pipeline, and deprive the country of lucrative transit fees.

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

7. U.S., Russia at odds over military activity in the Arctic

- » Prelims: Arctic council
- » Mains: Northern sea route and its significance

Context:

- A campaign is being led by the Biden administration against Russian attempts to

assert authority over Arctic shipping.

Details:

- Russia assumed the rotating chairmanship of the Arctic Council in May 2021.
- Following this, the U.S. rallied members to oppose Moscow's plans to set maritime rules in the Northern Sea Route and its desire to resume military talks within the council.
 - * Those talks were suspended in 2014 over Russia's actions in Ukraine.
- The US Secretary of State stressed the importance of upholding effective governance and the rule of law to ensure that the "Arctic remains a region free of conflict where countries act responsibly."

Concerns:

- Russia has become active in the region due to the effects of climate change.
- The effort reflects growing concerns in Washington and among some NATO allies about a surge in Russian military and commercial activity in the region.

Northern Sea Route:



- The Northern Sea Route is one of several Arctic shipping routes.
- The Northern Sea Route runs from Norway to Alaska.
 - * It runs from the Barents Sea, near Russia's border with Norway, to the Bering Strait between Siberia and Alaska.
- The entire route lies in Arctic waters and within Russia's exclusive economic zone (EEZ).

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

8. A September exit, Afghanistan at the crossroads

- » Prelims: Heart of Asia process
- » Mains: Afghanistan issue and its implications on India

Background:

- The U.S. has begun its withdrawal of the armed forces from Afghanistan.

Details:

- The article argues that while the U.S.'s withdrawal will end its war in Afghanistan, peace in Afghanistan will remain uncertain and will depend on what steps major stakeholders take.

Stalemate in the Afghan Peace process:

- The Afghanistan peace process has been in disarray.
 - * The U.S. peace plan involves the dissolution of the current government and setting up of a new governing system that would include the Taliban. Such a government would decide the future distribution of power and changes to the Afghan Constitution. This proposal has not been accepted by Afghanistan President Mr. Ghani who has refused to step down for an interim regime to take over.
 - * The division between the various factions in Afghanistan has only deepened over time.
 - * The Taliban has indulged in deadly attacks on targets in different provinces. It has indulged in arbitrary acts of violence just to demonstrate its capability. Given the rising level of violence in Afghanistan, the prospects of negotiating peace in Afghanistan seem bleak.
 - * There seems to be a difference of opinion between the field commanders and the Taliban leadership on the negotiations.
 - * The United Nations conference on the Afghan peace process scheduled in Istanbul, Turkey remains suspended due to the reluctance of the Taliban.
 - * The U.S. administration is insistent on withdrawing its troops even without any power-sharing deal between the warring parties in Afghanistan.

Pakistan's stakes:

- Being the Taliban's chief patron, Pakistan is the most important player in the Afghan conflict.
- The U.S. military presence in Afghanistan had kept Washington reliant on Rawalpindi for

operational and other support. Pakistan was able to leverage this for its strategic goals vis-a-vis India. With the U.S. withdrawal, Pakistan faces an uphill task in conducting a viable Afghan policy. Pakistan-U.S. bilateral relations will depend upon Pakistan's role in ensuring a smooth transition of power in Kabul.

- Kabul government's relation with Pakistan continues to be characterised by deep hostility and mistrust. Afghanistan President Ashraf Ghani has accused Pakistan of running "an organized system of support" for the Afghan Taliban.
- A potential civil war-like scenario in Afghanistan will not augur well for Pakistan given that it will lead to unconstrained refugee flows and terror attacks inside its territory.

China's stakes:

- Though China wants the Taliban to moderate its position, it continues to support the Taliban for strategic reasons.
- Despite public rhetoric of asking the U.S. to leave, the U.S.'s military presence in Afghanistan had helped suppress many terrorist groups which threaten China directly or Beijing-friendly regimes in Central Asia.
- The U.S. withdrawal has serious implications for China as it would leave China vulnerable to its spillover effects, particularly in the restive Xinjiang province.

India's stake:

- India has been the key regional backer of the Ghani government, supporting an "Afghan-led, Afghan-owned and Afghan-controlled" peace process.
- India fears a Taliban-dominated regime in Kabul might allow Pakistan to dictate Afghanistan's India policy which could turn out to be detrimental to India's strategic interests.
- Despite considerable stakes, India continues to be a peripheral player in the ongoing negotiations, partly attributable to India's reluctance to engage in talks with the Taliban.
- Given the lack of leverage with the Taliban and the recent events projecting a most likely scenario of the Taliban taking over power, the article argues for India to explore the possibility of developing links with the amenable section of the Afghan Taliban.
- The reduction in tensions between India and Pakistan will have an indirect stabilising effect on Afghanistan.

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

9. Lithuania quits 'divisive' China group

- » Prelims: 17+1 initiative
- » Mains: China's attempts at growing its global influence

What's in News?

- Lithuania quit the 17+1 cooperation forum calling it divisive.
 - * In recent months, Lithuania has taken several steps that have angered Beijing.
 - * Some of the steps include blocking Chinese investment and announcing it would open a trade office in Taiwan.

17+1 Initiative:

- 17+1 Initiative is the official cooperation between China and Central and Eastern European Countries, and it promotes business and investment relations between China and the 17 European countries.
 - * It includes twelve EU member states and five Balkan states — Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia.
- This format was founded in 2012 in Budapest.
- China states that the 17+1 initiative is about improving its relations with the European countries that are less developed as compared to the Western European states.
- The initiative is largely seen as an extension of China's flagship Belt and Road initiative (BRI).

Miscellaneous

10. France and the Rwandan genocide

- » Prelims: Rwandan civil war

Context:

- French President Emmanuel Macron asked for forgiveness for his country's role in the 1994 Rwandan massacre in which about 8,00,000 people, mostly ethnic Tutsis, were killed.

Details:

- France, which enjoyed close ties with Rwanda's Hutu-led government of President Juvénal Habyarimana, has long been criticized for its role in the killings of the Tutsi minorities in 1994.
- In 2019, a 15-member expert committee was set up to investigate France's role in the genocide. This promised a new beginning with Rwanda.

- * The committee report blamed the then-President François Mitterrand for a failure of policy towards Rwanda in 1994.

- Rwanda had commissioned a separate inquiry that concluded that France enabled the genocide.

Hutu-Tutsi relations:

- The majority Hutus and minority Tutsis have had a troubled relationship in Rwanda that goes back to the German and Belgian colonial period.
- Colonialists ruled Rwanda through the Tutsi monarchy. They were the local administrative chiefs and enjoyed relatively better educational and employment opportunities. This led to widespread resentment among the majority Hutus.
- In 1959, Rwanda saw violent riots led by Hutus in which some 20,000 Tutsis were killed and many more were displaced.
- Amid growing violence, the Belgian authorities handed over power to the Hutu elite. King Kigeli V fled the country. In the 1960 elections, organised by the Belgians, Hutu parties gained control of nearly all local communes.
- In 1961, Hutu leader Grégoire Kayibanda declared Rwanda an autonomous republic and later the country became independent.
- Kayibanda became Rwanda's first elected President, while the Tutsis who fled the country formed armed insurgencies.
- Since then, Rwanda had been controlled by Hutus, until their genocidal regime was toppled by the Rwandan Patriotic Front (RPF) in 1994.

What led to the killings?

- The crisis escalated in the 1990s when the RPF, led by Paul Kagame, the current President, grew in strength and posed a serious challenge to the regime of President Habyarimana, who was backed by France and had defence ties with Israel.
- In 1993, Habyarimana, who rose to power in 1973, was forced to sign a peace agreement (Arusha Accords) with the RPF.
- This led to resentment among Hutu militias (backed by the government) towards the local Tutsi population (accused of collaborating with the RPF).
- The killings were a pre-planned extermination campaign. The militias, with support from the government, launched a violent campaign aimed at eliminating the entire Tutsi community.
- The killings came to an end after the RPF, under Mr. Kagame's command, captured Kigali and toppled the Hutu regime.

- The RPF initially went about establishing a multi-ethnic government with Pasteur Bizimungu, a Hutu, being the President. Mr.Kagame, a Tutsi, was his deputy.
- In 2000, Mr.Kagame assumed the Presidency and continues to be in power till today.

Miscellaneous

11. Philippines protests against China's 'illegal' South China Sea presence

- » Prelims: South China sea dispute; Map based facts

Context:

- The Philippines has protested China's continuing illegal presence and activities near an island in the South China Sea held by it.
- A diplomatic protest was launched by Philippines over the incessant deployment, prolonged presence, and illegal activities of Chinese maritime assets and fishing vessels in the vicinity of Thitu island.
- According to Philippines, the Pag-asa Islands is an integral part of the country over which it has sovereignty and jurisdiction.
 - * Thitu, known as Pag-asa in the Philippines, is 451 km from the mainland and is one of the biggest among the eight reefs, shoals and islands it occupies in the Spratly archipelago.

Issue:

- Tensions between China and Philippines have escalated over the months-long presence of hundreds of Chinese boats in the Philippines' exclusive economic zone.
- The Philippines says it believes the vessels were manned by militia, while Beijing has said they were fishing boats sheltering from bad weather.
- This was at least the 84th diplomatic protest the Philippines has filed against China since President Rodrigo Duterte took office in 2016.
- An international tribunal in 2016 invalidated China's expansive claim in the South China Sea, where about \$3 trillion worth of ship-borne trade passes annually.
- Brunei, Malaysia, the Philippines, Taiwan and Vietnam also have competing claims to various islands in the South China Sea.

Miscellaneous

12. Enforced Disappearances

- » Prelims: United Nations Working Group on Enforced or Involuntary Disappearances (WGEID)

Context:

- Enforced disappearances are becoming a major concern in Asia. Cases especially in Asia are not decreasing, with domestic criminal law systems insufficient to deal with this atrocity.

Enforced Disappearances

- Enforced disappearance occurs when a person is secretly abducted or imprisoned by a state or political organization, or by a third party with the authorization, support, of a state or political organization, followed by a refusal to acknowledge the person's fate and whereabouts, with the intent of placing the victim outside the protection of the law.
- Enforced disappearances became widely known to the world in the 1970s and the early 1980s during the 'Dirty War' in Argentina.
- The Argentine military dictatorship committed the forceful disappearances of some 30,000 of its own citizens while denying that they kidnapped, tortured, and murdered them.

An enforced disappearance is defined by several constituent elements.

- It is characterised by the deprivation of liberty.
- There are grounds for seeking governmental responsibility for the act, including of officials of different branches or levels of government or by organised groups or private individuals acting on behalf of, or with the support, direct or indirect, consent or acquiescence of, the government.
- Such an act typically occurs in the context of a state's continuous refusal to take relevant action, including refusal to disclose the fate or whereabouts of the persons concerned or refusal to acknowledge the deprivation of their liberty, which places such persons outside the protection of the law.

United Nations Working Group on Enforced or Involuntary Disappearances (WGEID):

- To fight against these gross and systematic human rights violations, the UN Commission on Human Rights established the Working Group in 1980 as the first special procedure mechanism of the UN

Myanmar Coup:

- On February 1, 2021, the military launched a coup d'état to overthrow the democratically elected government led by Aung San Suu Kyi's party, the National League for Democracy.

- The military is committed to suppressing the people's movement, and the police are carrying out unimaginable acts of violence and oppression against those demanding freedom of expression and the restoration of democracy.
- The democracy movement in Myanmar is at a critical juncture.

Issue:

- Since the coup, the United Nations Working Group on Enforced or Involuntary Disappearances (WGEID) has received reports of enforced disappearances.
- There is concern that there will be a plethora of cases of enforced disappearances, torture, arbitrary detention, and even murder if the situation continues to deteriorate.
- Besides Myanmar, in many parts of Asia, enforced disappearances are being used as a tool to suppress the people.

Concerns around minorities:

China:

- In China, under the pretext of re-education to prevent terrorism, Uyghur minority ethnic group members are forcibly sent to what Chinese authorities call 'vocational education and training centers', with no information on their whereabouts.
- 'Residential Surveillance at a Designated Location (RSDL)' under Article 73 of the amended Criminal Procedure Law, is used against individuals accused of endangering state security.
 - * RSDL places individuals under incommunicado detention without disclosing their location. This may amount to a form of enforced disappearance.

Pakistan and Bangladesh:

- Increasing numbers of enforced disappearances are being reported in Pakistan and Bangladesh.
- Enforced disappearances are being committed in the name of counter-terrorism measures.

Post-conflict issues in Sri Lanka:

- Sri Lanka has experienced more than three decades of domestic conflict accompanied by various forms of enforced disappearances.
- Recently, the government has weakened the initiatives it previously started to investigate enforced disappearances.
 - * Instead, it has now returned to promoting a culture of impunity for these crimes.

During the Pandemic:

- Not only have enforced disappearances continued during the pandemic, but it has generated new contexts for enforced disappearances and has reduced the capacity of

all actors to take the necessary action to search for and investigate cases of disappeared persons.

Remedial measures:

- Under the Declaration on the Protection of all Persons from Enforced Disappearance (1992), the Working Group works to assist families of disappeared persons to ascertain the fate and whereabouts of the disappeared.
- With the assistance of the secretariat members based in Geneva, the Working Group monitors states' compliance and documented cases of enforced disappearance.
- The Working Group receives individual petitions from victims' families and civil society members, and channels them through to the relevant governments to demand searches.
- The WGEID also presses states to offer remedies, including compensation and a guarantee of non-recurrence of the violations.

Ratifying the Convention:

- To protect the right to be free from enforced disappearances, the international community adopted the International Convention for the Protection of all Persons from Enforced Disappearance in 2006.
 - * This became effective in 2010.
- The number of participating states is still very low compared to other treaties.
- Among 63 member states of the treaty, only eight states from the Asia-Pacific region have ratified or acceded to the treaty.
- Only four East Asian states — Cambodia, Japan, Mongolia, and Sri Lanka have ratified it.

Conclusion:

- Enforced disappearance is a serious crime that goes against the philosophy of humanity.
- The pain and suffering of the family members do not end until they find out the fate or whereabouts of their loved ones.
- Asian countries should consider their obligations and responsibilities more seriously and reject a culture of impunity in order to eradicate enforced disappearances.
- The domestic criminal law systems are not sufficient to deal with the crime of enforced disappearance. It is a continuous crime that needs a comprehensive approach to fight against it.
- The international community must strengthen its efforts to eradicate enforced disappearances at the earliest.

Miscellaneous

13. Myanmar's Karen insurgents burn another govt. outpost

Context

- Guerrilla soldiers from Myanmar's Karen ethnic minority burned down a government military outpost after capturing it.

Details:

- The Karen and the Kachin in northern Myanmar are the two major ethnic armed organisations that have allied themselves with the movement against the junta that took power in Myanmar after the Army ousted the elected government of Aung San Suu Kyi.
- Government offensive is underway against the Kachin and the Karen that maintain their own armed force and also has been the target of airstrikes.
- The fighting in Kachin and Karen states has displaced more than 45,000 villagers.
- The role of the ethnic fighting groups has become more important as the number of people joining street protests in Myanmar's cities and towns has declined, in large part due to deadly violence used by security forces to suppress them.

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

14. Israel Palestine Conflict

- » Prelims: Two state solution; Map based facts
- » Mains: History of Israel Palestine conflict; India's stake and stand in the conflict

Context:

- Ongoing conflict between Israel and Hamas.

History of Israel-Palestine issue:

The idea of a Jewish homeland:

- In the 19th century, the population in the region of Israel/Palestine was almost 87% Muslim, 10% Christian and 3% Jewish.
- In the 19th century, an Austro-Hungarian Jewish journalist, Theodor Herzl, propagated the idea of a Jewish homeland in Palestine for the Jews. This idea came to be known as Zionism, which found many followers among the Jews in Europe, where Jews were facing discrimination and even pogroms.

Balfour declaration:

- In 1917, the British government announced the Balfour Declaration, hoping to gain Jewish support for World War I, which promised: "the establishment in Palestine a national home for the Jewish People".

- The Arabs in Palestine vehemently opposed the declaration fearing that a Jewish homeland in the region would mean subjugation for the Palestinians.

Mandatory Palestine and the influx of Jews:

- The British, after the First World War, established a colony in Palestine maintaining that they would rule the area until the Palestinians were ready to govern themselves. This was called Mandatory Palestine as it was according to the League of Nations mandate.
- There was a massive influx of Jews from Europe into Palestine in the hope of creating their homeland after being expelled from it for centuries. In the 1920s and 1930s, the Jewish population in Palestine increased by hundreds of thousands, facilitated by the British (who were honouring the Balfour Declaration).
- During this time, tensions between the growing Jewish communities and the Arabs were increasing.
- Tensions escalated and the British handed over the problem to the newly established United Nations.
- In 1947, the UN voted to establish separate Palestinian and Jewish states in the region dividing Palestine. This plan was rejected by the Arabs.

Two state solution:

- The two-state solution to the Israeli-Palestinian conflict envisions an independent State of Palestine alongside the State of Israel, west of the Jordan River.
- There have been many diplomatic efforts to realize a two state solution, starting from the 1991 Madrid Conference. Then there was the 1993 Oslo Accords, the failed 2000 Camp David Summit and the Taba negotiations of 2001.

Formation of the state of Israel and the Arab-Israeli wars:

- In May 1948, Israel was declared an independent state. Following this declaration, in 1948, the Arab-Israeli War broke out with five Arab states, Iraq, Syria, Lebanon, Jordan and Egypt invading Israel.
- A ceasefire was announced in 1949 and as part of the agreement, the West Bank was given to Jordan and the Gaza Strip became part of Egypt. Israel, having won the war, though, now controlled more area than they would have under the UN plan. East Jerusalem was under the control of Jordan. Over 700,000 Palestinians fled the region and became refugees in neighbouring Arab countries.

- In 1967, the 6-Day War started in which Israel won control of the Gaza Strip, the West Bank, the Golan Heights, and the Sinai Peninsula. Israel captured East Jerusalem also.



Israel-Palestine conflict:

- Israel was creating Jewish settlements in areas that were considered Palestinian territory including in East Jerusalem. This resulted in an uprising of Palestinians against the Israeli occupation of Gaza and the West Bank in 1987.
- Hundreds of people were killed and this is called the First Palestinian Intifada (Arabic word meaning 'shaking off').
- The Intifada came to an end with the Oslo Peace Accords signed in 1993 and a second accord signed in 1995 between the then Israeli Prime Minister Yitzhak Rabin and Yasser Arafat, the leader of the Palestine Liberation Organization.
- After this, the Palestinian Authority formed and took control over some territories in Israel.
- The Israeli army withdrew from parts of the West Bank in 1997. However, the Accords could

not bring permanent peace to the region and the Second Palestinian Intifada was launched in 2000.

- There was widespread rioting and violence which lasted for years.
- A ceasefire was finally announced and Israel planned to withdraw all troops and Jewish settlements from the Gaza Strip by 2005 end.
- Hamas (which many consider a terrorist group) has been fighting with Israel with particularly significant battles in 2008, 2012 and 2014.

Recent escalation of tensions in Jerusalem:

- Tensions between Israel and the Palestinians have been building up since April 2021 when the Israeli police set up barricades at the Damascus Gate outside the occupied Old City, preventing Palestinians from gathering there.
- The threatened eviction of dozens of Palestinian families in the East Jerusalem neighbourhood of Sheikh Jarrah had also escalated the crisis further.

Opposing claims over Jerusalem:

- Jerusalem has always been at the centre of the Israeli-Palestinian conflict.
- Jerusalem is an ancient city and claimed by both Israel and Palestine as their own. Israel claims the whole undivided city as its rightful capital while Palestinians refute this. The city is also considered a holy one having many places of religious importance to the three Abrahamic religions of Judaism, Christianity and Islam.
- According to the original 1947 UN Partition Plan, Jerusalem was proposed to be an international city. But in the first Arab Israel war of 1948, the Israelis captured the western half of the city, and Jordan took the eastern part, including the Old City that houses Haram esh-Sharif.
- Al-Aqsa Mosque (Islam's third holiest site) and the Dome of the Rock are situated within Haram esh-Sharif.
- One side of the compound, called Temple Mount by the Jews, is the Wailing Wall (Western Wall), which is believed to be the remains of the Second Jewish Temple, the holiest site in Judaism.
- Israel captured East Jerusalem from Jordan in the 1967 Six-Day War and annexed it later.
- Since its annexation, Israel has expanded settlements in East Jerusalem. It is now home to some 220,000 Jews.
- Jews born in East Jerusalem are Israeli citizens.
- Palestinians in the city are given conditional residency permits.
- Palestinians in East Jerusalem, unlike other parts of the occupied West Bank, can apply for Israeli citizenship. Very few Palestinians have done so.

- Israel sees the whole city as its “unified, eternal capital”.
- Palestinian leaders across the political spectrum have maintained that they would not accept any compromise formula for a future Palestinian state unless East Jerusalem is its capital.

Sheikh Jarrah dispute:

- Hundreds of thousands of Palestinians were forced out of their homes when the State of Israel was created in historic Palestine in 1948.
- Twenty-eight of those Palestinian families moved to Sheikh Jarrah in East Jerusalem to settle there.
- In 1956, when East Jerusalem was ruled by Jordan, the Jordanian Ministry of Construction and Development and the UN Relief and Works Agency facilitated the construction of houses for these families in Sheikh Jarrah.
- But Israel captured East Jerusalem from Jordan in 1967.
- By the early 1970s, Jewish agencies started demanding the families leave the land.
- Jewish committees claimed that the houses sat on land they purchased in 1885 (when Jews, facing persecution in Europe, were migrating to historic Palestine that was part of the Ottoman Empire).
- In 2021, the Central Court in East Jerusalem upheld a decision to evict four Palestinian families from their homes in Sheikh Jarrah in favour of Jewish settlers. The Israeli Supreme Court is yet to hear the case. The issue remains unresolved.

The current conflict:

- The Israeli armed forces stormed Al-Aqsa Mosque in Jerusalem, ahead of a march by Zionist nationalists commemorating Israel’s capture of the eastern half of the city in 1967. This led to violent confrontations between Palestinians and Israeli security forces.
- In retaliation, Hamas, the Palestinian militant organization based in Gaza, fired dozens of rockets.
- Israel launched an airstrike on Gaza in response.

Concerns:

- Israel is being accused of using disproportionate force against Hamas.
 - * Israel’s latest bombing on Gaza killed more than 220 Palestinians, including 63 children and over 1,500 people were injured. Israeli airstrikes have induced large scale damages to civilian residential areas and infrastructure, homes, and hospitals.
 - * U.N. Human Rights Council has decided to launch an international investigation into crimes that may have been committed in the Israeli-Palestinian conflict.

- The current conflict is also indicative of the growing influence of Hamas in Palestine at the cost of moderate factions in Palestine. The growing support for the more militant Hamas does not augur well for peace and security in the already fragile region.
- Given that 20% of Israel’s population consists of Arab Muslims, there are concerns over the prospects of a civil war in Israel.
- The attack on the Al-Aqsa mosque has also given Islamic militants an opportunity to call for attacks across other parts of the world.

International Response:

USA:

- The President of the US, Joe Biden, has stated that Israel has the right to defend itself and has called for ending the conflict as soon as possible.
- In the United Nations Security Council, the US has blocked any discussion on the issue by using its veto power even though 14 out of 15 members called for an urgent meeting on the issue.
- A certain section of the Democratic lawmakers in the US believes that Israeli Prime Minister Benjamin Netanyahu is responsible for such escalation and has called to put pressure on him to end the conflict.
- However, the US has less leverage because of Donald Trump’s action of unilaterally siding with Israel over Jerusalem, which the Palestinians consider as their capital, and the vacillation of Biden over putting pressure on Israel.
- The US is also trying to shift its focus from the Middle East to the Indo-Pacific to tackle China.

Regional Powers:

- The Arab nations are also divided. On the one hand, Iran and Turkey are champions of the Palestine cause and on the other hand, Saudi Arabia and UAE have improved their relations with Israel.
- Qatar, Egypt, and Turkey are trying their best to calm the situation.

India:

- India has termed the conflict as an internal matter of Israel and Palestine and has called for a peaceful resolution of the conflict.
- India now follows dehyphenation policy when it comes to Israel and Palestine. It means India’s relationship with Israel would stand on its own merits, independent and separate from India’s relationship with the Palestinians.
- With the West shying away from its responsibilities to solve the Israel-Palestine conflict and the trust deficit with China, Palestinian leader Muhammad Abbas in 2014 had called for India to play the role of interlocutor in resolving the conflict.

- * In 1988, India became one of the first countries to recognize the Palestinian State.

Ceasefire:

- In the light of the ongoing conflict between Israel and Hamas, there had been a growing call for a ceasefire. In the UNSC, most countries, including India, backed an immediate ceasefire.
- The U.S. administration, which had been supportive of Israel's right to self-defence had also been pressing for a significant de-escalation lately.
- Amid international pressure, Israel and Hamas have agreed to a ceasefire.
- The ceasefire between Israel and Hamas has been mediated by Egypt.

Uncertain truce:

- Though the ceasefire appears to be holding, there continue to be grave risks for further escalation.
 - * Militarily, Hamas, despite the heavy losses it suffered, demonstrated its growing rocket fire capabilities. This does not augur well for peace in the region.
 - * The two sides have propounded different lines on the truce deal.
 - * The Sheikh Jarrah issue is complicated, where Palestinians face eviction from their houses. The Supreme Court of Israel is supposed to give a final ruling on the eviction of Palestinians in the neighbourhood. If Israel goes ahead with the eviction process, there could be more protests and violence.
 - * The continuing riots between Jewish vigilantes and Arab mobs and the increasing protests in the West Bank continue to be a cause of concern.

Conclusion:

- The Israel Palestine conflict is one of the oldest and persisting conflicts in the world.
- Looking at the ground situation, the resolution of the Israel Palestine conflict will continue to remain elusive.
- The real problem is that there is no meaningful effort to restart the peace process, which is the only way forward to end violence and address the political and humanitarian concerns of the occupied territories.
- The only way forward is peace talks between the two countries and further negotiations on the two-state solution proposed by the United Nations.
- India can be part of the peace process to end this conflict under the overall leadership of the United Nations.

India's bilateral relation with U.K

15. Global Innovation Partnership

» Prelims: Global Innovation partnership

Context:

- Cabinet gives ex-post facto approval to MoU between India and UK on Global Innovation Partnership (GIP).

