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GENERAL STUDIES (TEST CODE : 1864)

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Medium Eng./Hindi	English	Registration Number	999178
Center	Online	Date	21.12.2021

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
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3	10	
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18	15	
19	15	
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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EVALUATION INDICATORS

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.

3.

4.

5.

6.

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

एग्रीस्टैक 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।

Agristack refers to the stack of procedures to guide the approach towards agriculture. It is based on technological advancements and a pipeline of procedure.

creation of better ecosystem

- 1) Empowerment and awareness of farmers.
- 2) Use of technology to better farm practices.
- 3) Encourages increasing productivity by following right procedure.
- 4) Helps supplement progress of food processing industry
- 5) Mechanisation of agriculture.

Concerns:

- 1) One approach can not fit for all
- 2) Inability of small farmers to adapt.
- 3) low digital and technical capability.

Agristack must be adopted to empowers Indian farmers" and thus promote agricultural extension, secondary agriculture, etc.

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।

Geothermal energy refers to the renewable source of energy that is extracted from the subsurface heat of the earth.

Advantages
of Geothermal
energy:

1) Renewable
Source of
energy.

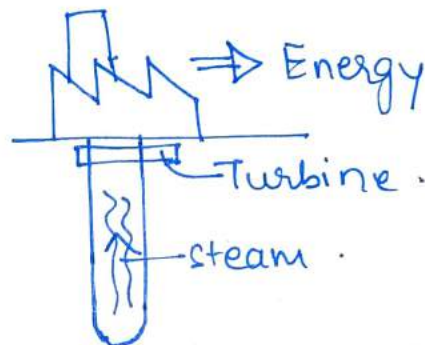


fig - Geothermal
energy

2) Very low carbon emission.

3) Very high potential of
energy.

4) Help India achieve its climate commitments.

Concerns leading to lacture adoption in India.

1) Highly concentrated in certain patches.

e.g. Himalyan region
(Himanchal, Uttarakhand)

2) Other harmful gases inside earth are released.

3) seismicity of the region increases.

↳ Also makes infrastructure vulnerable.

4) High cost of project.

India must conduct efficient research to develop geothermal energy to achieve commitments at COP 26.

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

जहाँ IUU (अवैध, अनरिपोर्टेड या असूचित और अनियमित) मत्स्यन सब्सिडी को समाप्त करना संधारणीय 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।

1864

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anything this
margin
(इस भाग में
कुछ ना लिखें)

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।

Rainfed agriculture refers to the farming practice that relies on rainfall as an essential source of water in regions like Odisha, Andhra Pradesh, etc.

Biased agricultural policy against rainfed agriculture

- 1) The power subsidies to facilitate groundwater extraction & other irrigation support.

↳ Less beneficial to rainfed areas.

- 2) Open procurement policy for rice and wheat.

↳ Haryana, Punjab being largest beneficiary due to green revolution.

3) Southern states like Telengana face reduced procurement by FCI.

But Policies are not always biased:

- 1) MSP regime is for whole country
- 2) Initiatives like e-NAM, Kisan Credit card, etc benefit all equally.
- 3) Rainfed areas benefit largely from fertilizer subsidy

Government Initiatives:

- 1) Irrigation support: PM Krishi Sishayee Yojana.
- 2) FCI's open procurement policy.
- 3) Soil health cards and Kisan credit card.
- 4) Early warning system for disasters like cyclone, drought.

Government must rationalise subsidies and develop assets for equitable development.

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।

Marine heat waves refer to the abnormal rise in temperature of an air mass which lasts for a prolonged time (3 to 5 days).

Major causes of Marine heat waves:

- 1) Warm ocean currents bringing heat
e.g. Gulf stream's North Atlantic drift.
- 2) Anticyclonic condition over an already warm region.
- 3) Cloudless sky
↳ no barrier to solar insolation

- 4) Global warming.
↳ raising mean sea temperature.

Impacts on ocean ecosystem

- 1) Reduction in population of planktons.
↳ Reduces fishery.
- 2) Ocean water warming
↳ leads to coral bleaching
↳ Death of pristine biodiversity
- 3) Loss of biodiversity.
- 4) Increases salinity triggering ocean current.

