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GENERAL STUDIES (TEST CODE : 1864)

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Medium Eng./Hindi	English	Registration Number	1214161
Center		Date	

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
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20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

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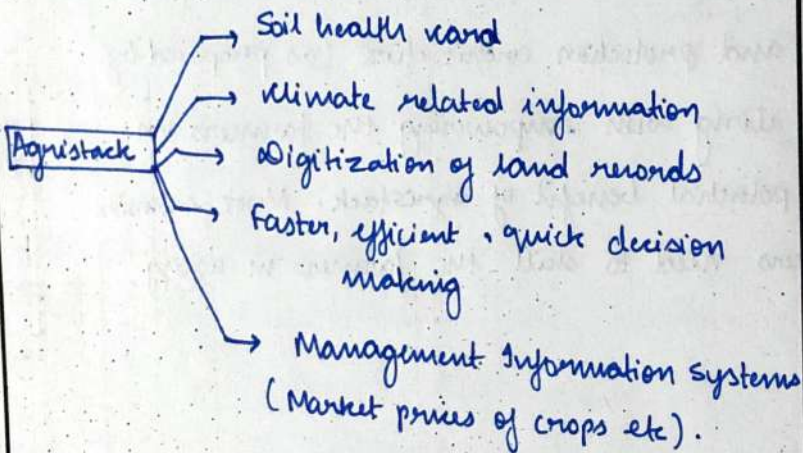
1. Agristack can serve as a foundation to build innovative agri-focused solutions; thus enabling creation of a better ecosystem for agriculture in India. Comment. Also, discuss the concerns associated with it.

(150 words) 10

एग्रिस्टैक अभिनव कृषि-केंद्रित समाधान प्रदान करने के लिए एक आधार के रूप में कार्य कर सकता है, इस प्रकार यह भारत में कृषि के लिए एक बेहतर पारिस्थितिकी तंत्र के निर्माण को सक्षम बनाता है। टिप्पणी कीजिए। साथ ही, इससे संबंधित चिंताओं की भी विवेचना कीजिए।

Ans.

NITI Aayog and Ministry of Agriculture have recently rolled out the Agristack, also called as farm stack. It is collection of data associated with farms - including land records, convergence of schemes, type of crops, insurance etc.



It will create better agri-focused solutions by-

1. Helping in evidence based decision making.
2. Bringing all related information at one place.
3. Precision farming, etc.

However, the concerns associated with it are-

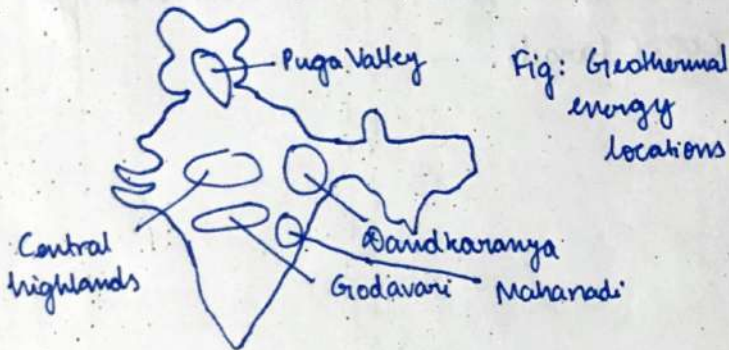
1. Monopoly of corporate sector - The market may become buyer based instead of seller based. Since the corporates will already know which crop is grown by farmer so they may manipulate it's prices.
2. Data protection and security issues, and breach of privacy.

Therefore, we need to enact the data empowerment and protection architecture (as proposed by NITI) along with empowering the farmers on the potential benefit of agristack. More extension workers need to skill the farmers in using it.

2. Despite the advantages of geothermal energy, it has not been adopted on a wide scale in India. Discuss. (150 words) 10

भूतापीय ऊर्जा के लाभों के बावजूद, इसे भारत में व्यापक पैमाने पर नहीं अपनाया गया है। चर्चा कीजिए।

Ans. Recently ONGC has opened up geothermal energy conversion plant at Puga valley in Ladakh. Geothermal energy is derived from the heat preserved inside Earth, used to convert it into electrical energy.



Despite the advantages it has not been adapted on a wide scale in India, because-

1. Lack of development of technology in harnessing the geothermal energy.
2. Lack of infrastructural development - in terms of pipes and grid connectivity.
3. Lack of an effective policy about harnessing geothermal energy.

4. Lack of research and development - given that we spend only 0.7% of our GDP on R&D.

Therefore, we need more concerted, integrated, co-ordinated approach for better policy formulation in this regards. Further, technology transfer from Denmark, Germany will pave the way for harnessing it's potential, thereby meeting our COP26 targets.

3. While the WTO seeks elimination of subsidies that contribute to IUU (illegal, unreported and unregulated) fishing, there are multiple concerns around it. Discuss while highlighting India's stand on the issue.

(150 words) 10

अहाँ IUU (अवैध, अनरिपोर्टेड या असूचित और अनियमित) मत्स्यन सन्धिडी को समाप्त करना संघारणीय मत्स्यन को सुनिश्चित करने हेतु परिकल्पित है, वहीं इसके इर्द-गिर्द अनेक चिंताएं विद्यमान हैं। इस मुद्दे पर भारत के रुख को रेखांकित करते हुए इसकी विवेचना कीजिए।

Ans. European countries had proposed to ban the IUU (illegal, unreported and unregulated) fishing at WTO (world trade organisation). This is the voice of all developed nations whose corporates are involved in fisheries sector.