Details:

- GIP will support Indian innovators to scale up their innovations in third countries thereby helping them explore new markets and become self-sustainable. It will also foster the innovative ecosystem in India. GIP innovations will focus on Sustainable Development Goals (SDG) related sectors thereby assisting recipient countries achieve their SDGs.
- Through seed funding, grants, investments and technical assistance, the Partnership will support Indian entrepreneurs and innovators to test, scale up and take their innovative development solutions to select developing countries.
- The innovations selected under GIP would accelerate the achievement of Sustainable Development Goals and benefit the base of the pyramid populations thus promoting equity and inclusivity in recipient countries.
- GIP will also develop an open and inclusive e-market place (E-BAAZAR) for cross border innovation transfer and will focus on results based impact assessment thereby promoting transparency and accountability.

India's bilateral relation with U.K

16. MoU between India and the UK

» Mains: India – U.K. relationship

Context:

- The Cabinet has approved the signing of a Memorandum of Understanding (MoU) on Migration and Mobility Partnership between India and the United Kingdom.

Objectives of the MoU:

- The MoU is aimed at liberalising issuance of visas promoting mobility of students, researchers and skilled professionals and strengthen cooperation on issues related to irregular migration and human trafficking between the two sides.

Benefits:

- The MoU would benefit Indian students, academics, and researchers, migrants for professional and economic reasons and those willing to contribute through various projects to the economic development of both countries without consideration of caste, creed, religion or gender.

- This MoU can support the innovation ecosystem in both countries by facilitating free flow of talent.

India's bilateral relation with U.K

17. India-UK virtual summit strengthens STI cooperation

» Mains: India – U.K. relationship

Context:

- The prime ministers of India and the UK met virtually and emphasised their shared commitment to an enhanced partnership in science, education, research and innovation and look forward to the next ministerial Science and Innovation Council (SIC).

Some of the key points to strengthen STI cooperation between the two countries are:

- Enhance cooperation between India and the UK on strengthening the role of women in STEMM (Science, Technology, Engineering, Mathematics and Medicine).
- Develop collaborations between Industry, Academia and the Government to foster innovation among school students.

research, science and innovation infrastructure and governmental relationships to continue to support high-quality, high-impact research and innovation through joint processes.

- Forge partnership across the pipeline of research and innovation activity, from basic research to applied and interdisciplinary research and through to translation and commercialisation across government departments to optimise impact, utilize expertise and networks and minimise duplication.
- Expand existing bilateral partnerships in this field by establishing joint centres and facilitating access to state-of-the-art facilities.
- Work together to share knowledge and expertise regarding artificial intelligence, scientific support to policies and regulatory aspects including ethics, and promote a dialogue in research and innovation.
- Grow programmes such as the Fast Track Start-Up Fund to nurture innovation led, sustainable growth and jobs, and tech solutions that benefit both countries.

ART AND CULTURE

Art and Culture - Places and archaeological sites in news

1. **6 UNESCO heritage sites added in India**

- » Prelims: UNESCO world heritage sites in India; Sites added to the tentative list
- » Mains: Efforts and measures for conservation of cultural heritage

Context:

- Six sites have been added to India's tentative list of UNESCO world heritage sites.

Details:

- Six of the nine sites submitted by the Archaeological Survey of India had been accepted by UNESCO for inclusion in the tentative list.
 - * This is a requirement before the final nomination of any site.
- The sites include the Ganga ghats in Varanasi, temples of Kancheepuram and the Satpura Tiger Reserve in Madhya Pradesh, Maratha military architecture in Maharashtra, the Hire Benakal megalithic site in Karnataka and Bhedaghat-Lametaghat of Narmada Valley.
 - * With the addition of these six sites, UNESCO has 48 proposals in the tentative list of India.

Note:

- UNESCO has already added 30 of India's cultural sites, 7 natural, and 1 mixed site in its World Heritage List.
- Archaeological Survey of India (ASI) is the nodal department for forwarding the proposals to UNESCO.

Art and Culture - Artforms

2. **Baul**

- » Prelims: UNESCO's list of Intangible Cultural Heritage; Bauls- Associated region and important features

- The Baul or Bauls are a group of mystic minstrels or poets of mixed elements of Sufism and Sahaja from Bangladesh and Indian states of West Bengal, Tripura and Barak Valley of Assam.
- Bauls are primarily identified by their music i.e, loud vocals accompanied by an ektara and Khomok.
 - * Ektara is a single-stringed instrument.
 - * Khomok is a hand-drum.
- While Bauls are a very heterogeneous group, with many sects, their membership mainly consists of Vaishnava-Sahajiyas and Sufi Muslims.
- In 2008, Baul songs were listed under UNESCO's Intangible Cultural Heritage of Humanity of Bangladesh.

Art and Culture - Governmental initiatives for conservation

3. **National Mission on Cultural Mapping**

- » Prelims: Provisions of National mission on cultural mapping scheme
- » Mains: Significance of preserving the cultural heritage of India
- The mission aims at converting the vast and widespread cultural canvas of India into an objective cultural map, designing a mechanism to preserve the rich cultural heritage of India in the form of a cultural repository of artists and art forms.
- The Cultural Mapping of India portal will serve as a repository/consolidated database of information about cultural assets and resources i.e. a cultural inventory at one place for essential planning, sustainable economic development and for preserving the scattered and near-extinct art forms.

- This Mission encompasses data mapping, demography building formalizing the processes and bringing all the cultural activities under one web-based umbrella for better results.
- The Mission also seeks to open a direct channel of communication for artists with the Government and peer to peer communication among artists for talent honing and handholding of each other.

SCIENCE AND TECHNOLOGY

Awareness in the field of Space

1. China's Mars landing

- » Prelims: Zhurong rover; Tianwen-1 mission; Chang'e-4 mission
- » Mains: Importance of study of mars

Context

- China landed a spacecraft on Mars carrying its first Mars rover.

Details:

- China has previously launched its first Mars mission, called Tianwen-1, carrying a lander and rover. Tianwen-1 had been in orbit and recently a lander descended successfully on to the surface of the red planet carrying a rover named Zhurong.
- This makes China the third country to achieve this feat. Only the Soviet Union and the U.S. had previously carried out a successful landing on Mars.
 - * China had previously tried to launch a Mars orbiter along with Russia in 2011, but that failed to enter orbit.
- The space programme marks another landmark progress in China's space industry development. China's Mars mission, along with lunar mission and space station, is key to its space programme.
 - * In 2019, the fourth lunar probe, Chang'e-4, carried out the world's first landing on the far side of the moon.
 - * China's first space station called the Tianhe is set to be functional by the end of next year and only the second space station after the International Space Station.

Awareness in the field of Space

2. China's space station

- » Prelims: Tiangong space station
- » Mains: Importance of space station; India's plan for its own space station

Context:

- The Tianzhou-2 cargo spacecraft was launched on a Long March-7 rocket and docked eight hours later with the space station's first core module – Tianhe which means heavenly harmony.

Details:

- The Tianzhou-2 cargo spacecraft has been described as the delivery guy for China's space station.

- * Tianzhou-2 is the largest cargo spacecraft in service.

- It carried a range of supplies. It is also carrying cargo and propellant that will replenish the supplies of the Tianhe module.
- It will be followed by the launch of another cargo spacecraft, Tianzhou-3, and two manned missions, Shenzhou-12 and Shenzhou-13, in 2021, each carrying three astronauts who will spend several months in orbit.
- The six missions to follow this year, including for the space station's second and third modules, Wentian and Mengtian, will close to complete the construction of China's first space station, expected to be finished in 2022.

Note:

- The Space Station China is building is called Tiangong which means "Heavenly Space".
- The space station, which will be only the second after the International Space Station (ISS), has been designed with a lifespan of 10 years but could last 15 years, or until 2037.

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

3. Scientists developed magnetometer for low cost, reliable & real-time measurements of magnetic fields

- » Prelims: Magnetometer
- » Mains: Significance of the new development

What's in News?

- Scientists from the Raman Research Institute (RRI), Bengaluru, have devised a more efficient, faster, and low-cost digital receiver system that can make precise measurements of magnetic fields.
 - * RRI is an autonomous institute under the GOI's Department of Science and Technology.
 - * The new study is supported by the DST and the Ministry of Electronics and IT.

Background:

- Digital signals are the backbone of communication systems processed by hardware systems that transmit and receive the signals with the help of intermediate systems called 'digital receiver systems' or DRS.

- When magnetic matter creates signals, analysing them with DRS lets scientists study the magnetic fields.
- By analysing the properties of the signals, for example, how they vary with time, scientists can measure the fields and study their small fluctuations.

Significance:

- The researchers have demonstrated a low-cost digital system to efficiently measure unknown magnetic fields.
- They developed a digital receiver system using heated rubidium atoms.
- Having demonstrated the functioning of a digital receiver system to precisely measure atomic magnetic fields, the researchers are open to large-scale manufacturing or commercialisation of the device.

Miscellaneous

4. National Technology Day

- » Prelims: Operation Shakti, 1998
- » Mains: Science and Technology for a Sustainable Future

Context:

- India celebrates May 11 as 'National Technology Day'.

About National Technology Day:

- The day celebrates the achievements and contributions of Indians to science and technology.
- The day commemorates India conducting three successful nuclear tests at the Indian Army's Pokhran Test Range in Rajasthan under Operation Shakti in 1998.
- The National Technology Day was observed for the first time on May 11, 1999.
- Usually, a large-scale event is organised in New Delhi for the National Technology Day celebrations and the President is invited to be the chief guest. He confers awards to scientists and honours them for their achievements.
- The National Technology Day 2021 theme is "Science and Technology for a Sustainable Future".
- In 2020, the theme was 'Rebooting the Economy through Science, Technology and Research Translations' titled 'RESTART'.

SECURITY AND DEFENCE

Defence Equipment

1. BVLOS Drones

- » Prelims: BVLOS drones; Unmanned Aircraft System (UAS) Rules, 2021
- » Mains: BVLOS drone- Advantages and concerns

Context:

- Government allows 20 entities to conduct BVLOS experimental flights of drones.

Details:

- The Ministry of Civil Aviation (MoCA) & the Directorate General of Civil Aviation (DGCA) have granted conditional exemption to the Government of Telangana for conducting experimental Beyond Visual Line of Sight (BVLOS) drone flights for delivery of vaccines.
- Exemption from Unmanned Aircraft System (UAS) Rules, 2021 has been granted as part of the government's constant endeavour to enhance the scope of drone usage in the country and assist the nation to fight the COVID-19 pandemic.

What is BVLOS?

- BVLOS describes operating UAVs (unmanned aerial vehicles) and drones at distances outside the normal visible range of the pilot.
- BVLOS is the second stage of testing drones and UAVs, as drones are generally operated within the visual line of sight during the first phase of testing.
- If the two stages are completed successfully, further clearance will be sought from the authorities to explore the possibility of vaccine delivery using drones.

Advantages of BVLOS:

- BVLOS drone operations provide numerous advantages over regular line-of-sight flying.
- They are more cost-effective and efficient, as there are fewer takeoff and landing phases, so the UAV will cover more ground in a single mission.
- BVLOS flights typically require less human intervention as some or all of the mission may be automated.
- They may also allow easier access to remote or hazardous areas.

Concerns associated with BVLOS:

- BVLOS UAV operations carry more safety concerns due to the fact that the pilot may only be observing potential obstacles via a remote camera feed, or, in the case of automated flights,

there may be no human observation at all.

- This means that there is additional risk of collisions with other aircraft, or damage to property and people, especially when flights take place in non-segregated airspace.
- BVLOS flights typically require additional equipment and extra training and certification, and are usually subject to permission from aviation authorities in many jurisdictions around the world.

Defence Equipment

2. Iron Dome System

- » Prelims: Iron dome aerial defence system

Context:

- The Iron Dome aerial defence system intercepted a Hamas Unmanned Aerial Vehicle (UAV) that crossed from Gaza into Israel.

Iron Dome System:

- Iron Dome is a multi-mission system capable of intercepting rockets, artillery, mortars and Precision Guided Munitions like very short-range air defence (V-SHORAD) systems as well as aircraft, helicopters and Unmanned Aerial Vehicles (UAV) over short ranges of up to 70 km.
- It is an all-weather system and can engage multiple targets simultaneously and be deployed over land and sea.
- The I-DOME is the mobile variant with all components on a single truck and C-DOME is the naval version for deployment on ships.

Genesis:

- The genesis of the Iron Dome dates back to the 2006 Israeli-Lebanon war, when Hezbollah fired thousands of rockets into Israel.
- The following year, Israel announced that its state-run Rafael Advance Systems would come up with a new air defence system to protect its cities and people.
- It was developed with Israel Aerospace Industries.
- The Iron Dome was deployed in 2011.

How does it work?

- An Iron Dome battery consists of a battle management control unit, a detection and tracking radar and a firing unit of three vertical launchers, with 20 interceptor missiles each.
- The interceptor missile uses a proximity fuse to detonate the target warhead in the air.

- One of the system's important advantages is its ability to identify the anticipated point of impact of the threatening rocket, to calculate whether it will fall in a built-up area or not, and to decide on this basis whether or not to engage it.

Limitations:

- The system has limitations when it is overwhelmed with a barrage of projectiles.
- Another limitation is the system's inability to cope with very short-range threats as estimates put the Iron Dome's minimum interception range at 5-7 km.
- Also, the cost of interception is high.

Defence Equipment

3. P-8I patrol aircraft

- » Prelims: P-8I patrol aircraft
- » Mains: Defence partnership between India and the U.S.

Context:

- The U.S. State Department has approved the proposed sale of P-8I patrol aircraft and related equipment to India.

Details:

- P-8I is a long-range, multi-mission maritime patrol aircraft manufactured by Boeing for the Indian Navy. It is a variant of the P-8A Poseidon operated by the US Navy.
- The P-8I aircraft is designed to protect the vast coastline and territorial waters of India. It can conduct anti-submarine warfare, intelligence, maritime patrol, and surveillance and reconnaissance missions.

Governmental Initiatives

4. Crime and Criminal Tracking Network and Systems (CCTNS)

- » Prelims: CCTNS- features
- » Mains: CCTNS- significance and utility
- Crime and Criminal Tracking Network and Systems (CCTNS) is a secure application that links over 97% of police stations in the country.
- The project was initiated in June 2009.
- CCTNS has been developed by the National Crime Records Bureau (NCRB) under the Union Home Ministry.
- It aims to create a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing at the Police Station level. This will be done through:

- * Adoption of principles of e-Governance.
- * Creation of a nationwide networked infrastructure for the evolution of IT-enabled state-of-the-art tracking system around the investigation of crime and detection of criminals.

- It not only automates police functions at Police station and higher levels but also creates facilities and mechanism to provide public services like registration of online complaints, ascertaining the status of a case registered at the police station, verification of persons, etc.

Note:

- CCTNS is being used for antecedent verification for Global Entry.
- The Global Entry is a facility run by the U.S. Customs and Border Protection (CBP), an agency that works under the Department of Homeland Security that fast tracks movement of pre-approved, low-risk travellers upon arrival after a rigorous background check through designated kiosks.
- Though the Global Entry pilot project started in 2008, India became a member in 2017 only.

Miscellaneous

5. Al-Badr

- » Prelims: Unlawful Activities (Prevention) Act, 2004.
- Al-Badr is a terrorist group operating in the Kashmir region.
- The group was allegedly formed by the Pakistani Inter-Services Intelligence (ISI) in 1998.
- India and the United States have declared it a terrorist organization and banned it.
 - * Al-Badr was banned by India under the Unlawful Activities (Prevention) Act, 2004.

Context:

- Two Al-Badr militants were killed near Srinagar's Khonmoh area.

ENVIRONMENT AND ECOLOGY

Environmental Degradation

1. World's largest iceberg breaks off

- » Prelims: Weddell Sea
- » Mains: Global warming and associated challenges

Context:

- A huge ice block has broken off from Western Antarctica into the Weddell Sea, becoming the largest iceberg in the world.



Details:

- The iceberg has been named A-76.
- It had been monitored by scientists since it began to separate from the Ronne Ice Shelf.
- It measures around 170 km long and 25 km wide, with an area of 4,320 sq km and is now floating in the Weddell Sea.
 - * It is slightly larger than the Spanish island of Majorca.
- It is the latest in a series of large ice blocks to dislodge in a region acutely vulnerable to climate change.
- According to the scientists, it appeared to be part of a natural polar cycle.

Note:

- A-23A, the previous world's largest titleholder has remained in the same area since 1986.
- Icebergs form when chunks of ice break off from ice shelves or glaciers and begin to float in open water.
- Once it melts, the new iceberg will not lead to a sea-level rise, because it was part of a floating ice shelf.

How are these icebergs named?

- Icebergs are traditionally named from the Antarctic quadrant in which they were originally sighted, then a sequential number and, if the iceberg breaks, a sequential letter is given to it.

Environmental Degradation

2. Declining forest bird species in Western Himalaya

- » Prelims: Important bird species found in western Himalayas
- » Mains: Significance of birds in ecological stability

What's in News?

- A study that analyzed natural oak-dominated forests and modified forests in the State of Uttarakhand has noted that there was a drastic loss of bird species in all modified landscapes.
 - * The State of Uttarakhand is home to the Western Himalayan temperate forests which harbour a large number of endemic bird species.

Key Findings:

- The results of the study showed that there was a low diversity of species in monoculture areas and urban sites.
- They also noted a drastic loss of pollinator birds and insectivores in the degraded forests, monocultures and urbanized sites.
- It saw a strong decline in some of the habitat guilds in the areas that experienced land-use change.
 - * Habitat guilds are groups of bird species that have common habitat preferences.
- Recognized oak forest specialists such as rufous-bellied woodpecker, greater yellow nape, rufous sibia, white-throated laughing thrush and black-faced warbler dropped out of the modified land areas.

- It was noted that two species (rufous-bellied woodpecker and greater yellow nape) showed great potential as indicators of forest quality as they were most likely to be found in dense canopied forests with larger and taller trees.

Initiatives in news

3. Arctic Science Ministerial

- » Prelims: Arctic science ministerial- membership and mandate; Arctic council
- » Mains: Arctic warming and the consequences

Context:

- India participates in the 3rd Arctic Science Ministerial.

Details:

- India is participating in the 3rd Arctic Science Ministerial (ASM3) – the global platform for discussing research and cooperation in the Arctic region.
- The first two meetings—ASM1 and ASM2—were held in the USA in 2016 and Germany in 2018, respectively.
- ASM3, jointly organised by Iceland and Japan, is the first ministerial meeting being held in Asia.
- The meeting is designed to provide opportunities to various stakeholders, including academia, indigenous communities, governments and policymakers, to enhance collective understanding of the Arctic region, emphasize and engage in constant monitoring, and strengthen observations.
- The theme for this year is 'Knowledge for a Sustainable Arctic'.

Background:

- Arctic warming and its ice melt are global concerns as they play a pivotal role in regulating climate, sea levels, and maintaining biodiversity.
- Moreover, there is growing evidence of connection between the Arctic and the Indian Ocean (which modulates the Indian monsoon).
- Hence, improving the understanding of physical processes and quantifying the impact of Arctic ice melt on the Indian summer monsoon is very important.
- Since 2013, India has enjoyed 'Observer' status in the Arctic Council.



Environmental Conservation Efforts

4. Moorhen Yoga Mat

- » Prelims: Deepor Beel
- » Mains: Environmental and economic sustainability- novel approaches

Context:

- Biodegradable yoga mat developed by girls from Assam may save lakes from water hyacinth menace.

What's in the News?

- Six young girls belonging to the fishing community in the fringes of the Deepor Beel in Assam have developed a biodegradable Yoga mat from water hyacinth.
- The Deepor Beel Lake has been a source of livelihood for 9 villages of the fishing community who share this biome for centuries, but over the years have suffered from excessive growth and accumulation of water hyacinth.
- This innovation could therefore contribute significantly towards the environmental conservation and sustainability of Deepor Beel and also ensure local livelihood.

- The mat called 'Moorhen Yoga Mat' will soon be introduced to the world market as a unique product.
- The mat has been named after Kam Sorai (Purple moorhen, a resident bird of Deepor Beel Wildlife Sanctuary).

Significance:

- Considering all aspects of water hyacinth's properties and the functional requirements of a product like a mat, a hand-woven 100% biodegradable and 100% compostable mat to be used for doing Yoga was ideated as a means to provide multiple ecological and social benefits.
- The mat developed through fibre processing and technological interventions could improve the aquatic ecosystem of the wetland through the removal of water hyacinth.
- It will also help in the sustainable production of utility products with community engagement and generate of livelihood for indigenous communities to become completely 'Atamanirbhar'.
- The intervention was triggered through an initiative by North East Centre for Technology Application and Reach (NECTAR), an autonomous body under Department of Science & Technology (DST) to involve the entire women community associated with a collective called 'Simang', led by the 6 girls to create wealth from water hyacinth plants.

About Deepor Beel:

- It is a permanent freshwater lake in the southwest of Guwahati city, recognized as a Ramsar Site and a bird wildlife sanctuary.
- It is the only wetland in Assam designated as a site of importance for "conservation and sustainable use" under the Ramsar Convention on Wetlands.
- The landscape of Deepor Beel, a riverine wetland in Kamrup district in the lower Brahmaputra valley, is dynamic, holding attraction for ornithologists, wildlife biologists and environmentalists.
- It is also a grooming site for bird enthusiasts as it sustains over 200 species of birds, including about 70 species of migratory birds.
- It is known for its fish and bird diversity and rich aquatic vegetation that attracts wild elephants.
- However, it faces conservation threats from garbage dumping, quarrying, a railway line, etc.

Environmental Conservation Efforts

5. The many benefits of an eco tax

- » Prelims: Forms of environmental taxation
- » Mains: Forms of environmental regulation; Environmental tax in India- Significance, concerns and recommendations

Background:

Financial impact of the pandemic:

- The second wave of the pandemic has induced lockdowns in several states and brought economic activity to a standstill. This will lead to a lower than estimated economic growth and a subsequent decline in tax revenue. This will lead to a larger than projected fiscal deficit in the current year.
- The fiscal deficit for FY 2020-21 (revised estimates) is projected to be 9.5% of the GDP; for 2021-22, it is pegged at 6.8%.
- The continued focus on fiscal discipline is bound to impact public expenditure which is vital for economic revival and also impact expenditure into the ailing health sector which is crucial in the fight against the pandemic.

Consequences of low public expenditure in the health sector:

- Sustained health financing in India has always been a challenge.
- The low public expenditure into the health sector results in the lack of adequate and quality public health care facilities, thus leading to the rise of private health care centres. Such a scenario invariably leads to a high out of pocket expenditure for health needs.
 - * The World Health Organization (WHO) data notes that 17.33% of the population in India made out-of-pocket payments on health exceeding 10% of the total household expenditure or income in 2011.
 - » This is higher than the global average of 12.67% and also the average for the Southeast Asian region which stands at 16%.
 - * Similarly, 3.9% of the population in India made more than 25% of out-of-pocket payments on health.
 - * The Economic Survey of India 2019-20 notes that an increase in public spending from the current level of 1% to 5-3% of GDP, as envisaged in the National Health Policy of 2017, can decrease out-of-pocket expenditure from 65% to 30%.
- The high out of pocket expenditure for health pushes many into poverty. Also since a lower proportion of disposable income is available for other essentials like food and education, this would also have a long term impact on the nutritional security and development of children of such families.

Details:

- Given the critical need for higher public expenditure in the health sector and the fiscal

strain imposed by the pandemic, it becomes important to look for alternate sources of health financing in India.

- The COVID-19 pandemic has also forced a rethink on climate change and the need for environmental preservation.
- In this direction, the article evaluates possible fiscal reforms which will not only help manage the environment in a sustainable manner but also help generate enough revenues to fund its public expenditure programmes in critical areas like health.
- The article evaluates the potential of environmental tax in this direction.

Environmental regulation:

- Environment regulation may take one of the following forms:
 - * Command and control approach wherein the government places strict regulations on pollutant emissions and there are fines on non-compliance.
 - * Economic planning/urban planning approach involves inculcating sustainable management practices in policymaking.
 - * Environmental tax (eco tax)/subsidies approach involves either taxing the polluters to disincentivize the use of high carbon footprint processes or products and also providing subsidies to encourage the adoption of green technology.
 - * Cap and trade approach involves the government setting limits for emissions and the establishment of carbon trade markets.
- India currently focuses majorly on the command-and-control approach in tackling pollution.

Eco tax:

- Environmental tax reforms would mainly involve the following three activities:
 - * Eliminating existing subsidies and taxes that have a harmful impact on the environment.
 - * Restructuring existing taxes in an environmentally supportive manner.
 - * Initiating new environmental taxes.
- For example, in the energy sector, the following reforms may qualify as environmental fiscal reforms.
 - * Correcting the price differential between diesel and petrol.
 - * Differential taxation on vehicles in the transport sector based on fuel efficiency and GPS-based congestion charges.
 - * Taxes on thermal-based powers and tax rebates for renewable energy producers.

- * Tax on high carbon footprint industries.

Significance:

- The implementation of an environmental tax in India will have the following three broad benefits.

Fiscal:

- Tax revenues can be generated through eco taxes by designing them as revenue augmenting.
- The additional revenue so generated can be used for the provision of environmental public goods or directed towards the overall revenue pool to be used in critical social sectors like health. This will help developing countries like India, constrained by limited fiscal space to address critical environmental health issues.

Poverty reduction:

- The augmented revenue from eco tax can finance research and the development of new technologies thus encouraging the rise of new sunrise sectors and new jobs.
- The augmented revenue will also help finance social sectors which will aid in the development process and help reduce poverty.

Concerns:

- Environmental regulations may have significant costs on the private sector in the form of the high cost of compliance. This could lead to a possible increase in the prices of goods and services. This may disincentivize demand and thus hamper the economic growth of the nation.
 - * Notably, there is no evidence of green taxes leading to a deceleration of the economy. Most countries' experiences suggest a negligible impact on the GDP.

Recommendations:

- It is the right time for India to adopt environmental fiscal reforms as it will not only help reduce environmental pollution but also generate resources for financing the health sector.
- The architecture of the eco tax framework should be credible, transparent and predictable.
 - * The eco tax rate should be commensurate to the marginal social cost arising from the negative externalities associated with the production, consumption or disposal of goods and services. This should consider both short and long term impacts both on humans and other living beings.
- The environmental taxes must be integrated with the Goods and Services Tax framework.

Species in news - Fauna

6. Indian Pangolin

- » Prelims: Indian pangolin- Habitat range, Threats and conservation status.
- IUCN: Endangered
- It is a pangolin found on the Indian subcontinent
- It is an insectivore, feeding on ants and termites, digging them out of mounds and logs using its long claws
- It is nocturnal and rests in deep burrows during the day.