Occurrence of marine heat waves around the world must be monitored and infrastructure must be developed based on vulnerability of various zones.

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।

Aseismic structures refer to the infrastructure constructed that are resilient to the seismic waves. These includes pillar structured foundation of buildings, installation of shock absorbers, etc.

Need of National Program on Seismic Retrofitting of Buildings and Structures in India:

1) India is highly vulnerable to disasters like earthquake with many severe occurrence.

e.g. → Bhuj Earthquake.

→ Gujarat, Himalayan region, Northeastern areas

↳ Many mild and frequent occurrence necessitate it.

- 2) Need to setup resilient infrastructure projects in vulnerable zones.
e.g. Hydropower projects and dams in himalayan region.
- 3) Earthquakes lead to huge loss of lives.
↳ Mostly due to burial under debris
- 4) less developed early warning systems for earthquake
- 5) Social disruptions due to earthquakes - breeds poverty and debt traps.

The National program aims to encourage earthquake resilience as a crucial building parameter. and must be implemented efficiently.

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।

Crypto assets refer to the assets owned by mostly private individuals, that are secured by cryptographic algorithms to characterize it as unique, immutable, secured, etc.

These include cryptocurrency, non fungible tokens, etc.

Risks associated:

- 1) Reduces scope of government regulation and safety assurance by legal authority
- 2) Used to proliferate terror financing, money laundering, etc.
- 3) Poses environment impacts as these computation lead to high emissions.

- 4) cyber attacks pose threat to ownership of these assets.
- 5) Often based on no physical backing for its value

But has several advantages

- 1) Monetization of intangible assets.
e.g. Jack Dorsey's first tweet; various painting in digital form.
- 2) Decentralised control.
- 3) Highly Secured to mutation.
due to cryptographic algorithm
- 4) Provides scope for underlying blockchain technology to be used in other areas like healthcare, education, etc.

Cryptoassets must be encouraged and adopted in other public service domains like elections, contracts, etc, but with proper regulation at place.

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।

Virtual Reality refers to the creation of a virtual world to provides the users with immersive experience of a new reality
e.g. Facebook's Metaverse.

Augmented Reality is augmenting virtual components to the real world in order to improve experience of the real world.
e.g. Pokemon Go game.

Huge innovation potential

- 1) can be used to monetize the experience of consumer
- 2) can help reduce mental strain and social isolation.
e.g. Metaverse.

- 3) Education can be done with a hologram of teachers at home.
- 4) Creation of holographic maps of battle field in defense sector.
↳ Mock drills in a virtual world.
- 5) shopping and e-commerce including live digital trials.
e.g. Wowexp company.
- 6) Space projects can undergo mock launches.
e.g. Space warfare drills.
- 7) Creation of new substances in research projects using virtual simulation.

There are many more diverse applications of VR and AR that can be utilised by India to the target of \$5 trillion economy.

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।

Narcotics Control Bureau (NCB) is a statutory body under the Ministry of home affairs that deals with regulation of narcotics in India. Recent high profile narcotics cases has brought NCB and NDPS act 1985 to light.

Role of NCB:

- 1) Investigation of Narcotics cases in terms of possession and commerce.
- 2) Advisory role towards policies for regulation of narcotics.
- 3) Supports border forces to curb cross border smuggling.
↳ from golden triangle and golden crescent

Whether NDPS Act 1985 needs to be remodelled:

Arguments against:

- 1) Strict guidelines must be retained.
- 2) Narcotics against Indian Constitution → DPSP.

Arguments in favour:

- 1) Need to amend current provision criminalising personal consumption and commerce equally.
- 2) Legal coercion against narcotics breeds illegal possession.
- 3) Current provisions are obsolete.

India must remodel its narcotics act to suit changing times with learning from Canada, etc. It must be approached as a behavioral issue & not of law & order.

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।

Recently, media reports regarding use of Pegasus software developed by Israel based NSO group to conduct surveillance on Indian citizens has broke out.

There has been rising debates now as the subjects include many high authorities of government.

surveillance is necessary

- 1) Need to gather intelligence against growing terrorist activity.
- 2) Government has claimed it to be required for national security.

- 3) Increased use of social media like whatsapp to spread unrest and internal disturbance.
- 4) Proliferation of misinformation and fake news.
- 5) Effective tracking of repeated and prospective criminals
↳ eases police burden.