But given for India, that 28 million of our people depend on fisheries, 90% of them belonging to unorganised sector. There are some concerns regarding it.

1. India wants to continue the special and Differential Treatment to support its marginalised fish farmers.
2. India has proposed that the developed nations must not go beyond their exclusive economic zone (260 nm) for exploiting fishing. This has been accepted.

3. India will continue to support with giving subsidies to it's small fish farmers. However, we are strictly against the illegal, unreported and unregulated fishing.

The recent visit of WTO representative to India has assured that the voice of developing nations will be heard. Therefore, a policy that represents interests of all nations must be formulated in this regard.

4. There is a view that the current agricultural policies in India are biased against rainfed agriculture. Comment. Also, identify government initiatives in this regard. (150 words) 10

यह विचार दिया जाता है कि भारत में वर्तमान कृषि नीतियां सिंचित कृषि के पक्ष में हैं।
टिप्पणी कीजिए। साथ ही, इस संबंध में सरकारी पहलों की पहचान कीजिए।

Ans. Around 70% of Indian agriculture is rainfed or monsoon dependant. Only 30% is fed with irrigational channels and tubewells, much of which have already dried as ground water depletes.

Government's agriculture policies -

1. Per drop more crop - with the help of PM Krishi Sinchayi yojana.
2. Promotion of efficient water delivery channels like drip irrigation and sprinkler irrigation.

However, in regards with rainfed agriculture, government has initiated steps such as -

1. Water harvesting techniques - such as Badi in Assam.
2. Har Medh Par Pedh - This translates to growing trees that help in conservation of ground water.

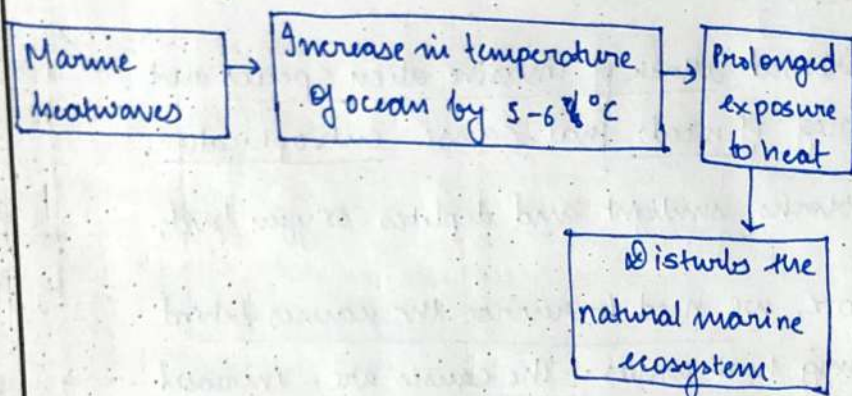
3. River linking schemes - Recently Ken Betwa linking was formulated. This will ensure better coverage in rainfed areas.
4. Four water concept - It is using local knowledge and participation by conserving river water, soil moisture, ground water and rain water.
5. Buldhana project in Maharashtra - where NHAI has dug pits to take out the mud for construction of roads. While these pits serve as store of rain water.

Therefore, government is trying to cover more areas under irrigation and simultaneously promoting farming techniques suited to the agro-climate zone of the area.

5. Enumerate the major causes behind marine heatwaves. Also, discuss their impact on the ocean ecosystem. (150 words) 10

एकल-उपयोग वाले प्लास्टिक क्या हैं और ये पर्यावरण के लिए खतरा क्यों हैं? भारत में एकल-उपयोग वाले प्लास्टिक को चरणबद्ध रीति से समाप्त करने से संबंधित चुनौतियों पर चर्चा कीजिए।

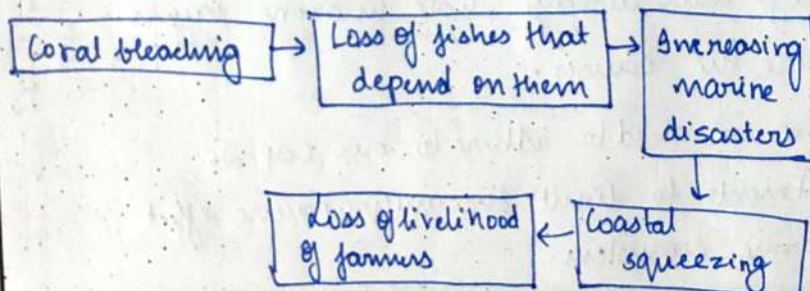
Ans. The recent study published in Journal 'Nature' highlighted that marine heatwaves are a growing cause of concern both for biodiversity and whole ocean ecosystem.



The impacts on marine ecosystem are as follows-

1. Damaging of coral reefs (Increased bleaching) -

It is found that algae are leaving the corals due to prolonged heat resulting into coral bleaching.



2. Impact on marine animals - The fishes are unable to adapt to increasing heat since this means increased demand of oxygen which their gills are not capable of performing.

3. Loss of seals due to melting arctic ice caps - This results into loss of population of polar bears.

4. Increased attack of invasive alien species and growing of weeds that cause eutrophication. This blocks sunlight and depletes oxygen levels.