Unique Attributes

- Its overlapping scales on its body act as armour.
- It can also curl itself into a ball as self-defense against predators such as the tiger.
- The colour of its scales varies depending on the colour of the earth in its surroundings.

Threats

- The Indian pangolin is threatened by hunting for its meat and for various body parts used in traditional medicine
- In traditional Chinese medicine, pangolin scales are also believed to treat a wide variety of conditions including psoriasis and poor circulation.

Species in news - Fauna

7. Red-eared Sliders

- » Prelims: Red-eared Sliders
- » Mains: Invasive species- threat posed and measures needed to tackle this challenge

Context:

- The Red-eared Sliders are threatening to invade the natural water bodies across the Northeast.

Red-eared Slider



- The red-eared slider (*Trachemys scripta elegans*) derives its name from red stripes around the part where its ears would be and from its ability to slide quickly off any surface into the water.
- It is native to the U.S. and northern Mexico and is popular as a pet.
- It is a semiaquatic turtle.
- They have become an invasive species in many areas where they outcompete native species.
- The red-eared slider is included in the list of the world's 100 most invasive species published by the International Union for the Conservation of Nature

Concerns:

- The red-eared sliders found in the natural water bodies grow fast, virtually leaving nothing for the native species to eat.
- The red-eared slider has already affected states such as Karnataka and Gujarat, where it has been found in 33 natural water bodies.
- More than elsewhere in India, preventing this invasive species from overtaking the Brahmaputra and other river ecosystems in the Northeast is crucial because the Northeast is home to more than 72% of the turtle and tortoise species in the country.
- The Deepor Beel Wildlife Sanctuary and the Ugratara temple pond where red-eared sliders are found are home to 21 of the 29 vulnerable native Indian species of freshwater turtles and tortoises.

Species in news - Fauna

8. Skink species from Western Ghats

- » Prelims: *Subdoluseps nilgiriensis*- threats
- » Mains: Significance of the new discovery

Context:

- A new species of an Asian gracile skink has been discovered recently at Anaikatti hills, Coimbatore.

Details:

- The new species has been named *Subdoluseps nilgiriensis*.
 - * Based on genetic studies, the new species is closely related to *Subdoluseps pruthi* found in parts of the Eastern Ghats.
- This species is only the third skink species discovered from mainland India in the last millennium.
- The reptile has a slender body of just about 7 cm and is sandy brown in colour. The inconspicuous limbs of skinks make them resemble snakes.

- Most skinks are diurnal and are non-venomous.
- Skinks are known to feed on insects such as termites, crickets and small spiders.

Threats:

- Subdoluseps nilgiriensis is currently classified as a vulnerable species.
- The main threats faced by the shinks include the following:
 - * Seasonal forest fires
 - * Brick kiln industries and their associated activities in the area
 - * Rapid urbanization which has led to high level of housing and road construction in the area, has also threatened the shinks's relatively small geographical range.
 - * Given their resemblance with snakes often leads to confusion resulting in humans killing them.

Significance of the new discovery:

- The discovery of the new species in the dry deciduous area, shows that even the dry zones of India are home to unrealized skink diversity. This challenges the notion that high biodiversity can be found only in the wet and evergreen forests and calls attention for the conservation of such areas.
- The new discovery also questions the current conservation policy wherein studies are carried out only in the protected areas and focus only on megafauna such as tigers and elephants. There is the need to study the little-known animal groups which are fundamental and indispensable components of the world's biodiversity.
- This discovery also highlights the neglected reptile diversity of India.

Species in News - Fauna

9. Xylophis deepaki

- » Prelims: Xylophis deepaki; Agasthyamalai hills
- A new snake species has been discovered. It has been reported to be an endemic species of Tamil Nadu and has been sighted in a few locations in the southern part of the Western Ghats.
- Named Xylophis deepaki, it is a tiny snake of just 20 cm length with iridescent scales.
- The species is named in honour of Indian herpetologist Deepak Veerappan for his contribution in erecting a new subfamily Xylophiinae to accommodate wood snakes.
 - * Wood snakes are harmless, sub-fossorial and often found while digging soil in farms and under the logs in the Western Ghat forests. They feed on earthworms and possibly other invertebrates. Interestingly, their close relatives are found in northeast

India and Southeast Asia and are known to be arboreal.

- This new species is found in the drier regions and in lower altitudes around Agasthyamalai hills. The other Xylophis were reported from cold higher altitudes, of 1,700 m and above, in the Nilgiris and the Anaimalai.
- The new find increases the total number of currently recognized wood snakes to five species.

Species in News - Fauna

10. One-horned rhino

- » Prelims: Great Indian rhinoceros- Threat and conservation status
- The Indian rhinoceros (Rhinoceros unicornis), also called the Indian rhino, greater one-horned rhinoceros or great Indian rhinoceros is a rhinoceros species native to the Indian subcontinent.
- IUCN Red List – Vulnerable
- Indian rhinos once ranged throughout the entire stretch of the Indo-Gangetic Plain, but excessive hunting and agricultural development reduced its range drastically to 11 sites in northern India and southern Nepal.
- Today, approximately 75% of the entire population of Greater One-horned Rhinoceros now occurs in India in three states viz, Assam, Uttar Pradesh and West Bengal.
- The Census of Rhinoceros is undertaken at the State-level by the respective State Governments periodically.

Miscellaneous

11. Globally Important Agricultural Heritage System (GIAHS)

- » Prelims: Globally Important Agricultural Heritage System (GIAHS) sites in India
- » Mains: significance of Globally Important Agricultural Heritage System (GIAHS) status
- The Koraput traditional agriculture was accorded the Globally Important Agricultural Heritage System (GIAHS) status in 2012.
 - * Globally Important Agricultural Heritage Systems (GIAHS) are outstanding landscapes of aesthetic beauty that combine agricultural biodiversity, resilient ecosystems and a valuable cultural heritage. Located in specific sites around the world, they sustainably provide multiple goods and services, food and livelihood security for millions of small-scale farmers.

- * GIAHS status helps to promote public understanding, awareness about sustainable agriculture and to safeguard the social, cultural, economic and environmental goods and services that provide to family farmers, smallholders, indigenous peoples and local communities.
- Globally Important Agricultural Heritage Systems (GIAHS) was started by the Food and Agricultural Organisation (FAO), an agency of the United Nations.
- The other recognised GIAHS sites in India include the following:
 - * Kuttanad Below Sea Level Farming System of Kerala.
 - * Pampore Saffron Heritage of Kashmir.

HEALTH ISSUES

Diseases in News - COVID19

1. Probing the origins of the SARS-CoV-2 virus

- » Mains: Significance of determining the origin of the SARS-CoV-2 virus

Context:

- Calls to investigate into the origin of the COVID-19 pandemic have resurfaced.

Details:

- The novel coronavirus was first reported from Wuhan.
 - * The Chinese city hosts a laboratory conducting virus research.
- The Program for Monitoring Emerging Diseases (ProMED) notified pneumonia of unknown cause in the city in December 2019.
 - * The city's Huanan wet market was associated with many of the earliest cases.

What is the need for investigation into the origin?

- According to a group of scientists, this is necessary because the two theories on the origins remain invalid. They are:
 - * The virus could have been accidentally released from a laboratory.
 - * It was the result of a spillover from some animal species to humans.

What have U.S. intelligence agencies been asked to do?

- Subsequent to the call issued by scientists, U.S. President Joe Biden, ordered an investigation by intelligence agencies into the origins of the virus.
- The Director-General of the World Health Organization (WHO) has also acknowledged that more work needs to be done on the lab leak theory.
 - * Earlier, a WHO team that visited Wuhan thought a leak to be the least likely hypothesis.

Why has the demand for a fresh inquiry arisen?

- Understanding the origin of the virus is important to both increase safety in laboratories undertaking biological research, and to prevent pandemics of animal origin.

What is the basis for the natural origin hypothesis?

- The natural origin hypothesis is explained in a Joint WHO-China study report.

- It identifies a SARS-related coronavirus in a (horseshoe) bat (SARSr-CoV; RaTG13).
 - * SARS-CoV-2 virus has 96.2% genomic similarity to this.
- The novel coronavirus is less similar to the genome of viruses that have caused other epidemics such as SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome).
- The higher infectivity of SARS-CoV-2 is attributed to the unique insertion of four amino acids in its spike protein that makes it more efficient.
- Their arguments are based on genetic differences between the viruses:
 - * While the RaTG13 in bats is similar to SARS-CoV-2, the receptor binding domain (RBD) of the spike (the RBD protein binds to the ACE2 receptor) is divergent for the two.
 - » RaTG13's RBD appears less efficient.
 - * It is on the basis of this natural origin hypothesis, it was concluded that natural selection on a human or human-like host appeared to facilitate optimal binding of the spike protein of the novel coronavirus with ACE2 receptors. This ruled out the lab-leak hypothesis.
 - * It is also believed that a virus was acquired by humans, and it became more efficient as it spread among humans during a certain phase that remains undetected.

Diseases in News - COVID19

2. Serosurvey learnings

- » Prelims: Serological surveys; Herd immunity
- » Mains: Significance of sero surveys; limitations

Context:

- Since the pandemic began in 2020, the Indian Council of Medical Research (ICMR) conducted three countrywide serosurveys to measure the spread of infection due to the SARS-CoV-2 virus.
- The third survey showed that 21.5% of the population had been exposed to the virus.
- ICMR is unlikely to immediately undertake a fourth national serology survey.

Serological surveys:

- Serological surveys are usually used to quantify the proportion of people or animals in a

population positive for a specific pathogen.

- Antibodies are measured from the blood samples from participants to check past exposure to the virus.
- The prominent objective behind such surveys is to check for levels of 'herd immunity', or if 60%-70% of the population have encountered the infection.
 - * This level of exposure is believed to be effective in protecting the rest of those uninfected.

Can serology surveys reveal more than just exposure?

- The second serology survey did point to an increase in infections in rural India and hence a risk of infection — as the second wave underlined.
- The specific blood-analysis tests, called assays, can be used to check if antibodies produced by the body are targeting the spike region of the coronavirus or an inner envelope containing its genetic material called the nucleocapsid.
 - * The antibodies against the spike are believed to be more relevant to preventing future infections and hence a better proxy for immunity.
- This can also provide inputs for improving vaccines.

Why is the ICMR not likely to conduct a fourth serology survey?

- Serosurveys lose their scientific relevance when vaccination starts in the population.
 - * The antibodies that are triggered after a SARS-CoV-2 virus infection are structurally indistinguishable from those after one is vaccinated.
- Besides, a serology survey is a logistically demanding exercise.
 - * Trained phlebotomists have to be available and dedicated laboratories have to earmarked to analyze the blood work.
 - * This would also require extensive inputs from the districts.
- Apart from the infections, the focus at the moment must be on vaccination.

Diseases in News- COVID19

3. Only a global effort can tame COVID-19

- » Prelims: mRNA vaccine technology
- » Mains: Limitations of vaccine nationalism; Challenges for India in ensuring universal vaccination; measures required

Background:

- India has been witnessing an unprecedented surge in COVID-19 cases in the second wave of the pandemic.
- Given the people shedding their vaccine hesitancy, there has been a surge in vaccine demand in the general populace.
- India has been reporting severe vaccine shortages in many parts of the country and the general criticism of the government's Vaccine Maitri policy has resulted in the government imposing temporary restrictions on the export of COVID-19 vaccines from India.

Limitations of vaccine nationalism:

- Although the government's move to temporarily restrict vaccine exports is much necessary to meet domestic demand, any definite move towards vaccine nationalism will be detrimental to global efforts to contain the virus.
 - * A 2020 report of the WHO on the urgent health challenges for the next decade expresses concern on the lack of access to medical products, including medicines and vaccines in the developing world.
- The pandemic needs to be checked globally in a coordinated manner. If this is not done, the virus will keep mutating and no country can remain immune to the evolving new variants.
- The increasing number of reports of new variants of the novel coronavirus underscores the fact that no individual or country is safe until everyone is safe.
- Thus there is a need for globally coordinated efforts to build herd immunity through mass vaccination.

Challenges for India in ensuring universal vaccination:

Large population to be vaccinated:

- The opening up of the vaccination process for all adults will require around 2 billion doses of vaccines.
- Inoculating this huge population will require time, resources and efforts.
- Only a little over 12% of the population has received one dose and 3.2% has received both doses in India so far.

Limited production capacities:

- The current production capacity in India is just over 70 million doses per month.
- Despite the best efforts from the government as well as the private players involved, in the best-case scenario, by June-July, the production capacity for vaccine production is expected to rise to 158 million doses per month.

- Despite the proposed domestic production of Sputnik in addition to Covishield and Covaxin, the anticipated production in the near future will not be sufficient to meet the enormous vaccine demand.

Challenges in scaling up production capacities:

- Scaling up the production of existing vaccines and producing new vaccines is not easy.
- Unavailability of raw materials, complexities in the transfer of technology, and intellectual property rights and the reluctance of the pharma companies and the parent countries act as a major barrier in scaling up the production of vaccines.

Way forward:

Scaling up production:

- India could consider the following options for scaling up the production of vaccines.
 - * The available capacity for vaccine production in India should be re-purposed for the production of COVID-19 vaccines.
 - » As per the data available from the National Health Profile 2019, published by the Central Bureau of Health Intelligence, Ministry of Health and Family Welfare, India has an installed capacity of 8,151.7 million doses of vaccines annually, in the private and public sectors.
- The government can consider tasking the public sector vaccine manufacturers with the production of Covaxin by providing support to them.

Catering to both domestic as well as global demands:

- The need of the hour is the mass production of vaccines in order to inoculate the global population.
- India should shoulder some of the burden to ensure mass production of COVID-19 vaccines for the mass vaccination of the global population to ensure global herd immunity against the virus. Upholding its reputation as the pharmacy of the world, India needs to cater to the demand for vaccines of the global population, especially in poorer countries.

Global cooperation:

- Global cooperation is needed to create an environment where the companies interested in producing vaccines can get an open licence from the innovators. The proposed WTO waiver for TRIPS provisions could play a critical role in this direction. This will allow multiple producers to take up the production of the vaccine. The increased supply will help bring down the prices of the vaccines.

- Global cooperation is also required for the sequencing of the viral genome to track and control the multiple variants. Given the doubts being expressed by the experts about the effectiveness of some of the COVID-19 vaccines against the new variants of the virus, there is a need to develop new vaccines or tweak the existing ones to become effective against the new variants.

Devising long term strategy:

- As infectious diseases are expected to increase in the coming years, India needs to frame a long-term strategy to enhance supply at the domestic and international level.
 - * The failure to identify public sector enterprises in the pharmaceuticals sector as strategically important, under the newly released Public Sector Enterprise Policy, needs to be rectified at the earliest. Public sector enterprises in the pharmaceutical sector should be incentivized to grow and expand.
 - * Research and Development studies on infectious diseases should be promoted.
 - * India should focus on building resilient supply chains for its domestic production centres while negotiating for the right to equitable access of pharma products for developing countries in WTO negotiations.

Imbibing new vaccine technology:

- Recent studies point out the benefits of mRNA vaccine technology compared to conventional vaccine technologies.
 - * Easy scalability in production
 - * The available mRNA COVID-19 vaccines have proven to be more effective than other vaccines
- India too needs to imbibe this new technology of vaccine production going forward.

Diseases in News - COVID19

4. Identifying mutants

- » Prelims: INSACOG
- » Mains: Significance of genome sequencing

Indian SARS-CoV-2 Genomic Consortia:

- The Indian SARS-CoV-2 Genomic Consortia (INSACOG) is an advisory group to the Central government.
- It is a national multi agency consortium of ten laboratories of Department of Biotechnology, CSIR, ICMR and Ministry of Health & Family Welfare.

- It has helped undertake the whole genome sequencing of SARS-CoV-2 virus across the nation in a more co-ordinated way. Thus it keeps a tab on the variants found in India. This continuous genomic surveillance and epidemiological surveillance will help the INSACOG flag potential virus variants of concern.

- * As per the Department of Biotechnology (DBT) around 20,000 samples have been sequenced till now and about 3,900 variants have been identified.
- * This included foreign variants like the B.1.1.7 (first identified in the United Kingdom), the B.1.351 (first found in South Africa) and a small number of P2 variants (from Brazil).
- * The B.1.617 variant also known as the 'double mutant' variant has also been flagged by it. In March, it was linked to a spurt in cases in Maharashtra.

Significance of genome sequencing:

- The genome sequencing and correlating them with disease intensity helps flag variants of concern. Timely measures to limit the spread of variants of concern help limit the spread of the pandemic.
- Genome sequencing helps understand the role of certain mutations in increasing the virus's infectivity and this will help in the refabrication of existing vaccines if need be.
 - * Some mutations have also been linked to immune escape, or the virus's ability to evade antibodies, which could have a huge impact on the efficacy of existing vaccines.

Challenges for INSACOG:

- INSACOG has not been able to achieve its target of sequencing at least 5% of the samples in India. It has been only around 1%. The shortage of funds and materials to scale up the process has been the major challenge to test more samples.
- The sharing of datasets, even within constituent groups of the INSACOG has been less than ideal. This robs the initiative of the potential benefits that a more co-ordinated approach would bring, like more accurate and informed warnings and also a more responsive structure.
- The INSACOG is only an advisory group to the Central government and its advice has not been given due weightage. Warnings about emerging variants were not made public with sufficient urgency.

Diseases in News - COVID19

5. SUTRA's approach to modelling pandemic

- » Mains: Significance of modeling to predict waves of the pandemic; limitations

What's in News?

- With close to 4,00,000 cases being added every day, questions are being raised on whether SUTRA – a government-backed model, to forecast the rise and ebb of the COVID-19 pandemic, may have had a role in creating the perception that a catastrophic second wave of the pandemic was unlikely in India.
 - * SUTRA stands for Susceptible, Undetected, Tested (positive), and Removed Approach.
 - * The Covid 'supermodel' was commissioned by the Government of India.

Issues:

- Unlike many epidemiological models that extrapolated cases based on the existing number of cases, the behaviour of the virus and manner of spread, the SUTRA model chose a data-centric approach.
- Too many parameters, a constant that was inaccurate and calibration errors may have led to predictions that did not signal the catastrophic second wave.
- A rapid acceleration of cases couldn't be predicted in advance.

Diseases in News - COVID19

6. Use of CT scans and steroids for COVID-19

- » Prelims: CT Scans and steroids
- » Mains: Concerns with over use of steroids and CT scans

Context:

- Unwarranted use of CT scans and steroids in the treatment of COVID-19.

Background:

Usefulness of CT scans for COVID-19 patients:

- CT scans can help in diagnosis and prognosis of COVID-19 disease.
 - * It can help in detecting COVID-19 in patients with a negative RT-PCR test but COVID like symptoms.
 - * It can help gauge the severity of the infection and plan treatment accordingly.
- A chest CT can be useful in evaluating patients with moderate or severe disease, to identify complications like thromboembolism or pneumomediastinum.
 - * Thromboembolism is the formation of a clot (thrombus) in the blood vessels that breaks loose and is carried by the blood stream to plug another vessel.

- * Pneumomediastinum is the abnormal presence of air or another gas in the mediastinum. The mediastinum is the center of the chest and is located between the lungs.

- CT appearance might give a clue towards a diagnosis of dangerous COVID-19-associated fungal super-infections like aspergillosis or mucormycosis.

Use of steroids for COVID-19 patients:

- In many patients, death occurs following a hyper-immune response (cytokine storm) to the SARS-CoV-2 virus, which damages the lungs and other organs, leading to multi-organ dysfunction syndrome.
- Corticosteroids like dexamethasone (anti-inflammatory drug) work by calming down the immune system and preventing the progression of organ damage.
- Steroids can prevent the immune system from unleashing the cytokine storm. It is primarily used for patients with moderate and severe infection.
- International agencies like the WHO have recommended the use of corticosteroids like dexamethasone for the treatment of COVID-19, following the UK's RECOVERY Trial, which found mortality benefit for patients who received steroids.

Concerns:

Use of CT scans:

- Doctors have cautioned against the use of CT scans indiscriminately to diagnose the disease, especially in the early stages or in patients with mild symptoms.
- CT scans exposes individuals to unnecessary radiation, which could be harmful in the long run. A single CT scan is equal to 300 X-rays, which may increase the risk of cancer later in life for young people.

Use of steroids:

- Doctors and the World Health Organization (WHO) are cautioning against the use of corticosteroids for patients who have non-severe COVID-19. Steroids can turn out to be harmful if the dosage, timing or duration of the drug goes wrong.
 - * Use of steroids too early in the illness when viral replication is happening might interfere with the immune system's natural ability to fight back.
 - * There have been reports of many mild COVID-19 cases where steroids had stimulated viral replication, causing oxygen levels to drop.

- * There is potential harm associated with the long-term use of steroids in a serious COVID-19 patient. This includes a rise in blood glucose levels, which will need to be carefully managed with insulin to prevent secondary bacterial or fungal infections.

Conclusion:

- Although CT does offer some insights into the level of infection and other associated threats, its routine use is not recommended. When indicated, a chest CT should be performed with a low-dose, single-phase protocol using fast scanning techniques to minimise motion artifacts (patient movement leading to subtle errors).
- Steroids are not mandated for all patients and certainly not for mild patients in the early stages of the illness. There has to be clear cut guidelines for determining the timing, dosage and duration of steroids usage for patients with moderate and severe symptoms.

Diseases in News - COVID19

7. Silent hypoxia

» Prelims: Silent hypoxia

Context:

- As medical practitioners around the world are busy treating people for Covid-19, many have reported a condition called 'silent' or 'happy' hypoxia, in which patients have extremely low blood oxygen levels, yet do not show signs of breathlessness

What is hypoxia?

- Hypoxia is a condition wherein there is not enough oxygen available to the blood and body tissues. Hypoxia can either be generalized, affecting the whole body, or local, affecting a region of the body.
- Normal arterial oxygen is approximately 75 to 100 millimetres of mercury (mm Hg), and normal pulse oximeter readings usually range from 95 to 100 per cent. Values under 90 per cent are considered low.
- When levels fall below 90 per cent, patients could begin experiencing lethargy, confusion, or mental disruptions because of insufficient quantities of oxygen reaching the brain. Levels below 80 per cent can result in damage to vital organs.

What is silent hypoxia?

- In 'silent' or 'happy' hypoxia, patients appear to be less in distress. Many Covid-19 patients, despite having oxygen levels below 80 per cent, look fairly at ease and alert.

Diseases in News - COVID19

8. Anti-COVID-19 drug developed by DRDO gets emergency use nod

- » Prelims: 2-DG drug
- » Mains: Significance of the new drug

Context:

- Drugs Controller General of India (DCGI) has granted permission for emergency use of an anti-COVID-19 therapeutic application of the 2-deoxy-D-glucose (2-DG)

Details:

- The order allows for emergency use of the drug as adjunct therapy in moderate to severe COVID-19 patients.
- The drug comes in powder form in sachets and is taken orally by dissolving it in water.
- It selectively accumulates in virally infected cells and prevents their growth by stopping viral synthesis and energy production.
- The drug has been developed by the Institute of Nuclear Medicine and Allied Sciences (INMAS) in collaboration with Dr. Reddy's Laboratories, Hyderabad.

* INMAS is a lab of the Defence Research and Development Organisation (DRDO).

Significance:

- Clinical trial results have shown that this drug helps in faster recovery of hospitalised patients and reduces supplemental oxygen dependence. This will help ease the acute bed shortage and also help reduce medical oxygen demand to a great extent.
- The drug being a generic molecule and analogue of glucose, it can be easily produced and made available in plenty in the country.

Diseases in News - COVID19

9. Ayush-64

- » Prelims: Ayush-64 drug

Context:

- Clinical trials conducted by the Central Council for Research in Ayurvedic Sciences (CCRAS) has shown that the polyherbal drug Ayush-64 has notable antiviral, immune-modulator and antipyretic properties.

What's in the News?

- The clinical trials were conducted by CCRAS in collaboration with the Council of Scientific and Industrial Research (CSIR) and many other research organizations and medical colleges across the country.

- The trials have shown that Ayush-64 is found to be useful in the treatment of asymptomatic, mild and moderate COVID-19 infection.
- Consequently, the drug is now repurposed for COVID-19.

What is Ayush-64?

- Ayush-64 is an Ayurvedic formulation developed by CCRAS.
- Originally developed in 1980 for the management of Malaria, this drug has now been repurposed for Covid-19 as its ingredients showed notable antiviral, immune-modulator and antipyretic properties.
- The in-silico study done on Ayush 64 showed that 35 out of 36 of its Phyto-constituents have high binding affinity against the COVID-19 virus.
- The formulation has also shown very promising results in Influenza like illnesses.
- With scientific evidence generated from six clinical studies across India, Ayush 64 has been identified as a potential adjunct to standard care in the management of asymptomatic, mild and moderate COVID-19 to improve the clinical recovery and quality of life.
- Ayush-64 is found to significantly enhance the speed of clinical recovery in terms of disease symptoms and severity. It also has significant beneficial effects on general health, fatigue, anxiety, stress, appetite, general wellbeing and sleep.
- The formulation can be taken by patients at any stage of the COVID-19 disease. However, its efficacy was scientifically studied in asymptomatic, mild and moderate disease without risk factors for poor outcome and those not requiring emergency interventions or hospitalization are eligible to take Ayush-64.

About Central Council for Research in Ayurvedic Sciences (CCRAS):

- It is an autonomous body of the Ministry of AYUSH.
- It is an apex body in India for the formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine.
- The activities are carried out through its 30 Institutes/Centres/Units located all over India and also through collaborative studies with various Universities, Hospitals and Institutes.
- The research activities of the Council include Medicinal Plant Research (Medico-Ethno Botanical Survey, Pharmacognosy and Tissue Culture), Drug Standardization, Pharmacological Research, Clinical Research, Literary Research & Documentation and Tribal Health Care Research Programme

- It is headquartered in New Delhi.

Diseases in News - COVID19

10. Kabasura Kudineer

- » Prelims: Kabasura kudineer; siddha medicine

Context:

- Ayush Ministry launches nationwide distribution campaign of Kabasura Kudineer.

What is Kabasura Kudineer?

- Kabasura Kudineer is a traditional formulation used by Siddha practitioners for managing common respiratory health.
- It is a herbal concoction, comprising dry ingredients of ginger, pippali, clove, cirukancori root, mulli root, kadukkai, ajwain and many other herbs.
- The ingredients are powdered and mixed with water, then boiled to make a decoction of one-fourth of its initial volume.