Evils of Surveillance:

- 1) Against Right to Privacy as in Puttaswamy judgement
- 2) Can be misused by government to further political agenda.
- 3) Innocent citizens may be under surveillance.
- 4) Curbs dissent preemptively including legitimate ones.

Surveillance is a very dangerous tool. It must be undertaken strictly under the principle of proportionality as per supreme court judgement.

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।

India has three main farming seasons namely Rabi, Kharif and Zaid. Indian farmers plan the crops to be grown in each season based on various geographical, environmental, societal, governance based and many other factors.

Factors affecting decisions of crops to grow

1) Yield of the crop:

↳ High yield is aimed to maximize profit post harvest.

2) Geographical factors:

2.1. condition of the soil is essential.

e.g. cotton in black soil.

2.2. Level of groundwater availability impacts scope of irrigation based crops.

2.3. Areas with high rainfall like northeast prefer crops like tea, coffee, etc.

2.4. General insolation of South India allows Kharif crops to be grown round the year.

3) Environmental factors :

3.1. High stubble burning and pollution must motivate northern plain farmer to switch crops.

3.2. Rabi crops are sown in cool climate and Kharif in rainy.

4) Social factors :

4.1. Prevailing peer group decision.

4.2. Condition of farmer, if poor seeks shift to cash crops, etc.

5) Governance related:

5.1. MSP regime has created bias for rice & wheat

5.2. Green revolution has skewed cropping pattern in North India

Need to change cropping pattern:

1) Prevalence of monoculture.

e.g. Growing only rice and wheat

2) Loss of nutrient in soil.

3) Unabated exploitation of groundwater due to irrigation intensive crops.

4) Environmental issues like pollution due to stubble burning.

5) Millet as a great source of nutrients.

↳ Need to correct the Indian diet.

6) Diversify export basket

Government initiatives like millet promotion, soil health card must be pursued effectively to change attitude toward cropping pattern.

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।

Indian agriculture and agricultural export is hugely dependent on livestock that include cattle, poultry, etc. while India is one of the leading producer of milk based products, it is the leading producer in poultry sector.

Importance of livestock in agricultural economy

1) Provides secondary source of income to Indian farmers.

↳ livestock can be maintained along with farm land.

- 2) Ameliorate conditions of Indian woman.
- 3) High demand of livestock based produce in international markets.
e.g. milk & milk based product.
- 4) Enhances resilience of farmers to income shocks like COVID lockdown, disasters, supply disruption, crop fails, etc.
- 5) High domestic demand
- 6) Feeder for food processing industry.

Steps taken by government

1) Rastriya Gokul Mission.

↳ to protect the cattle wealth of India.

↳ Rashtriya Kamadhenu Aayog perform researches in this line.

2) Animal husbandry Infrastructure development fund.

- 3) Artificial insemination technology bill to promote its regulated usage
- 4) National Bovine mission

Potential impact of climate Change

- 1) Spreading of diseases like foot and mouth disease.
- 2) Drought and related disasters greatly impact cattle health.
- 3) Climate change and global warming changing suitable condition for certain livestock
- 4) Disappearance of vegetation patches.
↳ loss of cattle fodder.

Government must take One health approach to include livestock health too. This can help achieve Dalwai commission's mandate of doubling farmers' income.

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.

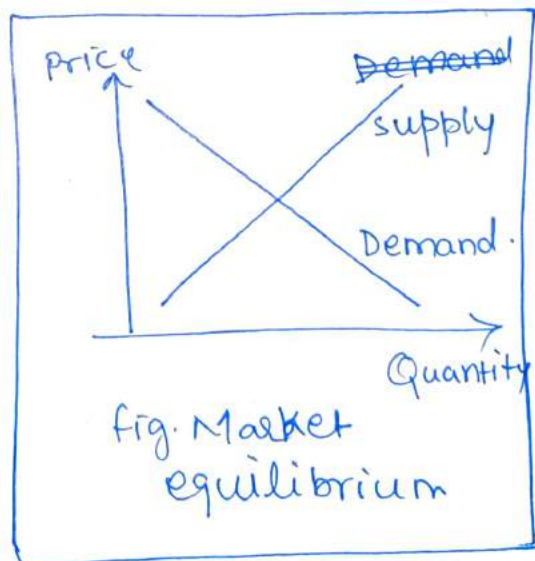
(250 words) 15

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।

As per economic theories, demand and supply are the two determinants of market equilibrium. Some theories support an interrelation between demand and supply that supports government interventions in supply side to revive demand.