Therefore, we need to reverse the causes behind increasing heat waves. The causes are - increased global warming (already 1.2°C higher), dumping of warmer effluents from industrial wastes, diversion of fresh water, release of Green house gases, weakening of magnetic field due to which Sun rays enter directly, hole in ozone layers etc are the causes.

Therefore we need to adhere to our COP 26 commitments to limit the anthropocene effect on marine ecosystem.

6. Aseismic structures are touted as a viable solution to combat earthquake destruction. In this context, highlight the need of a National Program on Seismic Retrofitting of Buildings and Structures in India. **(150 words) 10**

भूकंप के विनाश से निपटने के लिए भूकंपीय संरचनाओं को एक व्यवहार्य समाधान के रूप में माना जाता है। इस संदर्भ में, भारत में भवनों और संरचनाओं के भूकंपीय पुनर्निर्माण पर राष्ट्रीय कार्यक्रम की आवश्यकता को रेखांकित कीजिए।

Ans. Earthquakes are violent, catastrophic and often destructive shaking of Earth's crust. Approx 60% of our area is seismically active.

Therefore, to mitigate and prevent the ill-effects of Earthquake, aseismic structures are proposed.

1. Retrofitting of buildings - IIT Kanpur is undergoing research in this regards, given that Japan has successfully tested the technology.
2. Use of aseismic materials like flexible steel and making the structure monolith.
3. Using energy and shock absorbers in foundation to make the structure elastic.
4. Use of ball bearings above pile caps, provides the scope for movement of building.

Therefore, in order to give effect to the above suggestions, we need to make an effective

National Strategy on Retrofitting of Buildings and Structure in this regards. The National Building Code 2016 and IS Code 1893:2002 will need to be reformed and redrafted on this basis.

Benefits of Retrofitting

- Prevent falling of roof even at Earthquakes greater than magnitude 10 on Richter scale.
- Prevents loss of lives.

Therefore, effective research, regulation and Policy formulation is the need of the hour.

7. Despite the risks associated with cryptoassets, their underlying advantages should not be overlooked. Discuss. (150 words) 10

क्रिप्टो-एसेट्स से जुड़े जोखिमों के बावजूद, उनके अंतर्निहित लाभों की उपेक्षा नहीं की जानी चाहिए। चर्चा कीजिए।

Ans. Government (cabinet) has recently tabled the Regulation of Crypto Assets Bill. In this crypto currency is been regarded as crypto assets.

Government is not completely banning the crypto currency, but is allowing regulation of crypto assets exchange platform by SEBI.

Risks associated with crypto assets -

1. Use of cryptocurrency for illegal money laundering and terror financing.
2. Loss of revenue to state exchequer.
3. Lack of transparency, traceability, and monitoring over transactions done via crypto assets.
4. Lack of centralised control.

However, the flip side of coin presents certain advantages of crypto assets, which are as follows -

1. Using crypto asset as a medium of secondary investments - in terms of bonds and shares.
2. Using and harnessing the underlying blockchain technology. For example, in National Digital Health Mission, blockchain is used.
3. Prevent hoarding of gold.
Even government has said that it will not be banning crypto assets. Therefore, any decision must be made considering both sides of the coin.

8. Virtual Reality and Augmented Reality (VR and AR) have massive innovation potential across a wide range of industries and research fields in India. Discuss. (150 words) 10

हालांकि, कृषि जैव प्रौद्योगिकी में हमारे कुछ सबसे महत्वपूर्ण मुद्दों के समाधान की अपार क्षमताएं हैं, लेकिन भारत में इसके विकास के समक्ष अनेक बाधाएं विद्यमान हैं। चर्चा कीजिए।

Ans: Virtual Reality implies creating a 3D virtual space that is separated from reality. Use of headsets and remote controls is done.

Augmented reality, on the other hand is enhancement to the real world by using Artificial Intelligence & Machine Learning tools.

The innovation potential of AR and VR is as follows -

1. In medical field : It is now possible to attend a live surgery using AR headsets even in a crowded ICU.

Creation of holograms to engage the patients to help them recover better.

2. In space sector : Digantara is using AR and VR in order to fast track the efficient monitoring of space assets. This will promote space situational awareness.

3. In educational sector : Imagine Shaheed Vin Bhagat Singh ji's photo speaking himself about his journey in Nationalism and Indian freedom.

Even the learning has also become more interesting since students can now see things visually using AR and VR.

4. In defence sector : For assessing the terrain for deployment of missiles. It is also used for developing Daksh like robots for bomb diffusion.

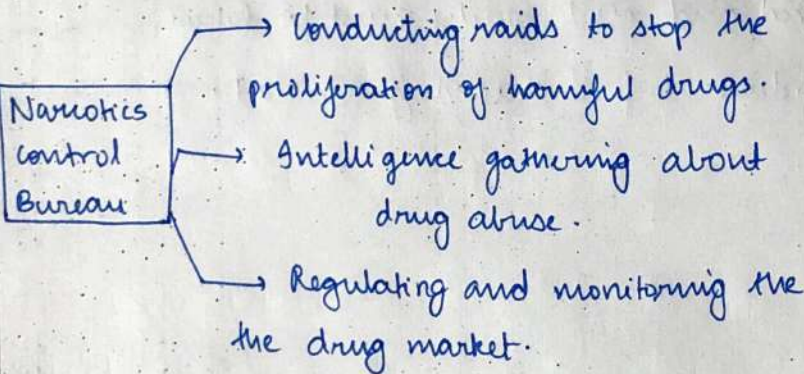
AR and VR are also the backbone behind the new frontier of technology i.e Metaverse. They can really transform the user experience and generate effective results.