Diseases in News - COVID19

11. Planning for future waves of the pandemic

- » Prelims: One health approach
- » Mains: Measures necessary to mitigate the impact of future waves in India.

Context:

- The second wave of the COVID-19 pandemic in India and the probability of more such waves in the coming times.
 - * The COVID-19 trajectory in other countries shows the possibility of multiple waves of the pandemic. Japan is experiencing the fourth wave.

Details:

- The article discusses some of the measures that could be necessary to mitigate the impact of future waves in India.

Surveillance:

- There is a lack of clear data relating to the pandemic. There has been some degree of unreliable testing and under-reporting and manipulation of data relating to cases and deaths. This will impair the modellers and result in faulty projections.
- Identifying impending waves is very important in mitigating the impact of the pandemic given that it serves as an early warning for the governments, which could then take appropriate measures such as localized lockdowns and other mitigative measures.

- A strong surveillance system reporting will provide reliable early markers of an impending wave. The detection of an outbreak in the initial stages can help contain it before the pandemic spreads to other areas.
- The Central and State government should use real-time data by encouraging reliable reporting.
- Also, concurrent genomic sequencing in real-time in the fixed proportion of samples will help identify any new variants causing several outbreaks. In case of such a scenario, the administration could impose local lockdowns in high-burden areas to stop the wide spread of the variant.

Vaccination:

- Vaccination continues to remain the major intervention that could help in the fight against the pandemic. The administration should take all measures to ensure vaccine production at pace and scale to vaccinate the entire population at the earliest.
- The Central government should proactively reach out to all the vaccine manufacturing firms in the west and invite them to collaborate with Indian firms under the 'Make in India' programme. This will not only increase its domestic production but also help India emerge as the world's biggest exporter of vaccines and furthermore provide an impetus to the soft power image of India in the global community.
- With newer variants of concern emerging, it is also important to update the vaccines depending on how the virus changes.

Public health infrastructure and workforce:

- The pandemic has brought to light the importance of timely and efficient public health responses. The lack of sufficient public health infrastructure to cater to the population and the depleted public health workforce has weakened India's fight against the pandemic. The front-line public health workforce is particularly absent in urban areas, while critical care capacity (oxygenated beds, ICUs) is limited in rural areas.
- The need for robust public health infrastructure and a trained public health workforce is a bare minimum necessity in this regard.
- The administration needs to reconfigure the health systems to ensure that adequate public health workers and public health infrastructure are available as per global norms.
- The administration will have to hire front-line workers in public health who can engage in surveillance and contact-tracing, and mobilise people for primary healthcare services, including vaccination.

Robust pandemic preparedness plan:

- India has to have a system that can respond to newer pandemics in the making. Rather than building reactive systems for each wave and each pandemic, India should develop robust pandemic preparedness plans. Such a proactive approach will help reduce the impact of such an outbreak.

One Health approach:

- India needs to adopt the 'One Health' agenda and ensure that environmental health and animal health are given similar priority as human health.
 - * Nearly 60% of known infectious diseases and up to 75% of new or emerging infectious diseases are zoonotic in origin.
- Hence, preserving the ecosystem in its natural form is important in order to prevent future pandemics.

Diseases in News - Mucormycosis

12. Mucormycosis

- » Prelims: Mucormycosis- Causative factors, effect and treatment
- » Mains: Reasons for sudden spike in cases; concerns and recommendations

Context:

- In light of the increasing number of cases of mucormycosis being reported from across India, the Union government has asked the States to declare mucormycosis an epidemic and has placed mucormycosis under the category of 'Notifiable' under Epidemic Diseases Act 1897.
 - * For diseases termed as notifiable, the states are required to report the suspected and confirmed cases of Black Fungus to the Integrated Disease Surveillance Programme (IDSP).
- Rajasthan, Tamil Nadu and Telangana have declared mucormycosis as an epidemic.
 - * The epidemic is a term that is often broadly used to describe a problem that has grown out of control. It occurs when a disease spreads rapidly to several people within a country or location. These diseases could be viral, bacterial or other health events such as obesity.

Mucormycosis:

- Mucormycosis is an aggressive and invasive fungal infection caused by a group of molds called mucormycetes.
- It is also known by the name 'black fungus'.

Causative factors:

- According to a study, Diabetes mellitus is the most common underlying cause, followed by haematological malignancies (hematologic malignancies are cancers that affect the blood, bone marrow, and lymph nodes) and solid-organ transplants for mucormycosis.
 - * Diabetes mellitus was reported in 54% to 76% of cases, according to a report.

Vulnerable population:

- Mycoses are all opportunistic infections, which means they attack an individual who has a weakened immune system.
- Even though mucormycosis is a rare disease, certain groups are more vulnerable to it. Mucormycosis largely affects people who have health problems or use medicines that depress the body's ability to combat germs and illness.
- People having co-morbidities like uncontrolled diabetes mellitus, undergoing treatment for cancers, taking variconazole therapy, chemotherapy or immunotherapy by steroids, undergone solid organ or stem-cell transplantations or having been exposed to prolonged ICU stay can get predisposed to this fungal infection.

Effect:

- It most commonly affects the sinuses or the lungs after inhaling fungal spores from the air. It can also happen on the skin after a burn, cut or other type of skin wound through which the fungus enters the skin. It can also affect the brain.
- It can affect various organs but is currently manifesting as an invasive rhino-orbito-cerebral disease, affecting the ear, nose, throat, and mouth and at times the brain, leading to blindness, stroke or death. It can cause a lot of damage internally and can be fatal if not detected early.
 - * The Centers for Disease Control and Prevention, U.S., calls it a serious but rare disease.
- Based on the region affected by the fungal infection, mucormycosis is classified under the following five types- Rhinocerebral (sinus and brain), Pulmonary (lung), Gastrointestinal, Cutaneous (Skin) and disseminated.

Treatment:

- The main line of treatment is an anti-fungal drug called amphotericin B, which is given over an extended period of time (4-6 weeks) under the strict observation of a physician.
- Other drugs used for the treatment of mucormycosis include posaconazole and isavuconazole.
- Surgery to remove the fungus growth might also be warranted.

- For recovered coronavirus patients, it is important to monitor blood glucose level and control hyperglycemia.

Reasons for sudden spike in cases:

- Mucormycosis has been affecting patients who have recently recovered from COVID-19. The sudden increase in the mucormycosis cases can be attributable to the following reasons:

Indiscriminate usage of steroids:

- Mucormycosis has been reported mostly amongst COVID-19 patients, especially those on steroid therapy and deranged sugar control. 90%-95% of patients suffering from mucormycosis are mostly diabetics who were on steroids.
 - * In many patients, death occurs following a hyper-immune response (cytokine storm) to the SARS-CoV-2 virus, which damages the lungs and other organs, leading to multi-organ dysfunction syndrome.
 - * Steroids can prevent the immune system from unleashing the cytokine storm. It is primarily used for patients with moderate and severe infection.
 - * Corticosteroids like dexamethasone (anti-inflammatory drug) work by calming down the immune system and preventing the progression of organ damage.
- The indiscriminate use of a high dose of steroids in COVID-19 patients, sometimes even in minimally symptomatic patients is a major reason. The excessive or premature use of steroids without medical supervision has proven to be harmful. Besides causing reduced immunity levels, this leads to spikes in the sugar level among diabetics, which, in turn, renders them vulnerable to mucormycosis.
 - * Steroids can turn out to be harmful if the dosage, timing or duration of the drug goes wrong.
 - * Use of steroids too early in the illness when viral replication is happening might interfere with the immune system's natural ability to fight back.
 - * There is potential harm associated with the long-term use of steroids in a serious COVID-19 patient. This includes a rise in blood glucose levels, which will need to be carefully managed with insulin to prevent secondary bacterial or fungal infections.

COVID-19 complications:

- A lab study published in Nature Metabolism notes that SARS-CoV-2 can potentially multiply in pancreatic cells and contribute to increased blood sugar levels in COVID-19 patients. This can make the concerned patient vulnerable to the fungal infection.

Over-use of antibodies:

- The use of monoclonal agents like Tocilizumab may be a factor, too. Monoclonal antibodies are man-made proteins that act like human antibodies in the immune system. The overuse of such antibodies reduces the inherent immunity of the body in the long run making it vulnerable to future infections.

Hospitalization linked infections:

- Though the disease is not contagious, the use of nasal prongs and other devices for oxygen delivery and possible breach of sterile conditions can possibly lead to cross-infection and hospital-acquired infection.
 - * Mucormycosis cannot spread between people.

Concerns:

High prevalence:

- The estimated burden of mucormycosis in India is 14 per 100,000 in a study published in Current Fungal Infection Reports. This is almost 70 times higher than what is reported in other countries.
- The magnitude of cases being reported, and the inability of treating physicians to create individualised treatment protocols has increased the risk posed by this fungal infection.

High vulnerability:

- Raised blood sugars being a cause is of particular concern. According to a study in The Lancet, the number of people with diabetes increased to 65 million in 2016 in India. Further, there is an underlying higher genetic susceptibility to diabetes in Indians.

High morbidity:

- Mucormycosis is associated with very high morbidity and mortality.
- Surgery for mucormycosis can be debilitating requiring major resections.

Challenges in treatment:

- The treatment for mucormycosis requires a multi-disciplinary team approach. A multi-disciplinary approach is simply not feasible on a large scale, especially in areas with limited medical access.
- Additionally, there are limited antifungal drugs available for mucormycosis. The liposomal amphotericin B medicine is very costly. Amphotericin B deoxycholate (conventional) is cheaper, but is associated with an unfavourable toxicity profile.
- Treatment for mucormycosis will require prolonged hospital admissions. This could further strain the already limited availability of beds in hospitals.

Recommendations:

Preventive measures:

- Following appropriate treatment protocols as recommended by the World Health Organization for COVID-19, including rational use of steroids and monoclonal antibodies only when they can help a patient, is important.
 - * Steroids are not mandated for all patients and certainly not for mild patients in the early stages of the illness.
 - * There has to be clear cut guidelines for determining the timing, dosage and duration of steroids usage for patients with moderate and severe symptoms.
- In case of usage of steroids, constant monitoring of sugar levels and resorting to insulin use to control these levels if required, is essential.

Management measures:

- Recognising the symptoms and seeking treatment early would be the key intervention. Like most illnesses, if detected early, mucormycosis can be cured.
 - * Among other symptoms, they should look out for facial swelling on one side, protrusion of the eyeball, new-onset visual disturbances, headache and vomiting, new onset swelling or ulcers with blackish discolouration, and prolonged fever.
- Monitoring is very essential in this direction. Health authorities may consider arranging for blood glucose monitoring for patients on steroids, and also promoting awareness campaigns on the importance of controlled blood sugar levels.
- Treatment protocols need to differ from patient to patient due to the complexities in clinical presentation and an individual's tolerance to treatment. Treatment guidelines and protocols need to be adapted and modified rapidly to arrest this growing epidemic.
- The administration should invest time and resources for ensuring widespread training of health-care personnel including Accredited Social Health Activists (ASHAs) and nursing professionals to raise awareness on mucormycosis while educating people locally.

Additional information:

Yellow fungus:

- What makes Yellow Fungus different from its black counterpart is that it starts to show internal symptoms before the onset of physical symptoms. This makes yellow fungus fatal as it starts internally and it is not easy to note its symptoms.

- Dirty surroundings, food contamination, unsanitary medical equipment /tools are the root cause of this infection.
- The symptoms first start internally, causing pus leakage, organ failure in some cases.
- The similarity that Yellow fungus shares with the Black fungus is that steroids and antibacterial medications are leading to yellow fungus cases.

White fungus:

- The white fungus is considered to be a common infection, curable by commonly available medicines. It is common in rural areas as it is carried by dust, hay or other such particles. Known as Aspergillus Flavus infection in medical parlance, it is not a new disease, nor is it as fatal as mucormycosis.
- White fungus like the black and yellow variants affect those who have diabetes or cancer and if they are using steroids as well. What sets it apart from other infections is that it affects the nail bed, skin, stomach, kidney, brain and reproductive organs

SOCIAL ISSUES

Social issues - Related to Women

1. It is getting from bad to worse for women workers

- » Prelims: WEF Global Gender Gap Report; India's ranking and performance under the different pillars of the index
- » Mains: Disproportionate impact of the pandemic on women workers and measures needed to address them

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:

Gender inequality in India:

- India has slipped from 112 to 140 amongst 156 countries in the 2021 WEF Global Gender Gap Report. Of the four pillars of the index, India suffered mainly in economic participation.
- Gender inequality subsists in the Indian economy as in other sectors like health, education and politics.
 - * The labour participation of women is 22 per cent in India, one of the lowest in the world (comparable countries have 50 per cent).
 - * The wage gap between men and women across the Indian economy is a marked feature in India.
 - * Despite the fact that the number of women has increased in jobs, still, they lag behind in the total percentage of jobs. The gender employment gap is substantial given that only 18% of working-age women are employed as compared to 75% of men (Pre-pandemic statistics).
 - » Reasons include a lack of good jobs, restrictive social norms, and the burden of household work.

Economic impact of the pandemic:

- The COVID-19 pandemic has brought about a massive disruption of the labour market in India, rendering millions unemployed and has led to a sudden and large increase in poverty.

Details:

- The pandemic seems to have worsened the situation of gender inequality in India.
- The pandemic has affected more women than men. Women workers, in particular, have borne a disproportionate burden of the pandemic and the associated lockdowns.

A widening economic gap:

- Data from the Centre for Monitoring Indian Economy Pvt. Ltd. show that 61% of male workers were unaffected during the lockdown while only 19% of women experienced this kind of work security.
- Women have lost more jobs irrespective of the industry in which they were employed.
- Unlike men who had the option of moving into fallback employment arrangements like self-employment and daily wage work, women seemed to have far fewer options.
- 47% of employed women who had lost jobs during the lockdown, had not returned to work, while the number stood at only 7% for men.
- Nearly half of the women workers, irrespective of whether they were salaried, casual, or self-employed, withdrew from the workforce, as compared to only 11% of men.
- Even as new entrants to the workforce, women workers had poorer options compared to men. Women were more likely to enter as daily wage workers while men found avenues for self-employment. This leads to more precarious work and lower earnings as compared to men.

Growing domestic work:

- With the lockdowns in place and almost everyone limited to the confines of their homes, household responsibilities have increased for women. There has been a massive increase in the burden of household work for women.
 - * The India Working Survey 2020 found that among employed men, the number of hours spent on paid work remained more or less unchanged after the pandemic. But for women, the number of hours spent in domestic work has increased manifold. This increase in household work came without any accompanying relief in the hours spent on paid work.
- This could lead to a situation where married women and women from larger households are less likely to return to work, suggesting that the burden of care may be a reason for poor employment recovery.

Recommendations:

Short term measures:

- Expansion of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- Introduction of an urban employment guarantee targeted at women.

- There should be coordinated efforts by states to facilitate the employment of women while also addressing immediate needs through the setting up of community kitchens, prioritising the opening of schools and anganwadi centres.
- The governments should consider a COVID-19 hardship allowance of at least Rs. 5,000 per month for six months for 2.5 million accredited social health activists and Anganwadi workers, most of whom are women.

Long term measures:

- The National Employment Policy, currently in the works, should systematically address the constraints around the participation of women's workforce, both with respect to the availability of work and household responsibilities.
- The government should come up with policies for sectors where women participation can be significant, both in current (healthcare, IT, education, agriculture) and emerging (artificial intelligence, blockchain) areas.
- The government should focus on increasing public investment in social infrastructure like health, education, child and elderly care. This can help bring women into the workforce not only by directly creating employment for them but also by alleviating some of their domestic work burdens.
- Given the close link between educational attainment and economic participation and the big drop in enrolment of girls in primary (93 per cent), secondary (62 per cent) and tertiary (29 per cent) education, relevant interventions like Skill India should develop programmes for girls/women and address the systemic issues.
- There is the need to embrace policies for inclusion that help women progress in career, with upskilling and "return-to-career" schemes, flexi-work, special leave, wage parity, hybrid working models, and so on. A concerted effort across key sectors with a cultural focus on gender sensitivity instead of gender neutrality can help.

Conclusion:

- In the pandemic, women have borne a disproportionate burden of the severe disruptions to life and the economy.
- The govt and businesses must join hands to empower women economically. This apart from the obvious social benefit of gender equality will also give a big boost to the GDP of the nation.
 - * The global GDP could rise by as much as \$28 trillion by 2025 if, for instance, women play an equal role to men in labour markets. If small, medium and large businesses — both domestic and MNCs — join hands with the government to close the gender gap in economic empowerment, India could add at least a trillion annually to its GDP by 2029.

- * Companies with more women representation have achieved 22 per cent higher productivity, 40 per cent better customer retention and 27 per cent more profitability.

Social Issues - Related to children

2. 'Child marriages may go unnoticed amid lockdown'

- » Mains: Factors leading to increase in child marriage during the pandemic; recommendations

Context

- With the ongoing lockdown in the state of Karnataka and the weddings being restricted to houses because of tough guidelines, there are fears of child marriages going unnoticed.

Background:

- The 2020 lockdown witnessed a slew of child marriages being reported in Karnataka.
- A total of 2,180 child marriage cases were reported in Karnataka as per reports of Childline (1098) from April 2020 to January 2021.
 - * The other complaints ranged from illegal adoptions, child trafficking and child labour to the need for medical help or shelter.
- The number of complaints eased when lockdown restrictions were relaxed but were still worrying.

Details:

- The Karnataka State Commission for the Protection of Child Rights (KSCPCR) expects the number of child marriages to go up, given that another lockdown is in place and marriages are being allowed in homes.
- Earlier, when child marriages happened at wedding halls, temples, etc., there were people who would alert the relevant authorities or activists who would be able to reach on time to stop the marriage. But now, with marriages happening at homes, the authorities would be getting fewer alerts.

Factors at play:

- The increasing number of child marriages could be attributed to the factors ranging from insecurity for the girl, wherein the parents assume their responsibility is over with her marriage, to the fact that they could get away with a simple marriage without calling too many people, resulting in less expenditure. The increased financial strain on the poor has also contributed to some families resorting to child marriage.

Recommendations:

- There is a need to create awareness among the people on the ills of child marriage.

- People should alert Childline if they come across child marriages.
- The district authorities should constitute a committee to tackle child marriages and they should conduct regular inspections in the most vulnerable areas.

Social Issues - Related to Children

3. Expanding the scope of POCSO

- » Prelims: POCSO provisions
- » Mains: Significance of including historical cases and challenges therein

Context

- The article argues for expanding the scope of the POCSO Act to enable prosecution of historical child sexual abuse.

Details:

- While the Protection of Children from Sexual Offences Act (POCSO) has been a step in the right direction to protect children from offences of sexual assault, sexual harassment and pornography, the POCSO Act has several deficiencies which need to be addressed to make it truly effective.
- A fundamental defect of POCSO is its inability to deal with historical cases of child abuse.
 - * Historical child sexual abuse refers to incidents that are reported late.

Significance of including historical cases:

- The step to include prosecution of historical cases of child sexual abuse would be in line with the growing international jurisprudence around this issue.
- It would also help uphold the provisions of the UN Convention on the Rights of the Child.

Concerns:

Contrary to established legal principles:

- The proposal seems to run counter to the established principle of criminal law that requires an act of crime to be reported at the earliest.
- Any delay in filing the complaint dilutes the efficacy of the prosecution's case.

Counter arguments:

- The circumstances around child sexual abuse cannot and must not be viewed in the same manner as other criminal offences.

Lack of understanding at the age:

- In the case of child sexual abuse, it is difficult for the child to report the offence or offender at the earliest point in time.

- It requires time and support for the child to recognise and comprehend the gravity of what transpired to report the offence.

Impeding factors:

- Intra-familial abuse accounts for a large proportion of child abuse cases.
- The delays in reporting sexual abuse may be due to factors such as threats from the perpetrator, fear of public humiliation, and absence of trustworthy confidant for the child.
- Sometimes a child keeps the abuse a secret because of the fear that no one will believe the abuse, which leads to accommodative behaviour on the part of the child.

Challenges in implementation:

Legal provisions:

- Provisions in the Criminal Procedure Code (CrPC) prohibit judicial magistrates from taking cognisance of cases beyond a specific time period. Reporting of an offence, under Section 354 of the IPC, more than three years after the date of the incident would be barred by the CrPC. Given such provisions, the historical reporting of child sexual offences would be legally implausible.

Availability of evidence:

- One of the major drawbacks of delayed reporting would be the lack of evidence to advance prosecution. There are very few chances for gathering direct physical and medical evidence in such cases.

Recommendations:

Changes in POCSO law:

- With growing research and empirical evidence pointing to behaviour justifying delayed reporting, there is a need to amend the law to allow delayed reporting and prosecution with regard to incidents of child sexual offences.
- India must revise its legal and procedural methods to deal with historical child sexual abuse.

For cases before 2012:

- The Union Ministry of Law and Justice's clarification that no time limit shall apply for POCSO cases is a welcome step and would help strengthen the POCSO jurisprudence, however, it does not help in cases that deal with incidents before 2012.
- Hence the Union government must also frame guidelines to direct effective and purposeful prosecution in cases that are not covered by the POCSO.

Social Issues - Related to Tribal

4. Call for action to protect Odisha tribes

- » Prelims: PVTGs in India
- » Mains: Impact of the pandemic on these PVTGs and recommendations

Context:

- More than 100 tribals among 10 out of 13 Particularly Vulnerable Tribal Groups (PVTGs) in the state of Odisha have been affected by COVID-19.

Details:

- Amid the concerns over rising COVID-19 positive cases among PVTGs, activists and writers have urged the Odisha government to take immediate steps to prevent loss of lives among the PVTGs like the Dongria Kondh and Bonda due to COVID-19.

Particularly Vulnerable Tribal Groups:

- Particularly vulnerable tribal group (PVTG) (earlier: Primitive tribal group) is a government of India classification created with the purpose of enabling improvement in the conditions of certain communities with particularly low development indices.
- In 1973, the Dhebar Commission created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups.
- PVTGs have some basic characteristics – they are mostly homogenous, with a small population, relatively physically isolated, social institutes cast in a simple mould, absence of written language, relatively simple technology and a slower rate of change, etc.
- There are 75 PVTGs in India.

Challenges:

- There is a heightened sense of hesitancy among the tribal to use allopathic medicines. The tribals have been reluctant to even undergo the RT-PCR tests.
- The measures announced to contain the spread of COVID-19 like home quarantine would not work among the tribals as privacy and isolation hardly exist within the tribal culture.

Recommendations:

- Door to door surveys must be undertaken by a team of trained local volunteers for regular monitoring of symptoms, and reporting of any suspected cases.
- The government should set up quarantine centres exclusively for tribals within 2 km of their settlements.
- Health kits consisting of three layered masks, necessary medicines and vitamins must be distributed among the tribal communities.

- The government must ensure upgradation of all primary health centres located in tribal areas and also ensure adequate provisioning of manpower, medical equipment, medicines and other infrastructure in these PHCs.
- The vulnerable tribals must be provided with a special livelihood relief package as compensation for their agriculture and minor forest produce (MFP) which have come to a standstill.

Government Initiatives

5. Children under mid-day meal scheme to get aid

- » Prelims: Mid-day meal scheme
- » Mains: Significance of the scheme; challenges faced during the pandemic induced lockdowns

Context:

- The Centre has decided to give about ₹100 each to children studying in Class 1 to Class 8 in government schools, who are beneficiaries of the Mid-Day Meal scheme.

Details:

- It is aimed at safeguarding the nutritional levels of children and ensuring their immunity is protected.
- ₹1200 crore in total would be given to 11.8 crore children through direct benefit transfer as a one-time payment.

Fund Allocation:

- The Central Government will provide additional funds of about ₹1200 crore to States and Union Territories.
- The money comes from the cooking cost component of the scheme.
- The Central allocation for the Mid-Day Meal scheme in 2021-22 is ₹11,500 crore.
 - * Its largest component is cooking costs, which cover the prices of ingredients such as pulses, vegetables, cooking oil, salt, and condiments.
 - * In 2020, the minimum allocation for cooking cost per child per day was set at ₹4.97 for Classes 1 to 5, and ₹7.45 for Classes 6 to 8, with the Centre paying 60% of the cost.

Issue:

- Children are being given cash in lieu of the mid-day meal in some places and dry rations in others. However, the quantities/amounts are too low to be even adequate for one nutritious meal a day.
- Noting that ₹100 per child amounts to less than ₹4 a day, even if it was a monthly payment, Right to Food activists also say this is insufficient to provide the nutrition security that is envisaged.

- With approximately 200 school days, each child should be getting something like ₹900-₹1300 annually [as cooking cost component].
- Also, while the schools can purchase ingredients at wholesale prices, with the same amount, parents will be able to purchase much less.

Way Forward:

- In 2020, hardly any State provided free grain or transferred these cooking costs. The children must be transferred the arrears from the previous year as well.
- Enhanced take-home rations, including eggs, vegetables, fruits, dal/chana, oil must be given in order to ensure nutrition security.

Government Initiatives

6. 10 lakh corpus fund for every child orphaned by COVID-19

- » Prelims: PM CARES for children
- » Mains: Impact of the pandemic on the children

Context:

- The Union government has announced a special “PM-CARES for Children” scheme for all those orphaned due to COVID-19.

Details:

- Children who have lost both parents or the lone surviving parent or their legal guardian or adoptive parent due to COVID-19 will be supported under the scheme.

Monetary Support:

- It will include a corpus of ₹10 lakh for each child till he or she reaches the age of 18.
 - * When a child turns 18, he/she will draw a monthly stipend from the corpus of ₹10 lakh in order to meet expenses for personal needs and higher education.
 - * On reaching the age of 23, the child will get the entire ₹10 lakh.

Schooling:

- The government will also assist such children with school education.
 - * They will be given admission in the nearest Kendriya Vidyalaya or in a private school as a day scholar.
- If the child is admitted in a private school, the fees will be paid from the PM CARES Fund as per norms under the Right to Education Act, 2009.
- PM CARES will also meet the expenses on uniform, text-books and notebooks.
- Children in the age group of 11-18 will have the option to study in a residential school under the

Central government such as Sainik School and Navodaya Vidyalaya.

Health:

- All children will be enrolled as a beneficiary under the Ayushman Bharat Scheme with a health insurance cover of ₹5 lakh, where the premium amount will be paid by PM CARES till a child turns 18.

Note:

- The government has also announced measures to help the families who have lost the sole earning member due to COVID-19.
- Pension scheme of the Employees State Insurance Corporation is being extended.