Supply creates its own demand

- 1) Rise in options for the consumer
e.g. electronic industry



- 2) signals revival of slowed economy.
- 3) Price falls and hence demand increases.
- 4) Improves product quality and service.

Merits of reliance on investment in infrastructure.

- 1) creation of jobs to increase over income of public.
- 2) Infrastructure generates returns over time unlike ~~cost~~ revenue expenditure.
- 3) Provides fillip to reduction in private investment in infrastructure.
- 4) Advancement in technology caters to consumers' interest.
↳ thus raising demand.

- 5) Helpful in long term growth of the economy.
 ↳ An airplane company can run for centuries and generate continuous revenue.

Demerits:

- 1) Reduction in expenditure for welfare of vulnerable sections.
 like Direct cash support, etc.
- 2) Government expenditure crowds out public participation.
- 3) Government's involvement in infrastructure puts pressure on fiscal management of government.
- 4) Excess infrastructure creation may lead to short term financial crisis.

Indian government must encourage public-private participation into investment in infrastructure to achieve an equitable & inclusive \$ 5 trillion 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।

India's food processing sector is one of the rising sectors of Indian economy catering to the need of value addition to vast resource of food crops.

Innovation in food processing sector as an opportunity

- 1) Rise of new trends of western food habits.
- ↳ Rise in purchasing power of consumers has created opportunities of marketing western food habits in India.
e.g. KFC, Domino's, etc.

- 2) Government Support schemes create favourable condition to innovate in food processing.
- 3) Globalisation leading to demand of domestic produce in international market.
- 4) Digitization creating easy grounds for marketing specific food products.
- 5) Busy timelines of people has created need for ready to cook food.
e.g. 2 minutes maggi.
- 6) consciousness about diet increased the food processing sectors scope for innovating
e.g. Tasty fat free food,
sugar free products.

As a pre condition to assure sustainability

- 1) Traditional food choices losing demand.

- 2) High share of perishable food in India.
↳ Need to improve storage and transport infrastructure.
- 3) Need to increase value of the food products after processing.
- 4) Climatic conditions are changing and hence the production pipeline needs to adapt
- 5) Adaptation to changing cropping and raw materials.

Government has identified the sector as a champion sector and extended PLI scheme as a right way ahead to boost the sector

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। चर्चा कीजिए। साथ ही, हाल के दिनों में बेरोजगारी की समस्या के समाधान के लिए किए गए उपायों पर प्रकाश डालिए।

India has a high prevalence of unemployment that has taken an upward trend due to COVID-19. These range from Structural unemployment, seasonal unemployment to disguised and frictional unemployment.

Issues leading to unemployment

structural issues:

- 1) Lack of skills commensurate to emerging technology.
- 2) Graduates are not job ready
- 3) High population.
- 4) High concentration of job opportunity in few economic centres like Gurgaon

Other factors:

- 1) Seasonal nature of many jobs.
- 2) Occurrence of pandemics like COVID.
- 3) Agriculture sector as a sector absorbing the unemployed.
- 4) Focus on capital intensive sector rather than labour intensive ones like textiles.
- 5) Low export potential of Indian products.
- 6) Rising competition among candidates.
- 7) Low security on private jobs due to hire and fire approach.

Measures taken to address

- 1) Labour codes.
↳ to regulate firing of employees.

↳ provide social security to the vulnerable groups among employees.

- 2) security at workplace assured to women.
- 3) Boost to MSME sector.
- 4) PLI scheme extended for labour intensive sectors.
- 5) Atmanirbhar Bharat campaign promoting employment generation.
- 6) Initiatives like Skill up India.

India must bolster the education system and promote vocational training along with creation of infrastructure and job opportunity to tackle unemployment

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।

COP 26 held at Glasgow recently was one of the very few conventions with maximum international participation. It was conducted to encourage improvement in NDCs of members and conclusion of Paris rulebook.