9. Discuss the role and functions of Narcotics Control Bureau (NCB) and examine whether the NDPS Act, 1985 needs to be remodelled.

(150 words) 10

नारकोटिक्स कंट्रोल ब्यूरो (NCB) की भूमिका और कार्यों पर चर्चा कीजिए तथा परीक्षण कीजिए कि क्या NDPS अधिनियम, 1985 को पुनर्निर्मित करने की आवश्यकता है।

Ans. Narcotics control Bureau was set up under Narcotic Drugs and Psychotropic Substances Act 1985 in order to fulfil the DSP enshrined under Article 47 of the constitution.



The NDPS Act 1985 is recently been considered for amendment -

1. To decriminalise the personal holdings of drugs if found in small quantities.
2. To provide for stricter, efficient, effective monitoring of drug abuse cases in India.
3. To co-ordinate with neighbouring countries

- to crack down on drug mafia.
4. Fixing the time limit for resolving the cases amicably.

In my opinion, we need to strictly enforce the proposed regulations. However, there shall be no legal loophole left in the law. For this, the definition of 'small quantity' must be well defined and civil society must be taken into confidence before amending this act.

10. Recent events have raised concerns around the issue of surveillance in India. Do you think surveillance is a necessary evil to tackle crime and terror? Discuss the various arguments on the issue. (150 words) 10

हाल की घटनाओं ने भारत में निगरानी के मुद्दे को लेकर चिंता बढ़ा दी है। क्या आपको लगता है कि अपराध और आतंक से निपटने के लिए निगरानी एक आवश्यक बुराई है? इस मुद्दे पर विभिन्न तर्कों की विवेचना कीजिए।

Ans. Delhi has installed more than 2000 CCTV cameras in every nook and corner of the city to prevent any gender based violence. However, the concern for privacy has surrounded the positive effects of surveillance.

Arguments in favour -

1. This helps keep a check on the crimes committed against citizens.
2. Use of spywares by tracking phones of terrorists and insurgents will help to suppress the separatist tendencies.
3. It will help to ~~preserve~~ preserve and protect National Security in case of any terror attack.

However, the flip side of the coin highlights the potential dangers of being a surveillance state.

Arguments against

1. This creates a surveillance state that compromises the fundamental right to privacy as said by SC in Puttaswamy judgement.
2. Tracking phones of journalists will make them exercise self restraint and will suppress democracy in the state.
3. Fear of getting monitored and recorded by using spywares will engender lack of trust among citizens against the state. This will suppress dissent.

Therefore, we need a balanced approach whereby surveillance must only be done for protecting national security. And this national security protection needs to be revealed before the court as said by SC.

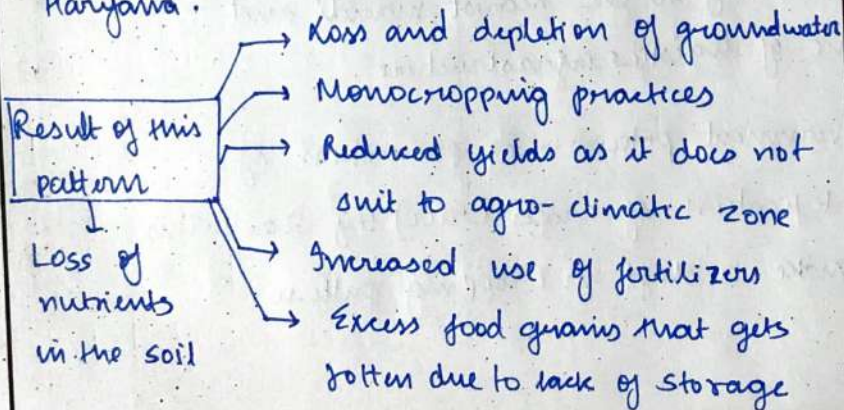
11. The decision to grow a particular crop by a farmer is affected by various factors other than the yield of a crop. Discuss this statement and assess the need for bringing a change in the cropping pattern in India.

(250 words) 15

एक किसान द्वारा किसी विशेष फसल को उगाने का निर्णय उक्त फसल की उपज के अतिरिक्त विभिन्न कारकों से प्रभावित होता है। इस कथन की विवेचना कीजिए तथा भारत में फसल पद्धति (क्रॉपिंग पैटर्न) में परिवर्तन लाने की आवश्यकता का आकलन कीजिए।

The cropping pattern in India depends upon numerous factors like rainfall, groundwater availability, Minimum support price on crop, agro-climatic zone, availability of irrigation, demand of crop along with its yield.

However, it is observed that the cropping pattern in our country is highly skewed in favour of water intensive crops like wheat, rice and sugarcane. This is especially the case of Punjab, Rajasthan, UP, Delhi and Haryana.



Therefore, we need to promote a paradigmatic shift in the cropping pattern of India - It must include the following factors -

1. Suitability of the crop as per the Agro-climatic zone of the region - For eg apples in Himachal Pradesh, coffee in South Kerala, Tea in Assam etc.
2. Improvement in the water use efficiency - Promotion of drip irrigation instead of tube wells that deplete ground water.
3. The minimum support price on crops - that must be raised for other crops and lowered on wheat and rice
4. Connectivity to the nearest mandi and presence of logistics infrastructure.
5. Government policies - Eg promotion of biofortification of crops (rice) by 2024. This will make a shift in cropping pattern.