Government Initiatives

7. SAMVEDNA

Context:

- Children impacted by Covid-19 Pandemic being provided Tele Counselling through SAMVEDNA.

What is SAMVEDNA?

- SAMVEDNA tele counselling service is for psychological support to children to address their stress, anxiety, fear and other issues during the coronavirus pandemic.
- The service is provided by the National Commission for Protection of Child Rights (NCPCR).
- Counselling through telephone is provided to children in three categories:
 - * Those who are in quarantine/isolation/covid care centres.
 - * Those whose parents or near ones have been tested positive for COVID.
 - * Those who have lost their parents to COVID.
- The counsellors have been trained under an eminent professor of the Department of Child and Adolescent Psychiatry and his team from NIMHANS.
- SAMVEDNA is an acronym for ‘Sensitizing Action on Mental Health Vulnerability through Emotional Development and Necessary Acceptance’.

Government Initiatives

8. ELDERLINE

Context:

- Toll Free Helpline for elderly persons ELDERLINE (14567) becomes operational in several states.

Details:

- The Ministry of Social Justice has started state-wise call centres in five major states to address the problems faced by elderly people in the wake of the covid pandemic.
- The toll free helpline for elderly persons called ELDERLINE is expected to become operational in all states by the end of May 2021.
- The states covered are Karnataka, Madhya Pradesh, Uttar Pradesh, Tamil Nadu and Rajasthan. It was already working in Telangana since one year.
- The toll free number by which the call centres can be reached is 14567.
- Tata Trusts and NSE Foundation have assisted in operationalising this facility

Government Initiatives

9. Lend a helping hand to children the right way

- » Prelims: Juvenile Justice (Care and Protection of Children) Act, 2015; Article 39 of the Constitution
- » Mains: Impact of the pandemic on the children

Context:

- The second wave of the COVID-19 pandemic has left many children orphaned and vulnerable in India.

Details:

- Before handing over an orphan child to any agency, family or person it is important to be aware of the laws that are prevalent and procedures with regard to the care and the protection of orphan children rather than face legal action for violations later.
- The non-reporting of such children is also a punishable offence under the JJA or the Juvenile Justice (Care and Protection of Children) Act, 2015.
- Only once a child is declared legally free for adoption by the Child Welfare Committee (CWC), adoption can be done either by Indian prospective adoptive parents or non-resident Indians or foreigners, in that order.
- Any voluntary or NGO which is not registered as per the requirement of the JJA cannot house children in need of care and protection.

Many options to help:

- Emergency phone outreach service managed by the Women and Child Development department's nodal agency, the Childline India Foundation should be used.
 - * These Childline units are civil society organisations duly approved by the government.

- The district protection officer concerned must be informed.
 - * The contact details can be found on the National Tracking System for Missing and Vulnerable Children portal maintained by the Women and Child Development department.
- The nearest police station or its child welfare police officer who is specially trained to exclusively deal with children either as victims or juvenile delinquents must be informed.

Court directives to police:

- Ignorance of the law is not an excuse. If an orphan child is kept by someone without lawful authority, he or she may land themselves in trouble.
- According to the Hindu Minority and Guardianship Act, 1956, the father, and in his absence the mother, is the natural guardian. Not even a close relative can look after the child without authorisation.
- The Supreme Court in Bachpan Bachao Andolan vs Union of India directed all Directors General of Police, in May 2013, to register a first information report as a case of trafficking or abduction in every case of a missing child.
- At least one police officer not below the rank of assistant sub-inspector in each police station is mandatorily required to undergo training to deal with children in conflict with the law and in need of care and protection.
- Each district is supposed to have its special juvenile police unit, headed by an officer not below the rank of a Deputy Superintendent of Police.

Conclusion:

- Article 39 of the Constitution prohibits the tender age of children from being abused. Therefore, orphaned children who have lost both their parents or abandoned or surrendered due to the COVID-19 pandemic must not be neglected and left to face an uncertain future. They must be taken care of by the authorities entrusted with responsibilities under the JJA.

Miscellaneous

10. Mandatory online certification of disability through UDID portal

- » Prelims: Rights of Persons with Disabilities act, 2016-provisions

What's in News?

- The Department of Empowerment of Persons with Disabilities (DEPwD), Government of India, through a Gazette notification, has made it mandatory for all States/UTs to grant certificate of disability through online mode only using UDID portal w.e.f. 1 June 2021.

Details:

- The Central Government notified the Rights of Persons with Disabilities Rules, 2017 under RPwD Act, 2016.
- Rule 18(5) mandates the Central Government to appoint a date making it mandatory for the State/UT authorities to issue certificate of disability through online mode.
- Accordingly, this notification was passed which makes online issue of disability certificates mandatory by the states and UTs.
- The UDID portal which has been under implementation since 2016 is <http://www.swavlambancard.gov.in/>.
- This move is expected to ensure complete digitization of certification of disability, besides providing a viable mechanism for cross-checking genuineness of the certificate to achieve pan-India validity, and simplifying the process for the benefit of Divyangjan.

- The origin of Hakki-pikki tribal communities have got a rich history and they are said to have ancestral relations with the legendary Ranapratap Singh.
- They are said to have migrated to southern India after their defeat with the Mughal king.

Tribes of India

11. Banrawats

- The Banrawats are a native endangered tribe originating and living in Uttarakhand.
- They are also called Banrajis, Vanrawats, Vanrajis.
- They are basically nomadic hunter-gatherers, but also work as agriculture and forest labourers.
- They are mainly dependent on forests, and also practise shifting cultivation.
- They speak a Tibeto-Burman language generally called "Rawat".

Tribes of India

12. Hakki-Pikki Tribe

- The Hakki Pikkis are a nomadic tribe based largely in Karnataka.
- They were rehabilitated in the 1970s once their trade of bird hunting was banned.
- They now live in villages in Karnataka.

EDUCATION

Issues Relating to Education

1. Online education

- » Mains: Challenges with respect to online education in India and recommendations in addressing them.

Background:

- The COVID-19 pandemic has resulted in a decisive shift from traditional modes of classroom education to online education.

Concerns:

- Though the online education mode has allowed maintaining a semblance of continuity in education, yet online education in India suffers from the following lacunae.

Lack of requisite infrastructure:

- The low public expenditure in the education sector has resulted in poor infrastructure in state run universities.
 - * The government spent only 3.2% of its GDP on education in 2020-21.
- Even this low expenditure is marked by stark differences within government institutions. While centrally funded elite institutes such as the IITs, IIMs, NITs and Central universities receive a large proportion of government funds, the financial health of state universities in the country continues to be worrisome.
- This allowed centrally funded elite institutes to adapt to the new requirement quickly. They were able to launch video channels and upload e-content on institutional websites and digital platforms.
- However, a majority of the state universities still struggle without proper Internet connectivity and bandwidth in their campuses. Also the severe crunch of human resources in universities of India is an added challenge to the already overburdened teachers.

Digital divide:

- Many of the students lack the facilities to attend online classes.
- Despite impressive growth in digital connectivity, internet penetration is still low in India.
- The difference in students' access to digital education, will lead to the exclusion of the less privileged student community and deepen the existing inequalities in the society.

Lack of appropriate study material:

- The lack of appropriate study material is a major concern too for online education. Merely using scanned lecture notes or powerpoint presentations does not serve any meaningful purpose.
- There has been the absence of application-based learning avenues for students in the online education mode. Without this the practical field and laboratory-based learning would suffer.

Recommendations:

- Given that there is talk of more COVID-19 waves, it is imperative for the government to embrace a pragmatic approach to online education.
- The higher education institutions were directed by the government to shift from classroom education to online education, without taking cognisance of changes needed in infrastructure, training, etc. Neither the institutions nor the students were prepared for this sudden change. The transition from conventional classroom teaching and learning to online education needs to be done in a phased manner.

Ensure funding:

- The government should provide sufficient financial support to the state universities to build the requisite infrastructure for online education. The government must provide suitable financial aids to state universities to obtain appropriate IT tools, platforms, devices etc.
 - * The Fifteenth Finance Commission in its report has also recommended investing in online education.

Bridging digital divide:

- Development of massive open online courses (MOOCs), direct-to-home (DTH) content development, digital classrooms and provision of devices (laptop/tablets) for 25 lakh students belonging to the socially and economically weaker sections of society could help close the digital gap to some extent.

Additional information:

- There are 993 universities, 39,931 colleges, 3.73 crore students and 14.16 lakh teachers in India, according to All India Survey on Higher Education (2018-19).

Issues Relating to Education

2. Education of students with disabilities

- » Mains: Measures needed for making education more inclusive for students with disabilities

Context

- The outbreak of the COVID-19 pandemic has drastically disrupted the overall education system across the globe. Consequently, there was a disproportionate impact on the education of students with disabilities.
- The article discusses how Indian higher education can be made more inclusive for students with disabilities.

Issues:

- During the initial phase of the lockdown, there was a lack of guidelines and an absence of tools to facilitate students with visual, hearing or specific learning disabilities.
- The pandemic exposed the stark lack of academic infrastructure for students with disabilities in Indian universities.
- It highlighted the lack of access to technology and assistive devices that could have eased the non-inclusive nature of typical teaching content.

Need for planning:

- While there has been progress in making education accessible to all, the National Education Policy 2020 included proposals on barrier-free access to education and teacher training.
- The magnitude and complexities involved in implementation need exhaustive planning and meticulous execution.

Way Forward:

- Higher Education Institutions (HEIs) must contribute towards creating an inclusive society.
- Government authorities must adopt some long-term measures that will help establish a process that addresses the needs of all learners.
 - * Inter-ministerial coordination would be required for all-encompassing standardised guidelines for digital education infrastructure.
- One of the key tenets of inclusive education is to make provisions that can give the students with specific needs full access to adequate services.
 - * To ensure this, there is a need for a coordinated approach that makes universal accessibility norms an integral part of pedagogy and teaching methodology in universities.
- On the ground, a learning support system needs to be established in each university — both public and private.

- Awareness and sensitisation towards people with disabilities is paramount.
 - * While there are visible disabilities that need an accessible physical and academic infrastructure in HEIs, the invisible ones such as Autism Spectrum, Dyslexia, Dysgraphia, Dyscalculia, and Attention Deficit Hyperactivity Disorder (ADHD) need to be understood and seen as learning and thinking differences.

DISASTER MANAGEMENT

Disaster and disaster management – Fire Accidents

1. Public buildings and fire safety rules

- » Prelims: National building code; NDMA
- » Mains: Reasons for recent rise in fire accidents in hospitals and public buildings; Fire safety compliance in public buildings- concerns and recommendations

Context:

- The recent fires in hospital buildings at Bharuch in Gujarat, Virar a suburb of Mumbai, and Mumbra near Thane.

Background:

- Fires occur in many public buildings in India every year, killing a large number of people and injuring many.
- The National Crime Records Bureau (NCRB) notes that 330 people died in commercial building fires in 2019.

Reasons for the fires:

- Electrical faults are cited as the leading cause of fires in most public buildings.
- Hospital ICUs (intensive care units) are a great fire risk because they are oxygen-suffused.

Fire safety compliance in public buildings:

National Building Code of India:

- The National Building Code of India is the main standard set for fire safety compliance in public buildings.
 - * Part 4 of the National Building Code deals with Fire and Life Safety
- The NBC recommends the location of buildings by type of use in specific zones to ensure that industrial and hazardous structures do not coexist with residential, institutional, office and business buildings. It also specifies the technical requirements for special buildings.
- The code provides specifications and guidelines for design of buildings and use of certified fire-resistant materials that reduce the threat of fires.
 - * It also stipulates the compulsory incorporation of technologies to sound alerts in case of a fire and also fire threat reduction technologies. Example: Automatic fire detection and alarm system, down-comer pipelines connected to a roof tank, dry riser pipelines that fire-fighters can use to douse upper floors, automatic sprinklers and water sprays, fireman's lift, fire barriers, escape routes, markings etc.

- These measures can avert deadly fires, giving occupants sufficient time to exit safely.

NDMA guidelines:

- The National Disaster Management Authority (NDMA) has stipulated requirements for fire safety in public buildings, including hospitals, which incorporate elements of the NBC, besides design guidelines on maintaining minimum open safety space, protected exit mechanisms, dedicated staircases, and crucial drills to carry out evacuations.

State laws:

- Maharashtra has a Fire Prevention and Life Safety Measures Act since 2008. Section 3 of the Act makes the provisions of the NBC mandatory and Schedule I of the State's law is borrowed from the Code.
- In Kerala, obtaining an NOC [no-objection certificate] from the fire department for hospitals requires furnishing exhaustive information on design and infrastructure. The rules prescribe firefighting equipment and installations that meet "Indian Standards".

Concerns:

Recommendatory nature of NBC:

- As per the Union Home Ministry's Directorate-General for Fire Services, Civil Defence & Home Guards, the National Building Code (NBC), published by the Bureau of Indian Standards, is a "recommendatory document", and States have been asked to incorporate it into their local building bylaws, making the recommendations a "mandatory requirement".
- However, the states aren't strictly following these regulations while preparing their own laws.

Scope for exemptions:

- Notably the NBC says that for various types of buildings, "in case of practical difficulty or to avoid unnecessary hardship, without sacrificing reasonable safety, local head, fire services may consider exemptions from the NBC.
- This could lead to watering down of safety measures in lieu of bribes from the approval seeking entities.

Under capacity of state administration:

- Despite the existence of a state law in Maharashtra, reports in the wake of recent fire accidents indicate that the authorities have been unable to keep up with inspection requirements for thousands of buildings.

- The States lack the manpower to inspect and ensure compliance with safety codes, including the NBC even though it is mandatory.

Laxity on the part of states:

- State governments are widely criticised for being lax with building safety laws and for failing to equip public buildings with modern fire safety technology.
 - * A Comptroller and Auditor General (CAG) report for the period 2010 to 2015 noted that in Maharashtra, a physical inspection of 53 government buildings/hospitals/educational institutions/commercial establishments in eight selected MCs [municipal corporations] revealed that only fire extinguishers were installed in 11 of 53 buildings and the remaining 42 buildings were not equipped with any of the fire-fighting installations.
- Though fire safety rules exist in every State, but the provisions of the Code are ignored in practice, and even mandatory certifications do not reflect compliance.

Measures being taken:

- As per the central government's statement, a Fire Safety Committee conducts periodical audits on fire installation, heating, ventilation and air-conditioning, electrical sub-stations and other electrical equipment in the Union government's hospitals.
- The Health Ministry has circulated strict guidelines in 2020 stipulating third-party accreditation for fire safety and calling for a fire response plan to be mandatorily in place.
- In December 2020, the Supreme Court directed all States to carry out fire safety audits of dedicated COVID-19 hospitals.

Recommendations:

- The state should also consider mandating heavy fire liability insurance for all public buildings, which would offer protection to occupants and visitors and also bring about external inspection of safety.
- Fire department professionals have earlier demanded third-party audits by licensed professionals. This they feel would apart from addressing the under capacity of the state to ensure compliance will also address the laxity on the part of state administration.

Disaster Management – Institutional framework

2. National Crisis Management Committee (NCMC)

- » Prelims: NCMC- membership and functions
- » Mains: Institutional framework for disaster management in India
- The NCMC is a committee set up by the Government of India in the wake of a natural calamity for effective coordination and implementation of relief measures and operations.
- It is headed by the Cabinet Secretary.
- In India, the NCMC and the Cabinet Committee on Security (CCS) are the two major committees involved in top-level decision making with respect to Disaster Management (DM).
- The committee is chaired by the Cabinet Secretary and has the secretaries of various ministries or departments with disaster management responsibilities as members.

Key functions of the NCMC:

- Overseeing the command, control and coordination of the disaster response.
- Giving directions to the crisis management group as necessary.

GOVERNANCE

Role of civil services in a democracy

1. **The outdated nature of bureaucracy**

- » Mains: Concerns associated with traditional bureaucratic as well as outright privatization; Significance of collaborative governance

Background:

- The COVID-19 pandemic has been a major challenge to public administration and has tested the resilience of all public institutions.
- The bureaucracy is being blamed for its ineffective response to the COVID-19 crisis.
- Academicians and public administration experts have pointed out the outdated nature of public bureaucracy for its ineffectiveness.

Concerns:

Continued reliance on traditional bureaucratic structures:

- The article laments the fact that even in this 21st century, democratic countries are still relying on traditional bureaucracies (Weberian bureaucracy model) to perform public policy formulation and implementation roles despite such structures having outlived their relevance.
- Some of the major lacunae with respect to the Weberian bureaucratic approach are as follows:
 - * Continued preference for generalists over specialists
 - » In such a system, specialists in every government department have to remain subordinate to the generalist officers despite their superior domain knowledge.
 - » The COVID-19 pandemic has exposed the weakness of such an approach. The lack of authority to healthcare professionals who are specialists to carry out policy formulation can be counted as one of the major lacunae in our policy response to the pandemic.
 - * Weberian bureaucracy prefers leadership of position over leadership of function.
 - » Leadership of function is when a person has expert knowledge of a particular responsibility in a particular situation and is capable of and authorized to respond to evolving situations rather than relying on dictation from someone occupying a particular position.

- » This acts as a major limitation for decentralized governance which is more effective. This has resulted in a situation where the bureaucracy has become an end in itself rather than a means to an end, which is, improved governance and socio-economic development of the society.

- * The rigid adherence to rules in the traditional bureaucratic structure has been an area of major concern.

- » The strict adherence to process and rules has resulted in COVID-19 aid getting stuck in cumbersome clearance processes even during the pandemic.

- » The rigid emphasis on the following of rules and regulations and the fear of official sanctions have resulted in the rejection of innovation from public officials.

Limitations of outright privatization:

- In the light of the lacunae in the existent bureaucratic structure, there have been growing calls for a new public management in India, which promotes privatization and managerial techniques of the private sector as an effective tool to seek improvements in public service delivery and governance.
- However, it should be noted that outright privatization may not be a viable solution in India where there is social inequality and regional variations in development.
- The private sector is driven by the motive of profits and hence would cater only to people and areas where their operations are financially viable. They would not be able to serve the poor due to his/her inability to pay for the private sector's work.
- Such an approach renders the state as a mere bystander among the multiple market players with accountability being constantly shifted, especially during a crisis. The COVID-19 crisis has shown that the private sector has failed in public service delivery.

Paradigm/key elements	Theoretical roots	Nature of the state	Focus	Emphasis	Relationship to external (non-public) organisational partners	Governance mechanism	Value base
Public administration	Political science and public policy	Unitary	How policy is made	Policy implementation	Potential elements of the policy system	Hierarchy	Public sector ethos
New public management	Economics (particularly rational/public choice theory) and management studies	Disaggregated	Intra-organisational management	Service inputs and outputs	Independent contractors in market place	Market through traditional contracts	Competition in market context
New public governance	Organisational sociology and network theory	Plural and pluralist	Inter-organisational governance	Service processes and outcomes	Preferred suppliers and interdependent agents within ongoing relationships	Trust or relational contracts	Neo-corporatist

Recommendations:

Collaborative governance:

- The most appropriate administrative reform to ensure more effective public governance is aiming for collaborative governance in which the public sector, private players and civil society, especially public service organizations (NGOs), work together for effective public service delivery.
- Benefits of such a system:
 - * Such a system would ensure that there is no domination of public bureaucracy in policy formulation and implementation. This can help change the behaviour of bureaucracy towards governance and also help initiate public service reforms – relook at the generalist versus specialist debate, openness to reforms such as lateral entry and collaboration with a network of social actors.
 - * In such a system the existing network of social actors and private players would take responsibility in various aspects of governance with public bureaucracy coordinating the efforts. Such a structure would allow the institutionalization of the critical role being played by civil society. This will help in scaling the impact of effective civil societies.
 - » Civil society has been playing a major role during the pandemic.
 - * The collaboration of public bureaucracy with the private and social society has had a profound impact on public service delivery as seen in the following cases.

- » Green Revolution (M.S. Swaminathan), the White Revolution (Vergheese Kurien), Aadhaar-enabled services (Nandan Nilekani) and the IT revolution (Sam Pitroda).

Conclusion:

- The public sector, private players and civil society should all work together for public service delivery.
- Such new public governance which can help address the various lacunae and make public administration more effective is the future of governance, especially public service delivery in India.

Important aspects of governance - accountability

2. Compulsory Retirement

- » Mains: Measures for increasing accountability in civil servants

What's in News?

- The Ministry of Home Affairs has revealed that 13 officers have been retired in public interest.

Background:

- The central government had instructed all ministries and departments to maintain a register of government servants in the 50-55 year age bracket, and those who have completed 30 years in service, as it plans to weed out more “corrupt” and “inefficient” officials
- According to an order issued by the Department of Personnel and Training (DoPT), all ministries and government departments will have to

conduct a quarterly review of the officials, in order to ascertain who among them need to be prematurely retired from service.

Law in Place

- The employees' performance review is conducted under the Fundamental Rule (FR) 56 (J) and 56 (I), and also under Rule 48 (1) (b) of the Central Civil Services (Pension) Rules, 1972, that gives "absolute right" to the appropriate authority to retire a government servant, "if it is necessary to do so in public interest".
- It is clarified that premature retirement of Government servants under these rules is not a penalty. It is distinct from 'Compulsory Retirement', which is one of prescribed penalties under CCS (CCA) Rules, 1965

Baikuntha Nath Das Vs. Chief District Medical Officer

- An order of compulsory retirement is not a punishment. It implies no stigma nor any suggestion of misbehaviour.
- The order has to be passed by the government on forming the opinion that it is in the public interest to retire a government servant compulsorily. The order is passed on the subjective satisfaction of the government.
- Principles of natural justice have no place in the context of an order of compulsory retirement. This does not mean that judicial scrutiny is excluded altogether. While the High Court or this Court would not examine the matter as an appellate court, they may interfere if they are satisfied that the order is passed
 - * mala fide or
 - * that it is based on no evidence or
 - * that it is arbitrary - in the sense that no reasonable person would form the requisite opinion on the given material; in short, if it is found to be perverse order.
- The government (or the Review Committee, as the case may be) shall have to consider the entire record of service before taking a decision in the matter - of course attaching more importance to record of and performance during the later years.

Role of civil services in a democracy

3. Centre tells West Bengal Chief Secretary to report to Delhi

» Mains: Issues with respect to civil service in India

Context:

- Following the absence of the West Bengal Chief Minister at the review meeting on Cyclone Yaas with the Prime Minister, the appointments committee of the Union Cabinet attached the State's Chief Secretary to the Centre.

Details:

- The Department of Personnel and Training (DoPT) invoked Rule 6(1) of the Indian Administrative Service (cadre) Rules, 1954 to place the services of West Bengal Chief Secretary Alapan Bandyopadhyay with the Government of India.
- The order asked the State government to relieve the officer with immediate effect and directed him to report to the DoPT office at North Block in Delhi.

What do the rules say?

- For the premier civil services — IAS, IPS and Indian Forest Service — officers of the state cadre are allotted by the Centre from a pool of officers.
- From time to time, a certain number of officers are sent on central deputation.
- The Home Ministry is the authority in control of the IPS cadre, the Department of Personnel and Training for the IAS cadre, and the Ministry of Environment, Forest and Climate Change for the IFS cadre.
- The Centre can take no action against civil service officials who are posted under the state government.
 - * Rule 7 of the All India Services (Discipline and Appeal) Rules, 1969, states that the "Authority to institute proceedings and to impose penalty" will be the state government if the officer is serving in connection with the affairs of a State, or is deputed for service under any company owned or controlled by the Government of a State, or in a local authority set up by an Act of the Legislature of that State.
 - * For any action to be taken on an officer of the All India Services (IAS, IPS, IFS), the state and the Centre both need to agree.
- Rule 6(1) states that "provided that in case of any disagreement, the matter shall be decided by the Central Government and the State Government shall give effect to the decision of the Central Government."

What has been the practice so far?

- Before any officer of All India Services (AIS) is called for deputation to the Centre, his or her concurrence is required.
- The Establishment Officer in DoPT invites nominations from State governments.
- Once the nomination is received, their eligibility is scrutinized by a panel and then an offer list is prepared, traditionally done with the State government on board.

- Central Ministries and offices can then choose from the list of officers on offer.
- AIS officers are recruited by the Centre and they are lent to States.

What if the officer refuses to comply with the order?

- The All India Services (Discipline and Appeal) Rules, 1969 are not clear on the punishment in such cases.
- But Rule 7 says the authority to institute proceedings and to impose penalty will be the State government while he or she was serving in connection with the affairs of a State.
- According to the All India Services (Discipline and Appeal) Rules, 1969, an officer found to be in violation of disciplinary rules by the disciplinary authority (the government to which the officer is reporting), there can be "minor" and "major" penalties imposed on the officer.
 - * The minor penalties include censure, withholding of promotions, recovery of any pecuniary loss caused due to negligence or breach of orders by the officer concerned, and withholding of increments.
 - * The major penalties can include reduction to a lower scale of pay or rank or compulsory retirement

Miscellaneous

4. The Information Technology Rules, 2021

- » Prelims: Provisions of the new IT rules
- » Mains: Arguments for and against the new IT rules

Context:

- In February 2021, the government notified guidelines: The Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021.
- The new rules that are aimed to increase compliance for social media platforms has come into effect

Guidelines:

- The guidelines, announced in February, had asked all social media platforms to set up a grievances redressal and compliance mechanism, which included appointing a resident grievance officer, chief compliance officer and a nodal contact person.
- The Ministry of Electronics & Information Technology had also asked these platforms to submit monthly reports on complaints received from users and action taken
- Failure to comply with any one of these requirements would take away the indemnity provided to social media intermediaries under Section 79 of the Information Technology Act.

What is Section 79 of the IT Act?

- Section 79 says any intermediary shall not be held legally or otherwise liable for any third party information, data, or communication link made available or hosted on its platform. This protection, the Act says, shall be applicable if the said intermediary does not in any way, initiate the transmission of the message in question, select the receiver of the transmitted message and does not modify any information contained in the transmission.
- This means that as long as a platform acts just as the messenger carrying a message from point A to point B, without interfering in any manner, it will be safe from any legal prosecution brought upon due to the message being transmitted.
- The protection accorded under Section 79, however, is not granted if the intermediary, despite being informed or notified by the government or its agencies, does not immediately disable access to the material under question. The intermediary must not tamper with any evidence of these messages or content present on its platform, failing which it lose its protection under the Act.