India's commitment at COP 26

- 1) Increase in energy from non fossil fuel based sources to 500 GW by 2030.
- 2) Reduction in emission intensity to 45% of GDP by 2030.

- 3) share of renewable sources of energy to be 50% of energy basket by 2030
- 4) An absolute reduction of 1 billion tons CO₂ equivalent by 2030.
- 5) Net zero carbon emission by 2070.
- 6) setting up Infrastructure Resilient Island states (IRIS) with UK.
- 7) Renewed focus on One Sun One world one grid.

India's capability:

- 1) India's per capita carbon emission is nearly 1/3rd of the global average
 ↳ But ⁱⁿ absolute terms, it has 3rd highest emission.
- 2) India is a developing country with high poverty.

↳ India called for compliance and increase in international funding

3). India committed to phase down of coal rather than phase out

↳ still it has more time than other nations to reach net zero.

4). India's energy demand is set to double by 2040.

↳ Diversification of energy source to renewable source.

India must increase investment in technology development to achieve net zero target 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।

Western Ghats is one of the most disaster prone region in India including landslides, torrential rains, cyclones, etc.

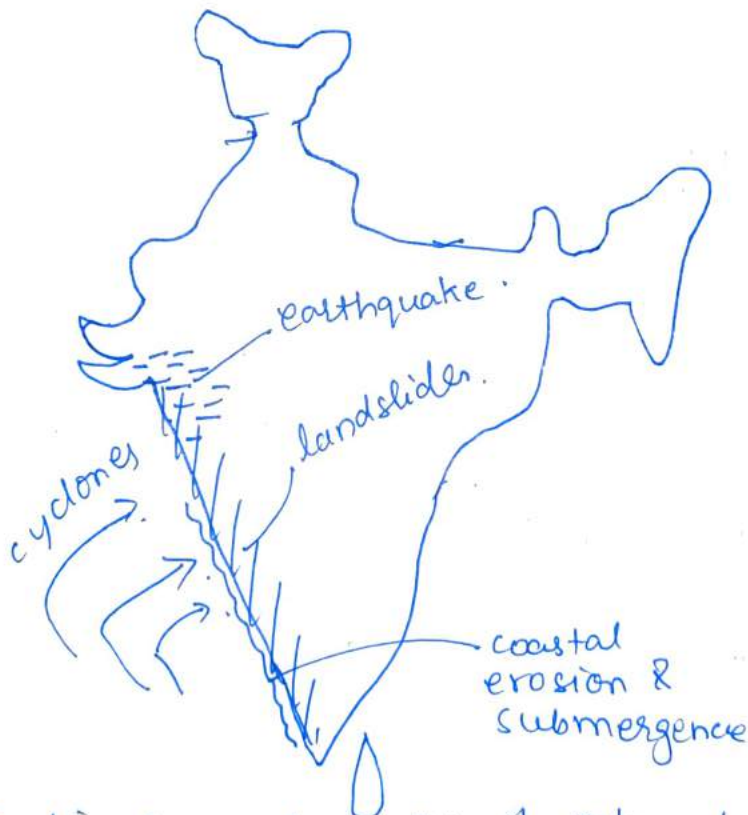


fig. disaster vulnerability of western ghats.

Factors for recurring
disasters in western ghats

Geographical

- 1) Heavy rainfall due to monsoon on seaward side
orographic rain.
- 2) High and steep slopes of mountain.
- 3) submerging side of Indian peninsular plateau.
- 4) faults and cracks . . .
exacerbating seismic activity.
- 5) warming arabian sea and low influx of river water.

Anthropogenic

- 1) Mining and quarrying
causing seismic activities
and disturbance

- 2) Development of infrastructure along the ghats.
- 3) Global warming mainly due to anthropogenic activities.
- 4) Deforestation → soil erosion.
- 5) Coastal construction project.
e.g. airport in Mumbai.

Measures to protect

- 1) Rationalise developmental projects
- 2) Early warning system for landslide vulnerability
- 3) Local graded vulnerability mapping.
- 4) strict adherence to coastal regulation rules.
- 5) capacity building of local population.

Landslides being a recurring phenomena in western ghats must be monitored and technology must be improved.