6. Cobweb cycle in case of pulse production as highlighted by economic survey.
7. Presence of nutrients in the soil and the invasive alien species that affects particular plants.

Therefore, we need to devolve evidence based policy making considering all the above points and involving all the stakeholders on a common platform to chalk out a solution. We need to promote intercropping, mixed cropping and organic farming that would result in both increase in yield as well as preservation of environment.

12. Identifying the importance of livestock in the Indian agricultural economy, enumerate the steps taken by the government in this regard. Also, discuss the potential impact of climate change on the livestock sector.

(250 words) 15

भारतीय कृषि अर्थव्यवस्था में पशुधन के महत्व को चिन्हित करते हुए, इस संबंध में सरकार द्वारा उठाए गए कदमों को सूचीबद्ध कीजिए। साथ ही, पशुधन क्षेत्र पर जलवायु परिवर्तन के संभावित प्रभावों पर चर्चा कीजिए।

Ans

The recent livestock census of 2018 highlights that India has largest number of livestock in the world. It becomes the helping hand of farmer and increases the over income from the farm land.



Importance of livestock -

1. Provide additional remuneration to farmers in the lean season.
2. Bullocks help in harvesting and threshing of crops.
3. Fulfilling the nutritional requirements - eg milk of cows and camels acts as twin purpose of curing disease and fulfilling nutritional requirements.

4. Help in transportation of goods, man, material from one place to another. Eg- Camels in Rajasthan

The steps taken by government in conserving livestock are -

1. Conducting livestock census every 5 years to know the status and population of livestock in the country.
2. Creating a separate ministry of Animal Husbandry, Dairying and Fishing.
3. Rolling out schemes like Prevention and Elimination of Foot and Mouth Disease and Brucellosis in Cattle by 2030.
4. Promotion of Apiculture - Bee farming by forming National Bee Board.
5. Promoting food processing industries ~~for~~ that uses milk which provides additional income to farmers.

However, since the global average temperature has already risen by 1.2°C (as per IPCC 6th report), it has got adverse impacts on livestock.

1. Reducing yields from cattle and sheep due to increased global warming.
2. Effects upon the breeding habits of livestock that has direct impact on their population.
3. Increased mortality rates due to high number of diseases attacking them. For this the use of diclofenac as pain killers were done that instead caused decline in vulture population.
4. Loss of livestock feed due to depleting forests and grasslands.

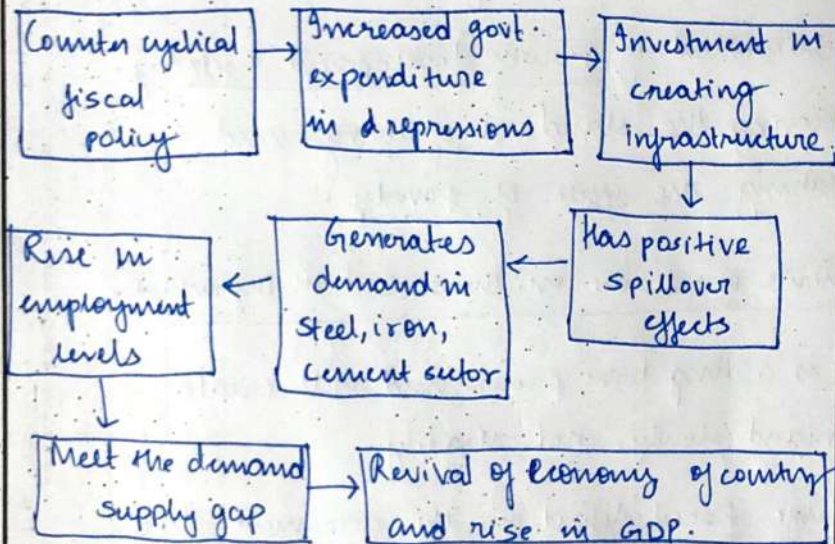
Therefore, we need to reverse the anthropocene changes to climate change. Also, need of Promoting Artificial Insemination and cross breeding of cattle for superior breed, along with adept research and development will help solve the problem.

13. It has been argued by some economists that supply creates its own demand. In this context, discuss the merits and demerits of reliance on investment in infrastructure to boost the Indian economy.

(250 words) 15

कुछ अर्थशास्त्रियों द्वारा यह तर्क दिया जाता है कि आपूर्ति अपनी मांग को स्वयं सृजित करती है। इस संदर्भ में, भारतीय अर्थव्यवस्था को बढ़ावा देने के लिए बुनियादी ढांचे में निवेश पर निर्भरता के गुण एवं दोषों की विवेचना कीजिए।

Ans. Government has decided to adopt countin cyclic fiscal policy amid the pandemic, on the lines of John Maynard Keynes, in order to revive the economy.



Merits of investments in infrastructure are as follows -

1. This provides additional employment opportunity since 80% of the sector is unorganised.

2. Hardware infrastructure like roads, rails, highways etc generate the demand for other raw materials like cement and steel.
3. Increased expenditure on infrastructure translates to positive recovery in GDP levels.
4. Rise in income levels of labour, who will now create demand for other goods and services in the economy.
5. Achievement of growth development cycle by improving the standard of living and breaking the cycle of poverty.