Consequences of non compliance:

- Despite the closing in on the last date for compliance, a majority of platforms are yet to fully comply with the new rules.
 - * While all the concerned companies have vowed to comply with the new rules, some have sought more time for compliance and also asked for more consultation with the government agencies over some provisions of the rules.
- Though there is no clarity on the immediate consequences of non-compliance. However, experts say these companies could lose the 'safe harbour' protection.

Positive aspects of the guidelines:

The Rules mandate duties such as:

- Removal of non-consensual intimate pictures within 24 hours.
- Publication of compliance reports to increase transparency.
- Setting up of a dispute resolution mechanism for content removal.
- Adding a label to information for users to know whether the content is advertised, owned, sponsored or exclusively controlled.

Concerns:

Chance of misuse:

- Some experts have pointed out that the new rules may amount to an over reach and lead to suppression of the right to free expression of

people on these platforms.

- Also the new rules can arm the ruling government to take undue advantage of the power to regulate to suppress views against the ruling dispensation.

Gagging a right:

- In Life Insurance Corpn. Of India vs Prof. Manubhai D. Shah (1992) case, the SC had elevated 'the freedom to circulate one's views as the lifeline of any democratic institution'.
 - * It said 'any attempt to stifle, suffocate or gag this right would sound a death knell to democracy' and would 'help usher in autocracy or dictatorship'.

Information Technology ultra vires to the IT Act:

- The rules were framed by the Ministry of Electronics and Information Technology (MeiTY).
- The Second Schedule of the Business Rules, 1961 does not empower MeiTY to frame regulations for 'digital media'.
 - * This power belongs to the Ministry of Information and Broadcasting.
- In this case, although MeiTY has said that these rules shall be administered by the Ministry of Information and Broadcasting, this action violates the legal principle of 'colourable legislation' where the legislature cannot do something indirectly if it is not possible to do so directly.
- The Information Technology Act, 2000, does not regulate digital media. Therefore, the new IT Rules which claim to be a piece of subordinate legislation of the IT Act, are beyond the rule-making power conferred upon them by the IT Act.
- This makes the Rules ultra vires to the Act.

Financial Burden:

- Rules create additional operational costs for intermediaries by requiring them to have Indian resident nodal officers, compliance officers and grievance officers.
- Intermediaries are also required to have offices located in India.
 - * This makes profit-making a far-fetched goal for multinational corporations and start-up intermediary enterprises.

Way Forward:

- What is important is that the genuine concerns of social media companies are taken on board.
- It is important that social media companies fight the new rules in a court of law if they find them to be problematic.
- Apart from issues about the rules, there have been problems about creating conditions for compliance during the pandemic. Companies

may need an extension of 6-12 months for compliance.

Conclusion:

- This is an opportunity for the Government to hear out the industry

Miscellaneous

5. 'FCRA amendments crippling our work'

» Prelims: Recent amendment to the FCRA

Issue:

- The amendments to the Foreign Contribution Regulation Act (FCRA) enacted in 2020 that among others made it compulsory for NGOs to open a bank account in Delhi has crippled the work of many organisations that are unable to receive foreign funds.

Details:

- An NGO has moved the Delhi High Court seeking exemption from the Union Home Ministry's March 31 deadline to open an FCRA account with the SBI branch in New Delhi.
- The petitioner argued that it applied to open the account before the March 31 deadline but the administrative delays on the part of the bank and the Ministry severely restricted its activities including providing COVID-19 relief and paying of urgent salaries of staff and also affected its charitable and educational activities.
- Many NGOs are affected by the new regulations as they are hampering charitable work during the pandemic.

Foreign Contribution (Regulation) Amendment, 2020:

- Foreign Contribution (Regulation) Amendment Bill, 2020 was passed in the Parliament in 2020.
- The Home Ministry had directed all NGOs seeking foreign donations to open a designated FCRA account at the State Bank of India's New Delhi branch by March 31, 2021.
- The NGOs registered under FCRA shall not receive any foreign donations in any other bank account from April 1, 2021.

Note:

- An FCRA registration is mandatory for NGOs to receive foreign funds.

Way Forward:

- The pandemic has underscored the importance of Vasudhaiva Kutumbakam (the whole earth is one family) as a framework for India's global engagement.
- Thousands of NGOs serve extremely disadvantaged sections, at times filling in for the state, at others, supplementing it.

- Further relaxations are necessary in terms of opening an FCRA account with the SBI branch in New Delhi.
- For a global community to function, there is a need for a seamless sharing of ideas and resources across national boundaries.
- It should not be discouraged unless there is reason to believe the funds are being used to aid illegal activities.

GEOGRAPHY

Geography - Climatology

1. Unfamiliar lineament among Assam earthquake factors

- » Prelims: Lineament; Seismic zones of India
- » Mains: Vulnerability of India to earthquakes

Context

- An earthquake struck Assam's Sonitpur.
- An unfamiliar lineament is among the factors behind frequent earthquakes in northern Assam's Sonitpur area.
 - * Sonitpur was the epicentre of the huge 6.4 earthquake after 33 years because of the tectonic complexity.

Details:

- According to the Geological Survey of India (GSI), Sonitpur district lies within a tectonically complex triangular area bounded by the east-west trending Atherkhet Fault, the northwest-southeast trending Kopili Fault and a north-south trending lineament.
 - * A lineament is a linear feature in a landscape dictated by an underlying geological structure such as a fault.
- The two faults and the lineament, along with the oblique convergence of the Indian plate, have caused frequent earthquakes.
 - * Both the Atherkhet and Kopilli faults are active.
 - * However, Atherkhet and Kopili are not the only faults that impact the Sonitpur region.
 - * The Siang Fracture, Yemla Fault, Namula Thrust and Canyon Thrust are spread across the northeast and are active along with Main Himalayan Thrust, Main Boundary Thrust, Main Central Thrust and several subsidiary faults.
- The northeast is demarcated as Seismic Zone V, which indicates a zone with high vulnerability.
 - * The Indian plate is moving northeast toward the Eurasian plate in the Himalayan region, their oblique collision and release of stress and strain accumulated in the local tectonic or fault environments lead to earthquakes.

Geography - Climatology

2. Cyclone Yaas

- » Prelims: Predominant season for cyclones in India; Storm surge and types of tides.

- » Mains: Link between climate change and increasing frequency and intensity of cyclones; climatological significance of tropical cyclones in Indian context.

Context

- Cyclone Yaas expected to make landfall on the Odisha and West Bengal coastal districts.

Background:

Cyclones in India:

Predominant season:

- Cyclones in the Bay of Bengal are an annual phenomenon in the pre monsoon period during late April- May.
- They are attributed to increased ocean surface temperatures of the North Indian Ocean during this season.

Major region of origin:

- Traditionally the cyclones originating in the Bay of Bengal area have been more in number than those originating in the Arabian Sea area because of more favourable conditions for cyclone formation in the Bay of Bengal waters.
- Also the cyclones originating in the Bay of Bengal region have caused maximum damage in India given the counter clockwise movement of these cyclones thus making landfall on the eastern Indian coastal areas.
- About 60% of the cyclones that form in these seas make landfall in India causing significant damage and devastation.
- Example: Amphan super cyclone of 2020 in West Bengal, Super cyclone of 1999 in Odisha, Fanicyclole of 2019 in Odisha etc.
- Unlike these comparatively lower number of cyclones originating in the Arabian sea make their landfall on Indian coasts.

Change in trend:

- However there seems to be a change in this trend with a relative decrease in the number of cyclones in the Bay of Bengal and a rise in the Arabian Sea as being observed in the last 4 years.

Climatological significance of cyclones:

- The cyclones are an important phenomenon from a climatological point of view as these pre monsoon cyclones are favourable for drawing in the monsoon into the Andamans and subsequently to the Kerala coast.

Details:

- Climate scientists say the temperature in the North Bay of Bengal waters has reached

temperatures up to 32 degrees Celsius. This is at least two degrees warmer than what is normal for this time of the year.

- * The higher temperature will lead to more evaporation of water and result in more intense cyclones.
- However, given that the distance to landfall is short, this has prevented the cyclone from drawing the excess thermal energy from the warm waters and intensifying into an extremely severe cyclone.
- * Cyclone Yaas is predicted to make landfall as a very severe cyclone.

Concern with respect to storm surge:

- The storm surges are expected to be 2–4 meters above astronomical tide levels along the West Bengal and Odisha coasts.
- * A storm surge is a rise in sea level that occurs during tropical cyclones. The storms produce strong winds that push the water into shore, which can lead to flooding. This makes storm surges very dangerous for coastal regions.
- * It is measured as the rise in water level above the normal tidal level, and does not include waves.
- The storm surge is a matter of concern because the cyclone will coincide with the full moon tide and the water level in the seas and river may rise further leading to breach of embankments.
- * Tides are the rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun, and the rotation of the Earth.
- * During the new moon and full moons, the tidal force due to the Sun reinforces that due to the Moon. The tide's range is then at its maximum; this is called the spring tide.

Geography - Mapping

3. Sunderbans

- » Prelims: Major cyclones in India; Ghoramara and Sagar island
- » Mains: Threat posed by frequent cyclones and the measures needed

Context

- Damage caused by the tropical cyclones to the Sunderbans and its inhabitants.

Background:

- Over just the past three years, the Sunderbans has been damaged by four tropical cyclones — Fani (May 2019), Bulbul (November 2019), Amphan (May 2020) and Yaas (May 2021).

- With every cyclone, the region has suffered damage because of gale winds and breached embankments, leading to ingress of sea water.
- * The intensity of the gale winds has ranged from 100 kmph to 150 kmph during each of the cyclones.

Effects of Cyclone Yaas:

- Cyclone Yaas made landfall about 200 km south of the Sunderbans in Odisha. But it inundated large areas of the estuary.
- There is a scarcity of drinking water because of inundation.
- The combined effect of the full moon tide and the cyclone led to the overflowing and breach of embankments in large areas of the Sunderbans.
- Not only the western part of Sunderbans that faces Bay of Bengal but large parts in the eastern part of the delta remain under water days after the cyclone and the high tide.
- Once the sea water enters the islands, the crops are inundated and land cannot be cultivated because of the salinity, even the fish in the ponds die.

Note:

- Ghoramara is one of the islands that has been sinking due to rising sea levels, where a few dozen houses and acres of land go under water every year.
- Sagar Island, the biggest island of the Sundarbans chain and site of the famous Gangasagar Mela during Makar Sankranti, has also suffered damage.

Way Forward:

- Solution to this perennial problem lies in long-term planning.
- Strategies that will minimize the impact of climate change must be adopted.
- Policy makers must prepare disaster management plans suited to the region.

Geography - Mapping

4. Mount Nyiragongo

- » Prelims: Mount Nyiragongo; East African rift valley
- » Mains: Types of volcanoes

Context:

- Congo's Mount Nyiragongo unleashed lava.

Details:

- It destroyed homes on the outskirts of Goma.
- An eruption in 2002 caused hundreds of deaths.



- Mount Nyiragongo is an active stratovolcano. It is located in the Virunga Mountains associated with the Albertine Rift.
 - * The Albertine Rift is the western branch of the East African Rift covering parts of Uganda, the Democratic Republic of the Congo, Rwanda, Burundi and Tanzania.
 - * It extends from the northern end of Lake Albert to the southern end of Lake Tanganyika.
- It is located inside Virunga National Park, in the Democratic Republic of the Congo.
- It is to the north of the town of Goma and Lake Kivu and west of the border with Rwanda.

Geography- Miscellaneous

5. Sun Halo

- » Prelims: Sun halo; dispersion of light; refraction of light

Sun halo:

- It is basically a rainbow around the Sun.
- This occurs due to the dispersion of light, as white light passes through ice crystals found in upper-level cirrus clouds, causing the halo to have colours.
- Light undergoes two refractions as it passes through the ice crystals and the bending that occurs depends on the ice crystal's diameter.

Context:

- Bengaluru witnessed a rare phenomenon known as sun halo.
- The halo that appeared around the Sun is a 22-degree ring. The 22-degree sun halo belongs to the family of ice-crystal halos.

Geography - Aspects Related to Climatology

6. Cyclone Tauktae

- » Prelims: Cyclone Tauktae; cyclone pattern in India
- » Mains: Link between climate change and cyclones; vulnerability of India and measures needed

Context:

- Formed in the Arabian Sea, Cyclone Tauktae was only the second 'Extremely Severe Cyclone' category storm to hit Gujarat in 23 years.
- Cyclone Tauktae made its landfall east of Diu on May 17 with wind speed ranging between 160–170 km/hr gusting to 185 km/hr.
- The last cyclone of equal intensity to hit Gujarat was Cyclone Kandla (wind speed 160 to 170 km/hr) that crossed near Porbandar in 1998.

Intensity of Cyclone:

- Unlike most cyclones that are forced to weaken post landfall as they detach from the sea, Tauktae retained its intensity as a cyclone and maintained wind speeds between 60 and 70 km/hr gusting to 80 km/hr.
- Cyclones are formed between the tropics while western disturbances are formed in the mid-latitudes. When the two interact, they influence each other. Such an interaction occurred at the time of landfall on the evening of May 17.

What is the meaning of the name 'Tauktae'?

- It means 'Gecko' (in Burmese Language) which is a highly vocal lizard
- Myanmar has named this cyclone 'Tauktae'.

States affected

- Cyclone Tauktae brought extremely heavy rainfall and gale winds over the entire west coast during May 12–May 19. As it travelled between Lakshadweep and Gujarat, the low-pressure system intensified into an 'Extremely Severe Cyclone', moving parallel along the west coast.
- During its northward journey, Tauktae affected five states — Kerala, Karnataka, Goa, Maharashtra and Gujarat along with two Union Territories — Lakshadweep and Daman & Diu.

Impact:

- Torrential rainfall and strong winds under the influence of Cyclone Tauktae, caused extensive damage to crops and buildings, and forcing district administrations to relocate more people to relief camps.
- The power sector reported heavy damage.
- The storm surges had inundated coastal areas.

Linkage between climate change and cyclones:

- Storms are common in the Bay of Bengal and the Arabian Sea in May, ahead of the monsoon

onset though climatologists have said there is an increase in the number of such storms in the Arabian Sea in recent years.

* Tauktae is the fourth cyclone in as many years over the Arabian Sea in the pre-monsoon months.

- This is being attributed to a rise in average sea surface temperatures driven by global warming.

Way Forward:

- Given the fact that it is very likely that India will see more frequent cyclones every year due to global warming, India should work towards mitigating the damage to life and property from these adverse climatic phenomena. The following measures will help in this direction.

Disaster Response:

- The impact of the storm can be considerably mitigated by specialized disaster response forces, who are well trained and equipped and are adequately supported by the defence forces in rescue and relief work.

Forecasting:

- India needs to develop greater expertise in forecasting which will help in the issuance of precise early warnings.
- Given the rapid intensification of cyclones, there is very little time available to take immediate measures for evacuation at the ground. State-of-the-art cyclone models are unable to pick this rapid intensification because they do not incorporate the ocean dynamics accurately. This is a forecasting challenge that needs to be addressed.
- There is the need to closely monitor at higher resolution and accuracy using on-site platforms such as buoys and moorings. Improving the Indian Ocean Observing System and incorporating the global warming signals in the weather models can help us tackle the challenges of intense cyclones in the future.

Risk assessment:

- The available data and updated weather and climate models incorporating the impact of global warming must be used to understand how the cyclones might change in the coming decades and how that might impact the coastline of India. A risk assessment based on this can definitely help save lives and property by ground mapping vulnerabilities.
- In 2020, the India Meteorological Department (IMD) launched an impact-based cyclone warning system from the October-December season designed to reduce economic losses by focusing on districts and specific locations, and incorporating such factors as population, infrastructure, land use and settlements.

Disaster mitigation and resilience building:

- The government must work towards crafting policies to improve disaster mitigation abilities and to increase resilience among communities.
- Climate-proofing lives and dwellings must be a high priority for vulnerable areas. This would warrant a multi-sectoral approach that would involve building sturdy homes of suitable design, creating adequate storm shelters and ensuring financial protection against calamities through insurance for property and assets.

Why is the Bay of Bengal more prone to Cyclones?

- The low-pressure system of cyclone needs a continuous supply of heat energy. The Bay of Bengal is warmer than the Arabian Sea, and hence is able to provide the heat energy needed to sustain the low-pressure system.
- Sea surface temperatures and humidity directly correlate with the chances of cyclone formation.
 - * The Bay of Bengal receives higher rainfall and constant inflow of fresh water from the Ganga and Brahmaputra rivers and the surface water keeps getting refreshed, making it impossible for the warm water to mix with the cooler water below. This condition is ideal for depression.
 - * The Arabian Sea receives stronger winds that help dissipate the heat, and the lack of constant fresh water supply helps the warm water mix with the cool water, reducing the temperature.
- The absence of a large landmass between the Pacific and the Bay allows cyclonic winds to easily move into the Bay of Bengal.
- Low-pressure system originating from the Pacific Ocean also travel towards the left to the Bay of Bengal.

MISCELLANEOUS

1. International Museum Day

Context

- International Museum Day falls on May 18.

About the International Museum Day:

- 18 May is observed as the International Museum Day every year.
- The theme for International Museum Day 2021 is "The Future of Museums: Recover and Reimagine."
- The day is observed to raise awareness among people about museums.
- Museums are an important means of cultural exchange and the development of mutual understanding, cooperation, and peace among people.
- International Museum Day was first held in 1977. The lead in celebrating this day is taken by the International Council of Museums (ICOM).
 - * The International Council of Museums is an international organization of museums and museum professionals which is committed to the research, conservation, continuation and communication to society of the world's natural and cultural heritage, present and future, tangible and intangible.
 - * It was formed in 1946 and maintains formal relations with UNESCO.
 - * Its secretariat is in Paris.

National Gallery of Modern Art:

- National Gallery of Modern Art launched Audio-Visual Guide App on the occasion of International Museum Day. The App enables museum viewers to listen to stories and anecdotes about the Indian modern art exhibited at the Gallery.

About the National Gallery of Modern Art:

- It is the premier museum for modern art in India.
- It was founded in 1954.
- The museum has a seminal collection of more than 2000 artists including Raja Ravi Varma, Rabindranath Tagore, Amrita Sher-Gil, Nandalal Bose, and a few other leading international artists.
- It is located in New Delhi. Two other National Galleries of Modern Art are located in Mumbai and Bengaluru. All are run by the Ministry of Culture, GOI.

2. International Nurses Day

Context

- PM expressed gratitude to the nursing staff on International Nurses Day.

International Nursing Day:

- International Nurses Day is celebrated every year to honour nurses and healthcare workers.
- May 12 is observed as nursing day to honour Florence Nightingale, the English nurse and social reformer who founded the key pillars of modern nursing. Nightingale was born on this day in 1820.
- The theme for this year's International Nurses Day is "Nurses: A Voice to Lead – A Vision for Future Healthcare."
- The International Council of Nurses (ICN) celebrated the day for the first time in 1965.

3. World Press Freedom Day

- It is observed on the 3rd of May every year.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) affirms that this day acts as a reminder to governments of the need to respect their commitment to press freedom.
- It is also a day of reflection among media professionals about issues of press freedom and professional ethics.

Impact of COVID-19 on Journalists:

- Journalists are paying an unusually high price for doing their job, often reporting from the field, standing outside hospitals, morgues and cremation grounds.
- More than a hundred journalists have lost their lives in India over the past year.
- Both the Centre and the States must extend all the facilities provided to frontline workers to these professionals.

4. MyGov Innovation Challenge

Context

- MyGov launches innovation challenge for creating Indian Language Learning App.

Details:

- MyGov has launched an Innovation Challenge for creating an Indian Language Learning App.
- MyGov has launched the challenge in partnership

with the Department of Higher Education, Ministry of Education, GOI.

- The challenge is to create an app that will enable individuals to learn simple sentences of any Indian language and acquire working knowledge of a language.
- Challenge objective: to create an app that will promote regional language literacy, thereby creating greater cultural understanding within the country.
- The key parameters for judging are: Graphical User Interface, UI/UX, ease of use, gamification features, simplicity, superior content, scalability, interoperability, etc.
- The challenge is open to Indian individuals, start-ups and companies.
- MyGov envisions the app to be multi-modular, with the capacity to teach through the written word, voice and video/visuals.
- Upon evaluation of submission of prototypes, the top 10 teams will be invited to make presentations and top 3 will be selected by a jury. The top 3 will receive funding of INR 20, 10 and 5 lakhs to make the apps better

PRACTICE QUESTIONS

1. Which of the following statement/s is/are correct?

1. The State Disaster Response Fund (SDRF) is constituted under the Disaster Management Act, 2005, and is the primary fund available with State Governments for responses to notified disasters.
2. The annual Central contribution is released in two equal installments as per the recommendation of the Finance Commission.
3. SDRF shall be used only for meeting the expenditure for providing immediate relief to the victims.
4. The allocation to each State depends on its population and utilisation of such funds in the previous financial year.

Options:

- A. Only 1 & 2
- B. Only 1, 2 & 3
- C. Only 1, 3 & 4
- D. All of the Above

2. Nagorno-Karabakh is often in news, in relation to which of the following?

- A. territorial conflict between Armenia and Azerbaijan
- B. territorial conflict between Kyrgyzstan and Tajikistan
- C. territorial conflict between Uzbekistan and Turkmenistan
- D. territorial conflict between Kazakhstan and Kyrgyzstan

3. Which of the following statement/s is/are correct regarding National Building Code of India (NBC)?

1. It is published by the Bureau of Indian Standards and is a "recommendatory document", and States have been asked to incorporate it into their local building bylaws.
2. It specifies the technical requirements for special buildings, high rises, educational and institutional buildings higher than 9 metres, and those with an area of over 300 square metres.
3. The code mandates heavy fire liability insurance compulsory for all public buildings.

Options:

- A. Only 1
- B. Only 1 & 2

C. Only 2 & 3

D. All of the Above

4. Which of the following statement regarding Remdesivir is incorrect?

- A. It is a brand name of a drug used in Covid-19 patients.
- B. It was originally developed to treat Hepatitis C.
- C. It is an intravenous nucleotide prodrug.
- D. None of the above

5. The Gandhi-Irwin Pact included which of the following?

1. Invitation to Congress to participate in the Round Table Conference
2. Withdrawal of Ordinances promulgated in connection with the Civil Disobedience Movement
3. Acceptance of Gandhiji's suggestion for enquiry into police excesses
4. Release of only those prisoners who were not charged with violence

Select the correct answer using the code given below:

- A. 1 only
- B. 1, 2 and 4 only
- C. 3 only
- D. 2, 3 and 4 only

6. Which of the following is/are not a member of the Group of Seven (G7) countries?

1. Russia
2. Canada
3. Japan
4. India
5. Australia

Select the correct option from below:

- A. 1, 2 and 4 only
- B. 1, 2, 4 and 5 only
- C. 1, 4 and 5 only
- D. 4 and 5 only

7. Karen and Kachin state, recently seen in the news, is related to:

- A. Afghanistan
- B. Armenia
- C. Iran
- D. Myanmar

8. Which of the following is responsible for the administration of the Government of India (Transaction of Business) Rules, 1961 and the Government of India (Allocation of Business) Rules 1961?

- A. Prime Minister's Office
- B. Department of Personnel and Training
- C. Cabinet Secretariat
- D. Lok Sabha Secretariat

9. Which of the following statements regarding Voter Verifiable Paper Audit Trail (VVPAT) is/are correct?

- 1. It is an independent verification printer machine and is attached to electronic voting machines.
- 2. VVPAT machines can be accessed by voters to point out any malfunction.
- 3. In 2013, the SC had asked the Election Commission to introduce paper trails in EVMs.

Options:

- A. Only 1
- B. Only 1 & 2
- C. Only 1 & 3
- D. All of the above

10. Which of the following diseases can be transmitted from one person to another through tattooing? [UPSC 2013]

- 1. Chikungunya
- 2. Hepatitis B
- 3. HIV-AIDS

Select the correct answer using the codes given below.

- 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 High Commissioner for Refugees (UNHCR) was created in 1950 to address the refugee crisis that resulted from World War II.
- 2. In recognition of its work, UNHCR is the only organization to win Nobel Peace Prize more than once.
- 3. It is a member of the United Nations Development Group, a consortium of organizations dedicated to sustainable development.

Which of the above statements is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. All of the above

12. Which of the following is correct regarding the National Human Rights Commission (NHRC)?

- 1. NHRC is an independent statutory body established in 1993 in conformity with the Paris Principles.
- 2. NHRC has the power to interfere in any judicial proceedings involving any allegation of violation of human rights.
- 3. NHRC has a special wing to investigate allegations of human rights violations.

Select the correct option from below:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. All of the Above

13. Which of the following statements is/are correct?

- 1. If a candidate belonging to a registered political party dies before the commencement of the poll, the election to that constituency is adjourned.
- 2. In case the polling in a particular constituency is adjourned, the Model Code of Conduct is revoked immediately.

Options:

- A. Only 1
- B. Only 2
- C. Both
- D. None

14. Consider the following statements:

1. The Organization of the Petroleum Exporting Countries (OPEC) is a permanent, intergovernmental organization, created at the Baghdad Conference in 1960.
2. Qatar is the latest country to suspend its membership in OPEC.
3. Currently, the organization has a total of 23 Member Countries.

Which of the above statement(s) is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. All of the Above

15. Karl Marx explained the process of class struggle with the help of which one of the following theories? [UPSC 2011]

- A. Empirical liberalism
- B. Existentialism
- C. Darwin's theory of evolution
- D. Dialectical materialism

16. Consider the following statements:

1. Self-driving cars are just one of the many potential advantages of 5G over 4G.
2. Latency is low with 4G, but 5G will make it virtually zero.

Which of the above statements is/are correct?

- A. Only 1
- B. Only 2
- C. Both
- D. None

17. Which of the following is/are correct regarding the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)?

1. MGNREGA wages are calculated based on the Consumer Price Index-Agriculture Labourer i.e. CPI-AL.
2. In FY21, as many as 11 crore individuals got work under the scheme, the highest since its inception in 2006.

Options:

- A. Only 1
- B. Only 2
- C. Both
- D. None

18. Which of the following statements is/are correct?

1. The Gujral Doctrine is a set of seven principles to guide the conduct of foreign relations with India's immediate neighbours.
2. The Gujral Doctrine is based on the principles of cooperation, accommodation and reciprocity.

Options:

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

19. Consider the following statements:

1. The National Commission for Women (NCW) is a constitutional body established under Article 350-B of the Constitution.
2. The NCW consists of a chairperson, a member secretary and 11 other members.
3. NCW has the power to inspect the jail, remand home to ensure that the women staying there are not exploited as they are vulnerable.

Which of the above statements is/are correct?