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।

India has faced repeated backlash at WTO from countries like US for its weak IP Regime. Recently Pepsico sued Indian farmers for infringing its IP rights over a particular variety of potato used for lays production.

Issues in India's IP regime :

- 1) Infringing of IP rights by local population.
- 2) Weak appellate structure for litigation.
↳ Recently IP Appellate body was removed.

- 3) Long judicial procedure on IP rights cases
- 4) Developmental aspirations of India due to poverty
 - ↳ Use of compulsory licensing.
- 5) Prevalence of piracy and copyright infringement.
 - ↳ Inability of law enforcement to curb these.

Measures to make IP regime more robust and effective:

- 1) Fastening the judicial process of IP rights litigation.
- 2) Strict enforcement of law against piracy and IP rights violation.
- 3) Restriction on the use of measures like compulsory licensing.

4) Adherence to TRIPS
guidelines.

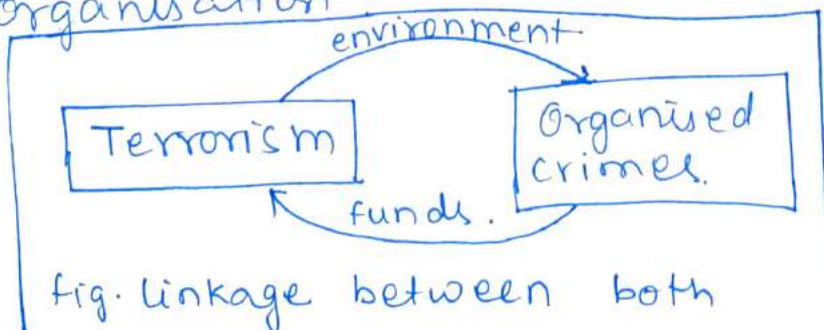
India must improve its
IPR regime in order to
boost overall ease of doing
business and attract
technological advancements.

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।

Terrorism refers to the systematic use of violence to create a general sense of terror among public to bring out a specific political agenda.

Organised crimes refer to systematic planning of crimes with help of existing loopholes in the legal system e.g. drug trafficking, human trafficking, etc. It done to increase the gains of the organisation



similarities

- 1) Both execute covert operations
- 2) Exploitation of public by fraud, deceit, coercion, etc.
- 3) Need for a planned and organised approach.
- 4) Radicalisation of youth.
- 5) Illegal means of fund raising
- 6) 2 layered operations
↳ one with overground contacts and one with underground linkages

DifferencesTerrorists

- 1) Necessary use of violence
- 2) Has a political agenda to pursue

Organised Criminals

- 1) Need not be violent.
e.g. drug trade.
- 2) No political agenda, only economic gains.

3) Against specific targets

e.g. Kashmir region.

4) comparatively easy to identify
↳ have heads

3) Generalised target of public

4) Mostly underground with no specific face

Their linkages:

Tactical → As terrorism creates significant grounds for conducting organised crimes.

Strategic → organised crimes often raise funds for terrorists.

→ Terrorists participate in these crimes too to exploit public.

organised crimes and terrorism must be tackled comprehensively as they both act as feeder for each other.

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।

The 4th generation of warfare refers to the new and emerging technologies and its use to exploit public of the adversary nation. to gain leverage.
e.g. US's cyberattack of Stuxnet on Iranian nuclear plants.

Arguments in favour

- 1) Vulnerability of countries in terms of infrastructure security
e.g. Cybersecurity

- 2) Huge leverage to target critical infrastructure.
e.g. China targetting India's power grids.
- 3) Traditional frontier has led to huge casualties on the nation conducting offensive too
↳ leading to shift to civil society
- 4) Increased use of digital technology with low awareness of vulnerability
e.g. recent log4j vulnerability.
- 5) companies and public becoming pivotal to the economy of a country
↳ Exploit public and hence country's economy collapses.
- 6) social media spreading misinformation and fake news.
↳ state sponsored terrorism.

However, civil society is still secure of being a frontier of warfare because:

- 1) Deterrence of use of reciprocal technological attacks.
- 2) International conventions regulating emerging technologies

With growing pace of technological advancements, India must upgrade its infrastructure and also build international consensus against targetting civil society