Demerits of reliance on investment in infrastructure

1. It is a long term process and will create demand slowly, not steadily.
2. Huge fiscal deficit for the government - due to increased expenditure on capital formation.

Therefore, in my opinion, the recently launched National monetisation pipeline will generate funds for investments in National Infrastructural pipeline. This will also reduce fiscal deficit along with generating employment to bandage our faltering economy.

14. Innovations emerge not just as an opportunity but also as a pre-condition to assure the sustainability of food production. Analyse the statement in context of the food processing sector in India. (250 words) 15

नवाचार, खाद्य उत्पादन की संधारणीयता को सुनिश्चित करने के लिए न केवल एक अवसर के रूप में बल्कि एक पूर्व शर्त के रूप में भी उभरें हैं। भारत में खाद्य प्रसंस्करण क्षेत्र के संदर्भ में, इस कथन का विश्लेषण कीजिए।

Ans.

Food processing refers to value addition to the primary raw material in order to enhance its quality and value of the product. It is classified as the sunrise sector in India having huge potential for investment.

However, our food processing sector is in dire straits due to -

1. Lack of use of technology.
2. Lack of use of genetically modified crops.
3. Absence of Hazard control and Critical points analysis.
4. Lack of promotion of food processing industries due to presence of stock limits.
5. Lack of backward and forward linkages in the sector.

Even when India acquires 4% of world's exports market in terms of agriculture, only

5-10% of that is by processed foods.

Therefore we need to promote innovations in the sector to ensure food sustainability -

1. Preventing the upward hazards from reaching downwards by controlling and monitoring the supply chains.
2. Supply chains suffer from a bullship effect whereby any fault at any point will get multiplied many times.
3. Provide adequate research and development in food processing sector.
4. Meeting the demands of European and Western nations by adhering to sanitary and phyto sanitary restrictions.
5. Developing infrastructure and backward tracking of the crops and fisheries. Demand of canned fishes is very high and it is double remunerative for farmers as compared to raw fishes.

6. Promotion of effective technology and connecting farmers directly with the food processors in order to bypass the middlemen.
7. Promoting contract farming on a model basis for improving food processing.

Therefore, we need to harness the potential of increasing demand of processed food all over the world. This will help us double farmers income and also ensure sustainability.

15. The factors contributing to unemployment in India are not merely a result of the structural issues related to the Indian economy. Discuss. Also, highlight the measures taken to address the problem of unemployment in recent times.

(250 words) 15

भारत में बेरोजगारी को बढ़ावा देने वाले कारक केवल भारतीय अर्थव्यवस्था से संबंधित संरचनात्मक मुद्दों का परिणाम नहीं हैं। ज़रूरी कीजिए। साथ ही, हाल के दिनों में बेरोजगारी की समस्या के समाधान के लिए किए गए उपायों पर प्रकाश डालिए।

Ans.

Every year, India adds 2 crore population to the pool of eligible youth in the working age population as per the CNIE (Centre for Monitoring Indian Economy) report. However, only 37% of them remains employable.

Coupled to this rising pool of unemployment, the pandemic has hit hard the un-organised sector.

The various reasons for existence of unemployment are as follows -

1. Early deindustrialisation (As highlighted by Arvind Subramaniam) - we shifted towards the service economy without peaking our industrial output. This has rendered crores of people unemployed.

2. Focus on capital intensive sector rather than labour intensive sector - Since the former boosts our GDP, while the later provides employment to the masses.
3. Lack of up-skilling and re-skilling amid the Industrial Revolution 4.0 that we have entered.
4. Feminisation of agriculture - due to migration of men towards towns. But in pandemic, the increased burden of care work has thrown women out altogether of labour force.

Measures taken by government to promote employment opportunities -

1. Rolling out of PLI (Production Linked Incentive) schemes - that focuses upon labour intensive sector like textile as well.
2. Bring part of Supply chain resilience initiative - This will help connect ^{our} ~~our~~ MSME's with the world.

3. Boost to sh. schemes like Assemble in India that has increased FDI in the country.
4. Providing skill gap mapping and analysis to the migrant labourers for finding relevant jobs. Eg- ASEEM portal.
5. Adopting the counter cyclical fiscal policy by increasing investment on infrastructure sector. This will raise the employment levels and will generate demand.
Eg- National Infrastructure pipeline.

Therefore, such efforts by government in promotion of labour intensive jobs (Agarbatti, handlooms etc) ~~with~~ are a step in right direction. This will help us achieve the growth development cycle.

16. Highlighting the major announcements made by India in the recently concluded COP26, examine India's capabilities in achieving net zero emissions by 2070. (250 words) 15

हाल ही में संपन्न COP26 में भारत द्वारा की गई प्रमुख घोषणाओं पर प्रकाश डालते हुए, वर्ष 2070 तक शुद्ध शून्य उत्सर्जन की स्थिति प्राप्त करने में भारत की क्षमताओं का परीक्षण कीजिए।

Ans.

COP26 to UNFCCC was recently concluded in Glasgow, Scotland. Efforts were made by all countries according to CBDR-RC (Common But Differentiated Responsibilities) in order to achieve Paris Agreement.

Announcements made by India are as follows-

1. Achieving net zero carbon emissions by 2070 - what we will release, will also be captured.
2. Achieving 50% of installed capacity by renewable energy by 2030. We have already crossed 40% mark in this regards.
3. Reducing the carbon emission intensity by 45% of the GDP.
4. Reducing 1 billion tonne of emissions.