- A. Only 1
- B. Only 1 and 2
- C. Only 3
- D. All of the Above

20. The Nagara, the Dravida and the Vesara are the: (UPSC 2011)

- A. three main racial groups of the Indian subcontinent
- B. three main linguistic divisions into which the languages of India can be classified
- C. three main styles of Indian temple architecture
- D. three main musical Gharanas prevalent in India

21. Which of the following was held by the Supreme Court in Indra Sawhney v Union of India case?

1. Economic backwardness is not a criteria for providing reservation.
2. Reservation can be provided only at the time of recruitment, and not at the time of the promotions.
3. Reservation cannot exceed 50% under any circumstance as it was needed to ensure "efficiency" in administration.

Select the correct option from below:

- A. 1 and 2 only
- B. 1 and 3 only

- C. 2 and 3 only
- D. All of the above

22. The Constitution (One Hundred and Second Amendment) Act, 2018 deals with:

- A. Withdrawal of political reservation in favour of Anglo Indians.
- B. Providing constitutional status to National Commission for Backward Classes (NCBC).
- C. 10% reservation in government jobs and educational institutions for the economically weaker section in the unreserved category.
- D. Implementation of Goods and Services Tax.

23. Which of the following statements is/are correct?

- 1. Department of Military Affairs (DMA) is headed by the Chief of Defence Staff, as its ex-officio secretary.
- 2. Officers from the Army, Navy and the Air Force are posted as Joint Secretaries in the Department of Military Affairs (DMA).
- 3. Department of Military Affairs (DMA) is an independent department directly under the command of the Prime Minister.

Options:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. All of the above

24. Consider the following statements:

- 1. MRIs (Magnetic Resonance Imaging) use radio waves and CT (Computed Tomography) scans use X-rays.
- 2. CT scans can spot blood clots while X-rays cannot.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

25. Which of the following statements is/are correct regarding Brahmo Samaj? (UPSC 2012)

- 1. It opposed idolatry.
- 2. It denied the need for a priestly class for interpreting the religious texts.

- 3. It popularized the doctrine that the Vedas are infallible.

Select the correct answer using the codes given below:

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. 1, 2 and 3

26. With reference to Uranium, which of the following statements is/are correct?

- 1. It is weakly radioactive because all isotopes of uranium are unstable.
- 2. In India, only public sector companies under the Government of India are allowed to explore and mine atomic minerals like Uranium.
- 3. The largest deposits are found in China, South Africa, and Argentina.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

27. Consider the following Pairs:

Tiger Reserve	State
1. Anamalai Tiger Reserve	Tamil Nadu
2. Satkosia Tiger Reserve	Odisha
3. Pilibhit Tiger Reserve	West Bengal

Which of the above pairs is/are correctly matched?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

28. Which of the following statements about Darwin Port is/are correct?

- 1. It is a port located on the South Western coast of Australia.
- 2. The US-owned Landbridge Group had won the bid for a lease of Port Darwin and the port hosts the annual naval exercise between the USA and Australia.

Options:

- A. 1 only
- B. 2 only

- C. Both
- D. None

29. Dahla Dam recently seen in news is in

- A. Iran
- B. Pakistan
- C. Tajikistan
- D. Afghanistan

30. With reference to National Legal Services Authority, consider the following statements: (UPSC 2013)

1. Its objective is to provide free and competent legal services to the weaker sections of the society on the basis of equal opportunity.
2. It issues guidelines for the State Legal Services Authorities to implement the legal programmes and schemes throughout the country.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

31. Which of the following statements is/are correct?

1. The Union Territories (UT) of Puducherry and Delhi are the only two UTs with legislative assembly.
2. These Union territories can make laws on any subject in the State List only.
3. The President can establish a high court for a union territory or put it under the jurisdiction of the high court of adjacent state.

Options:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 only
- D. None

32. Kabasura Kudineer recently seen in news is a/an

- A. Formulation used by Siddha practitioners for managing respiratory health
- B. Ayurvedic medicine for nerve regeneration

C. Ayurvedic formulation for the management of Diabetes

D. Ayurvedic herb which acts as a blood purifier and detoxifier

33. Which of the following statements about Beyond Visual Line of Sight (BVLOS) is/are correct?

1. Drones flying Beyond Visual Line of Sight are controlled by data provided by on-board instruments.
2. Deploying a drone for BVLOS costs more than several other methods such as manned helicopters and airplanes.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

34. With reference to Hajongs, which of the following statements is/are correct?

1. Hajongs are predominantly Buddhists and they speak Hajong, an Indo-Aryan language.
2. Hajongs are exogamous people who marry outside one's social group.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

35. Consider the following statements: (UPSC 2017)

1. India has ratified the Trade Facilitation Agreement (TFA) of WTO.
2. TFA is a part of WTO's Bali Ministerial Package of 2013.
3. TFA came into force in January 2016.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

36. The Central Authorities are responsible for which of the following?

1. Manufacture, sale and distribution of Drugs.
2. Approval of New Drugs.
3. Clinical Trials in the country.
4. Laying down the standards for Drugs.
5. Control over the quality of imported Drugs.

Options:

- A. 1, 2, 3 & 5
- B. 1, 3, 4 & 5
- C. 2, 3, 4 & 5
- D. All of the Above

37. Arnesh Kumar judgment is related to which of the following?

- A. Defection of legislators
- B. Shortage of oxygen in the hospitals
- C. Guidelines related to arrests
- D. Euthanasia

38. Match the following:

- | | |
|--------------------------------|-----------------|
| 1. Keibul Lamjao National Park | A) Manipur |
| 2. Kaziranga National Park | B) Chhattisgarh |
| 3. Kanger Valley National Park | C) Assam |
| 4. Bandipur National Park | D) Karnataka |

Select the correct option from below:

- A. 1-A, 2-C, 3-B, 4-D
- B. 1-A, 2-B, 3-C, 4-D
- C. 1-D, 2-C, 3-B, 4-A
- D. 1-B, 2-C, 3-A, 4-D

39. Consider the following countries/organisations:

1. Association of Southeast Asian Nations (ASEAN)
2. South Korea
3. Japan
4. Sri Lanka

Select the correct options India has Free Trade Agreements (FTAs) with:

- A. Only 1
- B. Only 1 & 2
- C. Only 1, 2 & 3
- D. All of the Above

40. The function of heavy water in a nuclear reactor is to

- A. Slow down the speed of neutrons
- B. Increase the speed of neutrons
- C. Cool down the reactor
- D. Stop the nuclear reaction

41. Which of the following is/are correct regarding Gopal Krishna Gokhale?

1. He became Congress president at its Banaras session in 1905.
2. He was regarded by Mahatma Gandhi as his political guru.
3. He started a weekly newspaper, 'The Hitavada', in Marathi.

Select the correct option from below:

- A. 1 only
- B. 2 only
- C. 1 and 2 only
- D. All of the above

42. Which of the following is/are incorrect regarding 'Dharmatma Gokhale'?

1. It was a book written by Bal Gangadhar Tilak as a tribute to Gopal Krishna Gokhale.
2. It was written in Sanskrit.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None

43. Which of the following is incorrect regarding Rabindranath Tagore?

- A. Rabindranath Tagore was awarded the Nobel Prize for Literature in 1913 for Gitanjali.
- B. In 1874, Tagore's poem Abhilaash was published anonymously in a magazine called Tattobodhini.
- C. In 1905, following the partition of Bengal, Tagore renounced his knighthood.
- D. In 1921, Rabindranath Tagore established Viswabharati University.

44. Which of the following amendments were made to the Foreign Contribution Regulation Act (FCRA) in 2020?

1. Foreign contribution must be received only in an account designated by the bank as an "FCRA account" in the Delhi branch of the State Bank of India.
2. The government may conduct an inquiry before renewing the FCRA certificate to ensure that the person making the application is not indulging in activities aimed at religious conversion.
3. A person who receives foreign contribution must not use more than 20% of the contribution for meeting administrative expenses.

Select the correct option from below:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. All of the above

45. Consider the following areas: (UPSC 2012)

1. Bandipur
2. Bhitarkanika
3. Manas
4. Sunderbans

Which of the above are Tiger Reserves?

- A. 1 and 2 only
- B. 1, 3 and 4 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

46. Which of the following statements regarding Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) is/are correct?

1. PMGKAY is a part of Pradhan Mantri Garib Kalyan Package (PMGKP) to help the poor fight the battle against Covid-19.
2. The scheme is aimed at providing each household covered under the National Food Security Act with an additional 5 kg grains (wheat or rice) for free, in addition to the 5 kg of subsidised food grain already provided through the Public Distribution System (PDS).
3. The central Govt. and the state Govts will share the burden of expenditure on account of intrastate transportation in the ratio of 90:10.

Select the correct option from below:

- A. 1 only
- B. 1 and 2 only

C. 2 and 3 only

D. 1, 2 and 3

47. Consider the following statements regarding Tanjore paintings:

1. They are painted mostly on cloth and vellum.
2. They depict a liberal use of golden leaf.
3. Lord Krishna and his life is a major theme of these paintings.

Select the correct answer using the options given below:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

48. Which of the following is part of the 'Charter of Duties' of the Indian Coast Guard?

1. Safety and Protection of Artificial Islands and Offshore Terminals
2. Protection of Fishermen
3. Assistance to Fishermen in Distress at Sea
4. Preservation and Protection of Marine Environment
5. Prevention and Control of Marine Pollution

Select the correct option from below:

- A. 1, 2 & 3
- B. 1, 2, 3 & 4
- C. 2, 3 & 5
- D. All of the Above

49. Consider the following statements:

1. Jal Jeevan Mission is being implemented in partnership with States/UTs to provide safe tap water to every rural home by 2034.
2. Puducherry has become India's first 'Har Ghar Jal' UT by ensuring that every rural home in the Union Territory gets a household tap connection.
3. For Jal Jeevan Mission there is assured fund available under the 15th Finance Commission tied-grant to RLB/PRI for water & sanitation.

Which of the above statements is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. All of the Above

50. What is the role of ultraviolet (UV) radiation in the water purification systems? (UPSC 2012)

1. It inactivates/kills the harmful microorganisms in water.
2. It removes all the undesirable odours from the water.
3. It quickens the sedimentation of solid particles, removes turbidity and improves the clarity of water.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

51. Consider the following statements: (UPSC 2018)

1. In the first Lok Sabha, the single largest party in the opposition was the Swatantra Party.
2. In the Lok Sabha, a "Leader of the Opposition" was recognised for the first time in 1969.
3. In the Lok Sabha, if a party does not have a minimum of 75 members, its leader cannot be recognised as the Leader of Opposition.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

52. What are S&P, Moody's and Fitch, which are often seen in news and referred to as the 'Big Three'?

- A. Multinational private banks
- B. Legal consulting firms
- C. Credit rating agencies
- D. Multilateral lending institutions

53. Which of the following statements is/are correct?

1. Cyclonic activity is comparatively less intense in the Arabian Sea, as compared to the Bay of Bengal.
2. Arabian Sea cyclones are also relatively weak compared to those emerging in the Bay of Bengal.
3. But the number of cyclones that form in the Arabian Sea in a year is roughly the same as the number of cyclones that form in the Bay of Bengal.

Options:-

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2, and 3

54. Which of the following statements is/are correct?

1. Central Adoption Resource Authority (CARA) is an autonomous and statutory body mandated to monitor and regulate in-country and inter-country adoptions.
2. CARA is responsible for granting a 'no objection' certificate for all inter-country adoptions, pursuant to India becoming a signatory to the 1993 Hague Convention on Protection of Children and Co-operation in Respect of Inter-country Adoptions.
3. India is also a signatory to the UN Convention on the Rights of the Child.

Options:-

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

55. Which of the following are located to the west and east of Strait of Hormuz respectively?

- A. Persian Gulf and Gulf of Oman
- B. Arabian Sea and Iran
- C. Saudi Arabia and Kuwait
- D. Iran and Qatar

56. Which of the following countries are members of the Organisation of Islamic Cooperation (OIC)?

1. Saudi Arabia
2. Pakistan
3. India
4. Turkey

Options:-

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 1, 2 and 4 only
- D. 1, 2, 3 and 4

57. Consider the following statements: (UPSC 2016)

The India-Africa Summit

1. Held in 2015 was the third such Summit.

2. Was actually initiated by Jawaharlal Nehru in 1951.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

58. The Bolshevik Party and its revolution was concerned with which country?

- A. France
- B. Russia
- C. Venezuela
- D. Turkey

59. Which states/UTs are involved in the Cauvery river dispute?

- 1. Karnataka
- 2. Tamil Nadu
- 3. Kerala
- 4. Puducherry
- 5. Andhra Pradesh

Options:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 1, 2, 3 and 4 only
- D. 1, 2, 4 and 5 only

60. What is Iron Dome of Israel?

- A. A sacred religious site which is revered by both Palestinian Muslims and Israeli Jews
- B. An advanced cyber weapon developed by Israeli intelligence to target Iran's critical infrastructure
- C. A mobile all-weather air defense system designed to intercept and destroy short-range rockets and artillery shells
- D. Israel's naval blockade of Gaza strip to deny essential supplies to Hamas militants in the Gaza strip

61. Which of the following statement/s is/are correct?

- 1. The Index of Industrial Production (IIP) is compiled and published monthly by the National

Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation.

2. Index of Industrial Production (IIP) represents the status of production in the industrial sector for a given period of time as compared to a reference period of time.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

62. The terms 'Event Horizon', 'Singularity', 'String Theory' and 'Standard Model' are sometimes seen in the news in the context of -

- A. Observation and understanding of the Universe
- B. Study of the solar and the lunar eclipses
- C. Placing satellites in the orbit of the Earth
- D. Origin and evolution of living organisms on the Earth

63. Which of the following statements is/are correct?

- 1. The National Health Mission (NHM) is an exclusive healthcare programme for rural areas.
- 2. States have no role in its implementation, it is entirely executed by the Centre.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

64. Which of the following statements is/are correct?

- 1. Mucormycosis is a fungal infection caused by a group of moulds called mucormycetes.
- 2. Poor immunity, uncontrolled diabetes, steroid treatment are considered to be risk factors.
- 3. It is commonly referred to as Black Fungus and has been reported in patients recovering from COVID-19.

Options:

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. 1, 2 and 3

65. Who was referred to as 'Deenabandhu' for his contributions to the Indian independence movement?

- A. Bal Gangadhar Tilak
- B. Charles Freer Andrews
- C. Jotirao Govindrao Phule
- D. Madan Mohan Malaviya

66. What is the purpose of the National Register of Citizens (NRC)?

- A. To identify native and indigenous tribes and distinguish them from outsiders
- B. To document all the legal citizens so that the illegal immigrants can be identified
- C. To facilitate rehabilitation of those facing religious persecution in neighbouring countries
- D. None of the above

67. Consider the following statements: (UPSC 2019)

- 1. Most of India's external debt is owed by governmental entities.
- 2. All of India's external debt is denominated in US dollars.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

68. Which of the following statements regarding Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) Yojana is/are correct?

- 1. It is a 100 per cent centrally funded scheme under which Rs 6,000 is transferred in three equal installments to eligible farmer families in a year.
- 2. The responsibility of identifying the landholder farmer family eligible for benefit under the Scheme and uploading the data of the eligible beneficiaries on the PM-KISAN Portal is that of the States/UT Administrations.
- 3. Under the Scheme, the States/UTs are required to set up Grievance Redressal Committees for looking into the grievances related to the implementation of the scheme.
- 4. Data of grievances received/disposed of by the states is maintained centrally.

Options:

- A. 1, 2 & 3 only
- B. 1, 2 & 4 only
- C. 1 & 4 only
- D. All of the above

69. Which of the following can be considered competitive advantages of the red-eared slider over the native turtle species?

- 1. lower age at maturity
- 2. higher fecundity
- 3. larger adult body size

Select the correct option from below:

- A. Only 1
- B. Only 1 & 2
- C. Only 2 & 3
- D. All of the above

70. Consider the following statements:

- 1. The red-eared slider is traded illegally in India.
- 2. Continuous releasing of exotic pet turtles in natural ecosystems increases the risk of parasite transmission to native species.
- 3. Because of their omnivorous diet and ability to adapt to various habitats, the red-eared slider has a great potential for impacting indigenous habitats.

Which of the above statements is/are correct?

- A. 1 & 2 only
- B. 2 & 3 only
- C. Only 3
- D. All of the above

71. Consider the following:

- 1. African Forest Elephant
- 2. African Savanna Elephant
- 3. Asian Elephant

Which of the above has/have been categorised as critically endangered by the International Union for Conservation of Nature (IUCN)?

- A. Only 1
- B. Only 1 & 2
- C. Only 1 & 3
- D. All of the above

72. In India, if a religious sect/community is given "the status of a national minority", what special advantages it is entitled to? (UPSC 2011)

1. It can establish and administer exclusive educational institutions.
2. The President of India automatically nominates a representative of the community to Lok Sabha.
3. It can derive benefits from the Prime Minister's 15-Point Programme.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

73. Which of the following statement(s) regarding Zeolites is/are correct?

1. Zeolites do not occur naturally but are produced industrially on a large scale.
2. Zeolites are used as molecular sieves to create purified oxygen from air using its ability to trap impurities.
3. Zeolites are reusable

Options:

- A. 1 & 2
- B. 1 & 3
- C. 2 & 3
- D. All of the Above

74. Zeolites are used in the following:

1. Water softeners
2. Water filters
3. Odor control
4. Pet litter

Select the correct option from below:

- A. 1 & 2
- B. 1, 2 & 3
- C. 2 & 4
- D. All of the Above

75. Consider the following statements:

1. China is the fifth country to perform a successful soft landing successfully on Mars.
2. China's Tianhe Rover landed on the Moon in its first attempt.

3. India's Mangalyaan, launched in 2013, landed on the surface of Mars in its first attempt.

Which of the above statement(s) is/are correct?

- A. Only 1
- B. Only 1 & 2
- C. Only 1 & 3
- D. None of the Above

76. NASA's Perseverance rover is related to:

- A. Mars
- B. Moon
- C. Sun and its Influence on Earth
- D. Venus

77. Which one of the following is a purpose of 'UDAY', a scheme of the Government? (UPSC 2016)

- A. Providing technical and financial assistance to start-up entrepreneurs in the field of renewable sources of energy
- B. Providing electricity to every household in the country by 2018
- C. Replacing the coal-based power plants with natural gas, nuclear, solar, wind and tidal power plants over a period of time
- D. Providing for financial turnaround and revival of power distribution companies

78. Consider the following statements:

1. India formally recognized Israel in 1992 when full diplomatic relations were established between India & Israel.
2. No Indian Prime Minister has made an official visit to Israel.
3. India has never voted in support of Israel at the UN or any of its committees.

Which of the above statements is/are correct?

- A. Only 1
- B. 1 & 2 only
- C. 1 & 3 only
- D. None of the above

79. Which of the following is/are weapons India has purchased from Israel?

1. Heron
2. SPYDER
3. Chinook
4. Python

Select the correct option from below:

- A. 1 & 2 only
- B. 1 & 3 only
- C. 1, 2 & 3 only
- D. 1, 2 & 4 only

80. Consider the following statements:

1. Central Adoption Resource Authority (CARA) is an advisory body of the Ministry of Women & Child Development.
2. CARA is designated as the Central Authority to deal with inter-country adoptions.
3. India has not ratified the Hague Convention on Inter-country Adoption, 1993.

Which of the above statements is/are correct?

- A. Only 1
- B. Only 2
- C. Only 3
- D. All of the above

81. Consider the following statements:

1. National Tribunals Commission (NTC) is an independent autonomous body responsible for oversight as well as administration of tribunals, constituted in 2019.
2. The establishment of NTC was suggested by the Supreme Court in the Rojer Matthew case (2019).

Which of the above statements is/are incorrect?

- A. Only 1
- B. Only 2
- C. Both
- D. None

82. Which of the following National Parks is unique in being a swamp with floating vegetation that supports a rich biodiversity? (UPSC 2016)

- A. Bhitarkanika National Park
- B. Keibul Lamjao National Park
- C. Keoladeo Ghana National Park
- D. Sultanpur National Park

83. Consider the following pairs:

Terrorist Group	Region
1. Al-Badr	West Africa
2. Al-Shabaab	East Africa
3. Boko Haram	Nigeria

Which of the above is/are correctly matched?

- A. 1 and 3 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

84. With reference to carving out a new district in a State, which of the following statements is/are correct?

1. The power to create new districts or alter or abolish existing districts rests with the State Government with the consent of the Central Home Ministry.
2. It can be changed only by passing a law in the State Assembly.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

85. Farzad B gas field recently seen in news is in

- A. Qatar
- B. Tajikistan
- C. Iran
- D. Azerbaijan

86. Which of the following statements about Wholesale Price Index (WPI) is/are correct?

1. WPI-based inflation is used by the government in the preparation of fiscal, trade, and other economic policies.
2. Core inflation is the total inflation in an economy.
3. 2015-2016 is the base year for the Wholesale Price Index (WPI).

Options:

- A. 1 and 2 only
- B. 1 only

- C. 2 only
- D. 2 and 3 only

87. Consider the following statements regarding the Directive Principles of State Policy: (UPSC 2015)

1. The Principles spell out the socio-economic democracy in the country.
2. The provisions contained in these Principles are not enforceable by any court.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

88. Which one of the following statements is the best description of Minsk agreement?

- A. It is an agreement between Ukraine and Russia to resolve the conflict in eastern Ukraine
- B. It is an agreement between England and France to resolve the dispute over access to waters around the Jersey island
- C. It is an agreement between Armenia and Azerbaijan to resolve Nagorno-Karabakh conflict
- D. It is a collective defense treaty between Russia and seven other countries in Central and Eastern Europe

89. Which of the following is/are correctly matched?

1. Kerch Strait -Black Sea with the Sea of Azov
2. Strait of Messina- Tyrrhenian Sea with the Ionian Sea
3. Strait of Dover- North Sea with English Channel

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

90. Consider the following statements about Competition Commission of India (CCI):

1. Commission has suo moto power to enquire whether an anti-competitive agreement or abuse of dominant position causes or is likely to cause an appreciable adverse effect on competition.
2. It is a quasi-judicial body.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

91. With reference to Right To Information Act, which of the following statements is/are incorrect?

1. An applicant making request for information shall not be required to give any reason for requesting the information or any other personal details.
2. Intelligence and security organizations specified in the 2nd schedule of the Act are exempted from providing information in all the cases.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

92. A rapid increase in the rate of inflation is sometimes attributed to the "base effect". What is "base effect"? (UPSC 2011)

- A. It is the impact of drastic deficiency in supply due to failure of crops
- B. It is the impact of the surge in demand due to rapid economic growth
- C. It is the impact of the price levels of previous year on the calculation of inflation rate
- D. None of the statements (a), (b) and (c) given above is correct in this context

93. Which of the following has/have been accorded the Geographical Indication (GI) tag?

1. Suvarnarekha mango
2. Banganapalli mango
3. Gholvad Sapota

Options:

- A. 2 only
- B. 1, 2 and 3
- C. 1 and 3 only
- D. 2 and 3 only

94. With reference to President's Rule, which of the following statements is/are correct?

1. A proclamation imposing President's Rule must be approved by both the Houses of Parliament within three months from the date of its issue.
2. A law made by the Parliament or president or any other specified authority continues to be operative even after the President's Rule.
3. Chhattisgarh and Telangana are the only Indian states that have never slipped to President's rule.

Options:

- A. 1 only
- B. 2 and 3 only
- C. None
- D. 2 only

95. Consider the following statements about National Human Rights Commission (NHRC):

1. A person who has been Chief Justice of the Supreme Court, or a Judge of the Supreme Court can be the chairperson of the NHRC.
2. The chairperson and members of the NHRC will hold office for five years or till the age of seventy years.

Which of the above statements is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both
- D. None

96. Which of the following statements about Central Bureau of Investigation (CBI) is/are correct?

1. The CBI functions under the Ministry of Home Affairs.
2. With the nationalisation of the banks in 1969, the Public Sector Banks and their employees also came within the ambit of the CBI.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

97. With reference to the cultural history of medieval India, consider the following statements: (UPSC 2016)

1. Siddhas (Sittars) of Tamil region were monotheistic and condemned idolatry.
2. Lingayats of Kannada region questioned the theory of rebirth and rejected the caste hierarchy.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

98. Which of the following statements about pardoning powers of the Governor is/are correct?

1. The Governor can pardon, reprieve, respite, remit, suspend or commute a death sentence.
2. Governor does not have the power to pardon the sentence inflicted by a court-martial on the convict.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

99. A-76 recently seen in news is

- A. A team of research scholars visiting Antarctica in an attempt to measure pollution and climate change
- B. A project funded by the European Space Agency (ESA) to understand the pole's gravity field
- C. A large iceberg that has broken off from the Ronne Ice Shelf in Antarctica
- D. An experiment being conducted in the Southern Ocean, Antarctica, aimed at increasing CO sequestration through ocean iron fertilization

100. Consider the following statements:

1. Tropical cyclones have much more intense rainfall than temperate cyclones.
2. Tropical cyclones are surrounded by closed isobars, the isobars of a temperate cyclone are generally elongated.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

101. Which of the following is/are the advantages of Northern Sea Route (NSR)?

- 1. It could potentially cut the travel distance between East Asia and Western Europe.
- 2. Substantial reductions in transportation time.
- 3. Increased insurance costs and safety considerations.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

102. Recombinant DNA technology (Genetic Engineering) allows genes to be transferred

- 1. across different species of plants
- 2. from animals to plants
- 3. from microorganisms to higher organisms

Select the correct answer using the codes given below. [UPSC 2013]

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

103. "Bao-dhaan" recently in News is:

- A. A medium-grain rice, grown in Bhutan and the eastern Himalayas.
- B. Red parboiled rice variety grown in Palakkad district of Kerala.
- C. A GI-tagged variety of rice known for its strong aroma that is widely used in traditional Bengali cuisine.
- D. Iron rich red rice grown in Brahmaputra valley of Assam.

104. Consider these statements w.r.t Particularly Vulnerable Tribal Groups (PVTGs):

- 1. A separate category for Primitive Tribal Groups was created by the Bhuria Commission.
- 2. India has more than 100 Particularly Vulnerable Tribal Groups.

- 3. Andhra Pradesh has the highest number of PVTGs.

Which of the given statement/s is/are correct?