India possesses the required capabilities in order to achieve the net zero by 2070. The efforts made in this regard are as follows -

1. Promotion of electric vehicles in the country -
Recently 22000 charging stations have been setup. Also NITI Aayog has asked RBI to include EV's in the priority sector lending norms.
2. Promotion of Green Hydrogen energy plants -
It involves production of hydrogen using renewable energy. ~~and~~ Recently ONGC has established plant in Mathura refinery. Also National Hydrogen mission is rolled out.
3. Promotion of bio-ethanol and bio-diesel -
Blending 20% ethanol in petrol by 2025 by formulating the National Biofuel policy.
4. International Solar Alliance - Promotion of solar harnessing the solar cells and solar energy to reduce dependence on fossil fuels.

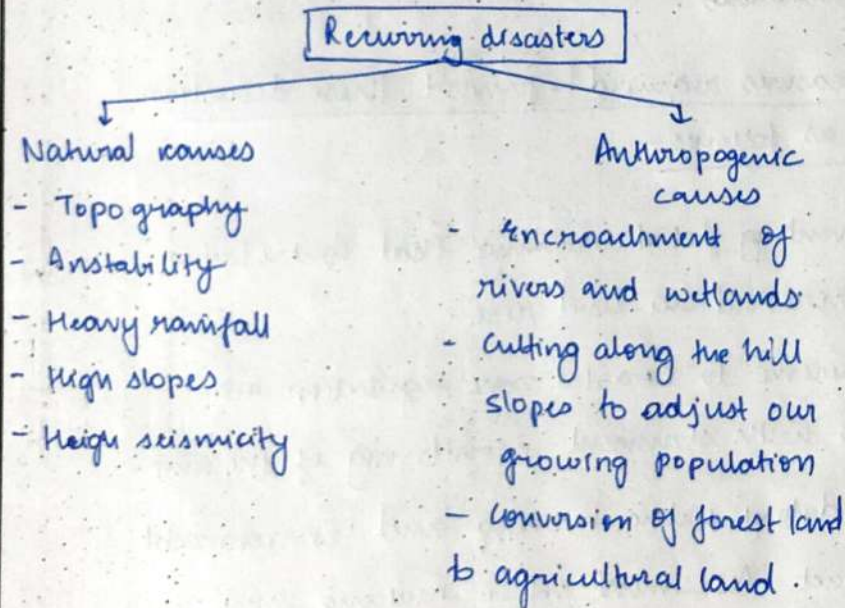
5. Mechanisation of farming and promoting efficient techniques to reduce carbon emissions from agriculture.
6. Promotion of carbon capture and storage technology with assistance from Netherlands and Germany.

Therefore, moving on the same path and doing our concerted efforts will help India reduce her carbon emissions and become net zero by 2070.

17. While geography plays a definite role in the recurring disasters in Western Ghats, it is the human intervention that has exacerbated them. Discuss. Also, suggest measures to protect Western Ghats from these frequent disasters. (250 words) 15

यद्यपि, पश्चिमी घाट में बारंबार आपदाओं के घटित होने के पीछे भौगोलिक स्थिति एक निश्चित भूमिका निभाती है, तथापि मानवीय हस्तक्षेपों ने उन्हें और बढ़ा दिया है। विवेचना कीजिए। साथ ही, बार-बार आने वाली इन आपदाओं से पश्चिमी घाट को बचाने के उपायों का सुझाव दीजिए।

Ans. Recently, the landslides in Idukki district of Kerala and the floods in Mumbai have highlighted presence of ~~anthropocene~~ anthropogenic era to create frequent disasters.



Due to increased human intervention, the anthropogenic reasons trigger the natural causes and create disasters.

- a. Building of Wayanad Tunnel - It's Environment Impact Assessment has not yet being cleared.
- b. Construction of dams on rivers in sensitive zones. This results in seepage of water in the nearby soil and increases the fragility of the ~~area~~ region.
- c. Building on seismically active zones by cutting across the hill slopes - This gives rise to landslides.

The measures required to prevent these disasters are as follows -

1. Preventing global warming that contributes to increased sea level rise.
2. Adherence to coastal zone regulation ~~and~~ rules with stringent monitoring of the same.
3. Mandatory public hearing and Environmental Impact Assessment before making any projects.
4. Building with nature - For example Ruinte Voor De Rivier project in Netherlands. This

Involves giving enough breathing space to the rivers and wetlands and preventing and encroachment on them.

5. Declaring the highly fragile area as ecologically sensitive area (25% as recommended by Gadgil Committee).

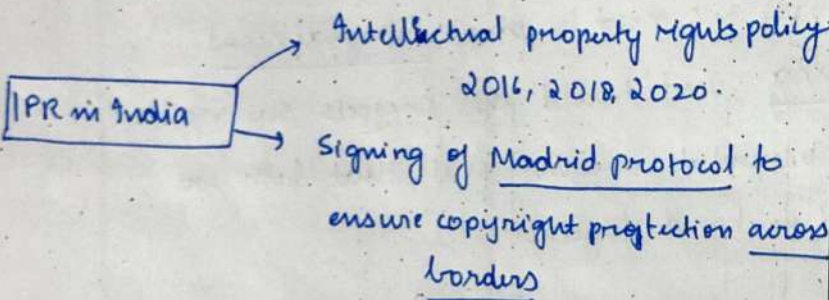
Therefore, we need to adopt topographical planning and build the projects suiting the environmental concerns such that both go hand in hand together.