- A. 2 and 3 only
- B. 1 and 3 only
- C. 1 only
- D. None of the above

105. Which of the given statements w.r.t Globally Important Agricultural Heritage Systems (GIAHS) is/are correct?

- 1. It was conceptualized in 2002 during World Summit on Sustainable Development in Johannesburg, South Africa.
- 2. Koraput in Odisha known for Kayal cultivation is a recognised GIAHS site in India.
- 3. Kuttanad in Kerala and Kashmir valley's Pampore region are proposed to be recognised as GIAHS sites.

Options:

- A. 1 and 2 only
- B. 1 only
- C. 2 and 3 only
- D. 2 only

106. Which of the following is/are correctly matched?

- 1. Chipko Movement – Uttarakhand
- 2. Appiko Movement – Andhra Pradesh
- 3. Save Silent Valley Movement – Kerala
- 4. Jungle Bachao Andolan – Bihar

Choose the correct option:

- A. 1, 3 and 4 only
- B. 2 and 4 only
- C. 1 and 3 only
- D. 2 and 4 only

107. Which of the following statements is/are correct? (UPSC 2017)

Viruses can infect

- 1. bacteria
- 2. fungi
- 3. plants

Select the correct answer using the code given below.

- A. 1 and 2 only
- B. 3 only

- C. 1 and 3 only
- D. 1, 2 and 3

108. Which of the given statement/s is/are correct w.r.t National Crisis Management Committee (NCMC)?

1. Vice-chairman of the National Disaster Management Authority is the ex-officio chairman of the NCMC.
2. NCMC and Cabinet Committee on Security (CCS) are the key committees involved in the top-level decision-making with respect to Disaster Management (DM).
3. It coordinates the activities of the ministries in the central government and the state governments in ensuring disaster preparedness and relief operations.

Options:

- A. 1 and 3 only
- B. 2 only
- C. 1, 2 and 3
- D. 2 and 3 only

109. Which of the given statement/s w.r.t Spiralling whitefly is/are correct?

1. It is an invasive species native to Sri Lanka.
2. It predares upon fruit plants, vegetables and entomopathogenic fungi.
3. First reported in Kerala, it is now distributed throughout India except for Jammu and Kashmir.

Options:

- A. 1 only
- B. 2 and 3 only
- C. 3 only
- D. 1 and 2 only

110. Which of the given statement/s is/are correct?

1. Genome sequencing helps in understanding the role of mutations in increasing the virus's infectivity.
2. Coronavirus genome is made of RNA only.
3. The Human Genome Project is India's research effort to determine the sequence of the human genome and identify the genes that it contains.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 2 only

111. Which of the given pairs are correctly matched?

Cyclones	Suggested by
----------	--------------

- | | |
|------------|------------|
| 1. Yaas | Oman |
| 2. Nisarga | India |
| 3. Nivar | Bangladesh |
| 4. Burevi | Maldives |

Options:

- A. 1 and 3 only
- B. 1, 2 and 4 only
- C. 2 and 4 only
- D. 1 and 4 only

112. With reference to Asian Infrastructure Investment Bank (AIIB), consider the following statements: (UPSC 2019)

1. AIIB has more than 80 member nations.
2. India is the largest shareholder in AIIB.
3. AIIB does not have any members from outside Asia.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

113. With reference to Baul, which of the following statements is/are correct?

1. They are a group of mystic singing minstrels living in rural West Bengal and Bangladesh.
2. They belong to a devotional tradition influenced by Vaishnavism only.
3. Baul songs are listed under UNESCO's Intangible Cultural Heritage of Humanity.

Options:

- A. 1 only
- B. None
- C. 1 and 3 only
- D. 2 only

114. Consider the following statements:

1. Mount Nyiragongo is an active stratovolcano in the Philippines.
2. Barren Island is the only active volcano in India.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only

- C. Both
- D. None

115. Which of the following statements about International Atomic Energy Agency (IAEA) is/are correct?

1. It is an organization within the United Nations family.
2. It is headquartered in Geneva, Switzerland.
3. IAEA was awarded the Nobel Peace Prize in 2005.

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

116. Which of the following statements is/are incorrect?

1. Treasury bills can be issued by the Government of India only.
2. Dated securities are issued at a discount to their true (PAR) value and upon expiry, it's redeemed at its true value.
3. G-Secs can be used as collateral to borrow funds in the repo market.

Options:

- A. 1 and 2 only
- B. 2 only
- C. 2 and 3 only
- D. 3 only

117. With reference to 'National Skills Qualification Framework (NSQF)', which of the statements given below is/are correct? (UPSC 2017)

1. Under NSQF, a learner can acquire the certification for competency only through formal learning.
2. An outcome expected from the implementation of NSQF is the mobility between vocational and general education.

Select the correct answer using the code given below:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

118. Which of the given statements is/are correct w.r.t the GST Council?

1. The Chairperson of the Central Board of Excise and Customs (CBEC) is a permanent invitee to all proceedings of the GST Council and has one vote.
2. Each state has one vote, irrespective of its size or population.
3. Half of the total number of Members of the Council constitutes the quorum at its meetings.

Options:

- A. 1, 2 and 3
- B. 3 only
- C. 1 and 2 only
- D. 2 and 3 only

119. Which of the following can help in Carbon Sequestration?

1. Dumping of Iron in the upper ocean
2. Crop Rotation
3. Deep sea fishing

Options:

- A. 2 only
- B. 1 and 3 only
- C. 1 and 2 only
- D. None of the above

120. The search committee involved in making recommendation for the appointment of the Central Bureau of Investigation (CBI) director comprises:

1. Chief Justice of India
2. Leader of Opposition/Leader of the largest opposition party
3. Central Vigilance Commissioner
4. Home Secretary
5. Prime Minister

Options:

- A. 2, 3 and 5 only
- B. 3, 4 and 5 only
- C. 1, 2 and 5 only
- D. 1, 2, 3 and 4 only

121. Which of the following is/are fungal infections?

1. Mucormycosis
2. Cryptococcus
3. Histoplasmosis

4. Candida

Options:

- A. 1 only
- B. 1 and 4 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

122. Consider the following statements: (UPSC 2017)

1. In tropical regions, Zika virus disease is transmitted by the same mosquito that transmits dengue.

2. Sexual transmission of Zika virus disease is possible.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

123. Which of the given statement/s is/are correct?

1. Tides originate in deep sea under impact of crustal movement.

2. They occur on the impact of gravity of moon and the sun.

3. Gravitational force and centrifugal force give rise to tides.

Options:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 2 only

124. Which of the following is/are the importance of Mangroves?

1. Stabilize the coastal shores.

2. Enhance the natural recycling of nutrients.

3. Act as carbon sinks.

4. Reduce the turbidity of water.

Options:

- A. 1 and 3 only
- B. 2, 3 and 4 only
- C. 1, 2, 3 and 4
- D. 2 and 3 only

125. Arrange the following Islands in Lakshadweep from North to South:

1. Kavaratti

2. Agatti

3. Minicoy

4. Amini

Options:

- A. 4, 2, 1, 3
- B. 4, 1, 2, 3
- C. 1, 4, 2, 3
- D. 3, 4, 2, 1

126. Which of the given statement/s is/are correct?

1. Ahimsa, Karma and Nirvana are the three ratnas of Buddhism.

2. Right observation, right determination and right livelihood are a part of Buddha's Ashtangamarga.

3. Mahayana and Theravada are the two major sects of Buddhism created by Gautama Buddha.

Options:

- A. 1 and 2 only
- B. 2 only
- C. 1, 2 and 3
- D. None of the above

127. 'Net metering' is sometimes seen in the news in the context of promoting the

A. Production and use of solar energy by the households/consumers

B. Use of piped natural gas in the kitchens of households

C. Installation of CNG kits in motor-cars

D. Installation of water meters in urban households

128. Which of the following statements is/are correct?

1. National Highways Authority of India (NHAI) is an extra-constitutional body.

2. NH1 extends from Delhi to Amritsar.

3. NH7 is the longest National Highway in India.

Options:

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. 1, 2 and 3

129. With reference to the National Investigation Agency (NIA), which of the following statements is/are correct?

1. The agency is allowed to investigate offences committed outside India.
2. NIA can investigate terror cases across the country without having to get permission from the states.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

130. Which one among the following statements is incorrect with respect to International Solar Alliance (ISA)?

- A. The ISA is a coalition of solar resource-rich countries that lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn.
- B. It is the first full-fledged treaty-based international intergovernmental organization headquartered in India.
- C. The ISA membership is limited to countries that are partially or fully located within the tropics.
- D. The body is funded by voluntary contributions by its members and partner countries.

131. With reference to Coalition for Disaster Resilient Infrastructure (CDRI), which of the following statements is/are correct?

1. CDRI was launched by the President of the European Commission at the UN Climate Action Summit.
2. CDRI Secretariat is based in Madrid.
3. A large share of the estimated fund requirements to cover the core costs for the first five years was invested by Germany and France.

Options:

- A. 1 and 2 only
- B. 3 only
- C. None
- D. 1 and 3 only

132. What does venture capital mean? (UPSC 2014)

- A. A short-term capital provided to industries
- B. A long-term start-up capital provided to new entrepreneurs

C. Funds provided to industries at times of incurring losses

D. Funds provided for replacement and renovation of industries

133. Colour-coded notices such as red, blue, green, yellow, etc. are issued by which international organisation?

- A. World Trade Organisation
- B. World Bank
- C. Interpol
- D. UNEP

134. What does CARICOM, often seen in news, refer to?

- A. Private communication satellite developed by Indian students
- B. Regional organisation representing the Caribbean nations
- C. UN financing mechanism for disaster risk reduction
- D. Intelligence gathering and sharing arrangement of NATO countries

135. Which of the following statements about Rabindranath Tagore is/are correct?

1. Rabindranath Tagore was ideologically opposed to the Non-cooperation movement.
2. He wrote an essay – 'The Cult of the Charkha' – which offered a critique on the Gandhian ethic of "charkha-spinning" as an activity that could rejuvenate the Indian masses during the Indian independence movement.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

136. The State of the Global Climate Report is brought out by -

- A. World Meteorological Organization
- B. United Nations Framework Convention on Climate Change
- C. Intergovernmental Panel on Climate Change
- D. United Nations Environment Programme

137. In a given year in India, official poverty lines are higher in some States than in others because: (UPSC 2019)

- A. poverty rates vary from State to State
- B. price levels vary from State to State
- C. Gross State Product varies from State to State
- D. quality of public distribution varies from State to State

138. Which of the following statements regarding 'National AI Portal' is/are correct?

- 1. It is a joint initiative by the Ministry of Electronics and IT (MeitY), the National e-Governance Division (NeGD) and NASSCOM.
- 2. It serves as a central hub for AI-related news, learning, articles, events and activities, etc., in India and beyond.
- 3. The portal was launched in 2019.

Options:-

- A. Only 1
- B. Only 1 & 2
- C. Only 2 & 3
- D. All of the above

139. The 'Great Gatsby Curve' deals with:

- A. inflation
- B. unemployment
- C. inequality and inter-generation mobility
- D. None of the above

140. Which of the following are the three values of Olympism?

- A. excellence, friendship and respect
- B. excellence, friendship and honour
- C. fairness, teambuilding and equality
- D. discipline, inclusion and perseverance

141. Which of the following statements is/are correct?

- 1. An IAS officer may, with the concurrence of the state governments concerned and the central government, be deputed for service under the central government or another state government.
- 2. If there is a disagreement between the centre and state on the central deputation of an officer, the matter shall be decided by the Central Administrative Tribunal (CAT).

Options:-

- A. Only 1
- B. Only 2

- C. Both
- D. None

142. Consider the following statements: (UPSC 2012)

- 1. Union Territories are not represented in the Rajya Sabha.
- 2. It is within the purview of the Chief Election Commissioner to adjudicate the election disputes.
- 3. According to the Constitution of India, the Parliament consists of the Lok Sabha and the Rajya Sabha only.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 and 3
- C. 1 and 3
- D. None

143. Which of the following species are most likely to be seen at the Sundarbans?

- 1. Indian python
- 2. Irrawaddy dolphin
- 3. Hangul
- 4. Batagur baska

Select the correct option from below:

- A. 1 & 2
- B. 1, 2 & 3
- C. 2 & 4
- D. 1, 2 & 4

144. Consider the following:

- 1. Batagur baska
- 2. Irrawaddy dolphins
- 3. Gharial

Which of the above species is/are Critically Endangered?

- A. Only 1
- B. 1 & 2
- C. 1 & 3
- D. 2 & 3

145. Consider the following statements:

- 1. The Comptroller and Auditor General is the sole authority prescribed in the Constitution entrusted with the responsibility of audit of accounts of the Union and of the States.

2. The Executive does not have powers of direction in relation to Comptroller and Auditor General's audit mandate and its execution.

3. Audit is required to report only significant cases of irregularity and breach of rules, regulations and orders.

Which of the above statements is/are correct?

- A. Only 1
- B. 1 & 2
- C. 2 & 3
- D. All of the Above

146. YUVA, recently seen in news, is:

- A. a skill development program for youth below the age of 30
- B. an Author Mentorship programme to train young and budding authors
- C. a National Scheme of Incentive to Girls for Secondary Education
- D. none of the Above

147. Which of the following is/are the indicator/ indicators used by IFPRI to compute the Global Hunger Index Report? (UPSC 2016)

- 1. Undernourishment
- 2. Child stunting
- 3. Child mortality

Select the correct answer using the code given below.

- A. 1 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 and 3 only

148. Consider the following statements regarding the National Security Act (NSA):

- 1. The NSA is a preventive detention law that empowers only the Centre to detain a person to prevent him from acting in any manner prejudicial to national security.
- 2. Under NSA, a person could be kept in the dark about the reasons for his arrest for up to five days.

Which of the above statements is/are correct?

- A. Only 1
- B. Only 2
- C. Both
- D. None

149. Under 'The Sexual Harassment of Women at Workplace Act, 2013' which of the following circumstances may amount to sexual harassment?

- 1. implied or explicit promise of preferential treatment in her employment.
- 2. humiliating treatment likely to affect her health or safety.
- 3. implied or explicit threat about her present or future employment status.

Options:

- A. Only 1
- B. Only 1 & 2
- C. Only 2 & 3
- D. All of the above

150. Consider the following statements:

- 1. Indian Renewable Energy Development Agency (IREDA) is a Public Sector entity under the Ministry of New and Renewable Energy.
- 2. IREDA reported an all-time high annual Profit Before Tax (PBT) in 2020-21.
- 3. IREDA has been notified as a "Public Financial Institution" as well as a Non-Banking Financial Company (NBFC).

Which of the above statements is/are correct?

- A. Only 1
- B. Only 1 & 2
- C. Only 2 & 3
- D. All of the above

151. 'Camp David Accords' are related to which of the following countries?

- A. Israel and Egypt
- B. Israel and Saudi Arabia
- C. Israel and UAE
- D. Israel and Jordan

152. Which of the following are not necessarily the consequences of the proclamation of the President's rule in a State? (UPSC 2017)

- 1. Dissolution of the State Legislative Assembly
- 2. Removal of the Council of Ministers in the State
- 3. Dissolution of the local bodies

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

ANSWER KEYS

1	D
2	A
3	B
4	A
5	B
6	C
7	D
8	C
9	C
10	B
11	C
12	D
13	D
14	A
15	D
16	C
17	C
18	D
19	C
20	C

21	A
22	B
23	A
24	C
25	B
26	A
27	B
28	D
29	D
30	C
31	D
32	A
33	A
34	D
35	A
36	C
37	C
38	A
39	D
40	A

41	C
42	C
43	C
44	D
45	B
46	A
47	B
48	D
49	C
50	A
51	B
52	C
53	B
54	D
55	A
56	C
57	A
58	B
59	C
60	C

61	C
62	A
63	D
64	D
65	B
66	B
67	D
68	A
69	D
70	B
71	A
72	C
73	C
74	D
75	D
76	A
77	D
78	D
79	D
80	B

81	C
82	B
83	B
84	D
85	C
86	B
87	C
88	A
89	D
90	C
91	B
92	C
93	B
94	B
95	B
96	B
97	C
98	B
99	C
100	C

101	A
102	D
103	D
104	D
105	B
106	A
107	D
108	D
109	C
110	A
111	D
112	A
113	C
114	B
115	C
116	B
117	B
118	D
119	C
120	C

121	D
122	C
123	B
124	C
125	A
126	B
127	A
128	A
129	C
130	C
131	C
132	B
133	C
134	B
135	C
136	A
137	B
138	B
139	C
140	A

141	A
142	D
143	D
144	C
145	B
146	B
147	C
148	B
149	D
150	D
151	A
152	B

MAINS PRACTICE QUESTIONS

GS Paper 1

Geography

1. Has Climate change led to cyclones becoming fiercer and frequent? Examine. (10 marks, 150 Words)

Social Issues

1. The COVID-19 pandemic is having devastating social and economic consequences further exacerbating inequalities and creating new vulnerabilities for women. Comment. (10 Marks, 150 Words)
2. Technological changes in education and health are worsening inequities. In the light of this statement, evaluate the rising inequality in a digital world. (15 marks, 250 words)
3. What lessons do the communal tensions in Ireland offer to India? (15 marks, 250 words)

GS Paper 2

Polity

1. The Supreme Court declared the Maratha quota to be unconstitutional as it violates the right to equality. Critically evaluate. (15 marks, 250 words)
2. Explain the recent Supreme Court ruling on the 102nd Constitutional Amendment with respect to identifying 'Socially and Educationally Backward' Classes (SEBC). Will it deprive State governments of their power to identify SEBCs? Evaluate. (15 Marks, 250 Words)
3. Has the Judiciary usurped the powers of the Executive by constituting the 12-member National Task Force (NTF) to ensure oxygen supply? Examine. (10 Marks, 150 Words)
4. A fundamental problem in the GST is the erosion of 'trust' between the States and the Centre. Critically evaluate. (15 marks, 250 words)
5. The Information Technology Rules, 2021 go against landmark judicial precedents that uphold key rights. Evaluate. (15 marks, 250 words)
6. Speech is free, but it is a freedom that comes with responsibility. In the light of this statement, examine the proposed hate speech provisions under the IPC. (15 marks, 250 words)
7. Imprisonment practices need a relook so that the police do not effect unnecessary arrests. Evaluate the statement in the context of prison reforms. (15 marks, 250 words)
8. The Governor of a state wears two hats, and therefore, dilemmas have arisen in practice. Comment. (10 Marks, 150 Words)
9. With foreign aid pouring in for India, discuss the hurdles in accessing foreign COVID-19 aid. (10 marks, 150 Words)
10. Discuss the concerns associated with abolishing appellate tribunals and the need for establishing the National Tribunal Commission. (10 Marks, 150 Words)
11. The casual resort by the police to the sedition clause continues to cause concern. Critically evaluate. (15 marks, 250 words)
12. The Centre's attempt to introduce notable reforms in the system should not be at the cost of bypassing the State Governments. In the light of the statement, discuss the significance of cooperative federalism. (10 Marks, 150 Marks)

Governance

1. The universalization of social security remains an unfulfilled aspiration in the new code on social security. Examine the statement. (15 marks, 250 words)
2. Despite predictions that 'New Public Management' would establish itself as the new paradigm of Public Administration, the future of governance is new public governance. Do you agree? Substantiate. (15 Marks, 250 Marks)
3. There is a growing demand for India to write laws on data protection and privacy in the wake of the WhatsApp privacy policy. Examine. (10 Marks, 150 Words)
4. Discuss the importance of the media in delivering 'Information as a Public Good' and list out the international efforts in defending media rights. (10 Marks, 150 Words)
5. COVID-19 has thrown light on the presence of migrant labour laws and policies and has also exposed the absence of administrative oversight and execution. Substantiate. (10 marks, 150 Words)
6. Examine how India's rural areas have been hit hard by the pandemic and what in your opinion are the upcoming challenges? (15 marks, 250 words)
7. The Mid Day Meal Scheme is a hugely popular scheme that has already shown a lot of potential. It is imperative to strengthen it by making further investments towards improved quality. Comment. [GS-2, Polity and Governance] (15 marks, 250 words)
8. Write a note on the new Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021. Examine the possible consequences with the non-compliance. (15 Marks, 250 Words)
9. The pandemic has led to a surge in black marketeering of essential drugs and medicines. Suggest measures to dismantle these networks. (15 marks, 250 words)
10. The Protection of Children from Sexual Offences (POCSO) Act has to be suitably expanded to account for the reporting of historical child sexual abuse. Analyse. (10 Marks, 150 Words)
11. Pandemic leaves many children orphaned, but citizens must take the legal route to adopt them. Discuss the due process and procedures involved in an adoption. (15 Marks, 250 Words)

Education

1. There is an urgent need to plan for disability-inclusive education, during and after the COVID crisis. Comment. (10 Marks, 150 Words)
2. COVID-19 is an opportunity to bridge the digital gap and reform the education system in India. Discuss. (10 Marks, 150 Words)

Health

1. The battle against COVID-19 should be used as an opportunity to meet India's 'One Health' targets. Discuss. (15 Marks, 250 Words)
2. What is the Role of CT scan in diagnosis of COVID-19? Discuss the potential risks associated with excessive use of scanning. (10 Marks, 150 Words)
3. Serological survey offers key insights into the changing dynamics of SARS-CoV-2 infection and allows policymakers to make informed decisions. Comment. (10 Marks, 150 Words)
4. Discuss the importance of understanding Covid's origin and suggest measures to prevent the spread of similar infections in the future. (10 Marks, 150 Words)
5. Is it time for India to have a National Health Service based on the British model? Discuss. (15 marks, 250 words)
6. India's healthcare system has been facing a serious human resource crunch during the pandemic. What measures do you suggest to reform the medical sector? (15 marks, 250 words)

International Relations

1. Examine in detail the latest Israel-Palestinian clashes. (15 marks, 250 words)
2. During a discussion at the United Nations Security Council on the latest Israel-Palestine clashes, India as a nonpermanent member, reaffirmed its support for Palestine, but stopped short of making any direct reference to the status of Jerusalem or the future of Israel-Palestine borders. Does this indicate that India's Palestine policy is evolving? (15 marks, 250 words)
3. Write a note on Cross-Border Conflict in Post-Soviet Central Asia and examine the causes of the conflict. (10 Marks, 150 Words)
4. Controlling the threat posed by North Korea will require a strategic approach that combines North Korea's economic worries and dialogue. Examine. (10 Marks, 150 Words)
5. India's handling of the pandemic could be a stumbling block to the country's claim to regional primacy. Do you agree? Justify. (15 marks, 250 Words)
6. Write a detailed note on the India-Sri Lanka fishermen dispute. (15 marks, 250 words)
7. The U.S. supported patent waiver in the fight against COVID has the potential to bring in much needed global health equity. Evaluate. (15 marks, 250 words)
8. ASEAN has created a rare pathway to help Myanmar move forward from its political crisis. Examine. (15 marks, 250 words)
9. The unconditional withdrawal of all US troops from Afghanistan could push China to the centre stage and negatively impact the future of Afghanistan. Discuss. (15 Marks, 250 Words)
10. Frequent political turmoil in Nepal has often compromised Indian interests. In the light of the latest political crisis, examine the way forward for India. (15 Marks, 250 Words)
11. India should remain fully engaged with Nepal at all levels and across the political spectrum. The safeguarding of India's vital interests demands such sustained engagement. A hands-off policy will only create space for other external influences, some of which, like China, may prove to be hostile. Discuss. (15 marks, 250 words)
12. Growing vaccine nationalism in major vaccine producing countries will continue to have ripple effects on Covid-19. In the light of the statement, discuss the global approach to vaccine equity. (15 Marks, 250 Words)
13. Write a detailed note on enforced disappearances with an examination of related international laws and conventions. (15 Marks, 250 Words)
14. Is a thaw in the India-Pakistan trade relations possible in the current context? Discuss. (15 Marks, 250 Words)

GS Paper 3

Economy

1. Discuss the measures taken by the RBI to reduce the burden on healthcare providers during the pandemic. (15 Marks, 250 Words)
2. The second wave of the pandemic has amplified the issue of rent which does not draw as much attention as food and income support do. Elucidate. (15 Marks, 250 Words)
3. TRIPS waiver is not a magic pill as there are non-IP challenges in making vaccines and drugs accessible to the world population. Illustrate with relevant examples. (10 Marks, 150 Words)
4. The character and consequences of the economic crisis of 1991 and 2021 are different. Analyse. (15 Marks, 250 Words)
5. What do you understand by 'Voluntary Licensing (VL)? Should countries and companies explore VL to enhance access to essential COVID-19 vaccines and medicines? Discuss. (15 Marks, 250 Words)
6. The spike in COVID cases and the subsequent lockdowns has led to Job losses and created an unemployment Crisis. Illustrate with examples the initiatives taken by the Governments to compensate wage losses and also support livelihood. (15 marks, 250 Words)

Environment & Ecology

1. Environmental fiscal reforms will reduce pollution and generate resources for financing the health sector. In light of this statement, evaluate the viability of an environmental tax in India. (15 Marks, 250 Words)

Disaster management

1. Accurate forecasts and resilience building hold the key to handling severe cyclones. Evaluate. (15 Marks, 250 Words)
2. In the light of the increasing frequency and intensity of tropical cyclones, discuss the cyclone preparedness and effective mitigation strategies required to deal with future cyclones. (15 marks, 250 Words)
3. Discuss the measures that need to be adapted to prevent fire hazards in hospitals during the COVID-19 health crisis and suggest post-disaster recovery plan. (10 Marks, 150 Words)

GS Paper 4

1. Explain Transformational Leadership and Situational Leadership with the help of relevant examples. (10 Marks, 150 Words)

INTERVIEW TRANSCRIPT

Candidate Details:

- Name: Pulkit Garg
- AIR: 27 (CSE-2015) 490, (CSE 2014) - Indian Railway Traffic Service (IRTS)
- Hobbies: Playing badminton and squash, jogging
- Education: B Tech, Civil Engineering, IIT Delhi
- Home town: Delhi

Questions asked by the interview board:

- Chairman of the Interview Board: Shri HC Gupta

Questions based on work experience

- Why do you want to leave IRTS?
- What is your opinion about scrapping of recruitment into railways through Special Class Railway Apprentice Examination (SCRA)?
- What measures would you take to prevent a railway accident, and in case an accident happens, what are the steps to minimize injuries and casualties?

Economy based

- What is Make in India?
- What is Skill India?

About educational background

- Why do you think IITs are institutes of excellence, better than other institutes?

Questions on Personality and Ethics

- When posted in a district, if people request for illegitimate demands, how would you tackle them?

Other Questions

- What does your name mean?
- Since he was from Delhi questions were asked regarding 3 major problems in the health sector and solutions to those problems.
- What is the capital of Assam?