18. The IPR regime in India is mired by inadequate protection and ineffective implementation. In this context, discuss how the IPR regime can be made more robust and effective. (250 words) 15

भारत में IPR प्रणाली अपर्याप्त संरक्षण और अप्रभावी कार्यान्वयन से ग्रस्त है। इस संदर्भ में, चर्चा कीजिए कि IPR प्रणाली को और अधिक मजबूत एवं प्रभावी कैसे बनाया जा सकता है।

Ans.

Intellectual Property Rights encompass protecting the brainwork of a person with help of legal provisions, as also enshrined in UN charter.



However, the IPR regime in India has remained ineffective as also highlighted by EU nations and USA due to which we have not yet secured Free Trade Agreements with them.

The reasons are as follows -

1. Dilution of provision of search and seizure with effective punishment on patent infringement. This was done by 2018 amendment.
2. Presence of patent cliffs and evergreening of patents. Certain changes are

Introduced in the existing product and again patented.

3. Provision for compulsory licensing in case of medicines etc when public interest outweighs profit motive.
4. The amount of time taken for processing on approving the patent application. It takes more than 8 months even at single stages.

Therefore, we need to revamp our patent protection architecture by following ways -

1. Providing for stringent punishments and giving back powers of search and seizure in case of patent infringement.
2. Fastening up the process for patent filing and processing of application. The IPR policy aims to bring it down to 1 month at each stage and 8 months in total.
3. Protecting patent infringement of foreign researchers.

4. Providing a conducive environment to file more patent applications. eg- ASIIM Portal (Ambedkar social innovation & Incubation mission).
5. Strengthening the Madrid protocol by providing ready ground for patent recognition of international brands.

Therefore, we need to adhere to UN charter of protect the brainwork of individuals by strengthening the patent regime in India.

19. What are the similarities and differences between the activities of terrorists and organized criminal groups? Also, elaborate upon the fact that their linkages occur in both tactical and strategic ways. (250 words) 15

आतंकवादियों और संगठित आपराधिक समूह की गतिविधियों के बीच समानताएं और असमानताएं क्या हैं? साथ ही, इस तथ्य पर सविस्तार चर्चा कीजिए कि उनके संबंध सामरिक और रणनीतिक दोनों तरीकों से होते हैं।

Ans. Terrorists are those that aim to create terror in eyes of common people and prove themselves in front of the state. They tend to spread their ideology by involving in terror attacks.

Organised criminal groups are those which have organised, systematic, structured and programmed network of supplying money. This is done in exchange of drugs, arms, cashes, weapons etc.

Similarities between terrorists and OCG -

1. Both industries thrive on illegal financing.
2. They have intricate connections where the money supplied to OCG is used to buy weapons by terrorists.
3. Both of them work against the state authorities.
4. They have a leader and work in an underground fashion.

Differences between them -

1. Terrorists conduct violence by harming the innocent victims via bomb blasts. Whereas the main aim of OCA is to earn money.
2. OCA may have linkages with big corporate houses. They may not have a particular ideology.

Their linkages occur in both tactical and Strategic ways as -

1. The opium, drug and poppy cultivation enters India via Pakistan and Myanmar through Golden Triangle and Golden Crescent. The terrorists of Lashkar-e Toiba and Jish-e-Mohammad have direct linkages with them.
2. The money earned via cattle smuggling through Bangladesh borders becomes the basis for buying arms and ammunitions. These are then supplied to terrorists.

3. The recent Crackdown of Bangladesh government upon the fake Indian currency notes being circulated by OCG's. These OCG's were getting them with help of terrorists based in Pok.

Therefore, OCG and Terrorist organisation work hand in hand and threaten internal security of the State. We need co-ordinated and integrated efforts to fight this menace.

20. There is a view that the 'civil society is emerging as the new frontier of war', in the 4th generation of warfare. Do you agree with this view? Substantiate with logical arguments. (250 words) 15

ऐसा माना जाता है कि नागरिक समाज, युद्ध की चौथी पीढ़ी में एक नए मोर्चे के रूप में उभर रहा है। क्या आप इस विचार से सहमत हैं? उचित तर्कों के साथ पुष्टि कीजिए।

Ans.

Recently the National Security Advisor, Mr Ajit Doval announced that civil society may emerge as a new frontier of war. Civil society is defined as a group of people organised together for effective bargaining with the state as well as raising awareness among the people about policies of government.

Arguments in favour of civil society as new frontier of war -

- 1: Influence of ideology - This creates a false sense of being in minds of people forming the civil society.
2. Fear of getting divided, subverted and diverted from their purpose. Eg- in Pakistan, civil society played role in radicalisation of masses.

Arguments against

1. Civil society helps in engendering peace -
Eg amid the recent attacks on minorities in Kashmir valley, civil society took help of mosques to ensure peace in the region.
2. Civil societies represent the will of the masses and provide for upliftment of the people by proliferation of schemes.
3. Civil society has fed more people amid pandemic than the government alone.
4. Civil society in India protects the dignity of the woman. Eg - #MeToo Campaigns.
5. Provides medical helps in times of disaster management operations.
6. Ensures peace and stability in case of communal disharmony.

Therefore, it cannot be denied that we face challenges due to increased influence of ideologies on civil society. They may even divert from their paths. So we need to prevent the same and use them as our strength instead of weakness.