

TEST CODE	6	1	1	2	0	2	FIAS – MGP 2023 – Cohort 13 Alt – Sectional Test	#8
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Time Allowed : Three Hours
समय : तीन घंटे

ForumIAS

Maximum Marks : 250
अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	Aditya Agarwal		
Roll No./अनुक्रमांक	1910/01741	Medium/माध्यम	English ☒ हिंदी ☐
Center Code/परीक्षा केंद्र	1901	Date/दिनांक	20 Aug 2023

*Center Code : For Online - 1900 / Delhi : Karol bagh - 1901, ORN - 1902, Mukharji Nagar - 1903 / Patna : Boring Rd. - 2001 / Hyderabad : Jawahar Nagar - 2101

INDEX TABLE / अनुक्रमणिका			INSTRUCTION / अनुदेश	
Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक	1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet. कृपया उत्तर-पुस्तिका में नाम, ईमेल, रोल नंबर और मोबाइल नंबर भरें। 2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory. उत्तर पुस्तिका में अंग्रेजी/हिंदी में बीस प्रश्न दिए गए हैं, सभी प्रश्न अनिवार्य हैं। 3. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के लिए निर्धारित अंक उसके सामने अंकित किए गए हैं। 4. 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. उत्तर प्रवेश पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो कि दिए गए स्थान में इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवर पर स्पष्ट रूप से लिखा जाना चाहिए। 5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off. प्रश्नों में शब्द सीमा, यदि निर्दिष्ट हो, का पालन किया जाए। प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गये किसी भी पृष्ठ या पृष्ठ के भाग को स्पष्ट रूप से काट दें।	
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Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
			10:00 am	1:10 pm
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन ☐ Offline/ऑफलाइन ☒
			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy. मूल्यांकन कर्ता का विवेक अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग, फ्लोचार्ट, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आयी के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			ECN CODE/ ईसीएन कोड :	EG/ईजी :
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			Evaluation Date/ मूल्यांकन तिथि :	

Note: Students are expected to incorporate suggestions from the solution provided in the answers. Discussion classes for the tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good copies of the tests and learn from them. You can also discuss your copy with a Mentor and discover ways and means to improve your answers, or if you have any issues with this test / copy. Asks specific questions, to get specific answers.

EXAMINER'S REMARKS

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand of the question gets you an objectively fair score. It is examiner's perception if you have understood the question and if you know the answer in the first place. Creative answer writing, sometimes missing the core demand, may fetch very high or very low scores, and exposes your answer to the subjectivity of the examiner.
2. **CD & VA = Content Density & Value Addition.** Examiner will evaluate the quality and quantity of your content in the answer. In the same word limit and space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggestions, ideas, quotes, flowcharts, diagrams, facts and figures, data etc. This affects objective components of assessment.
3. **S & F = Structure & Flow** = Whether you have structured your answer properly or not. Whether the answer has been broken into parts and sub-parts and each part has been addressed appropriately or not. Whether the flow of the answer is maintained. Affects both subjective and objective components of assessment.
4. **P & R** = How your answer performs on the criteria of presentation, ease of read, clarity and apparent effort in writing the answer. This affects the subjective components of assessment.

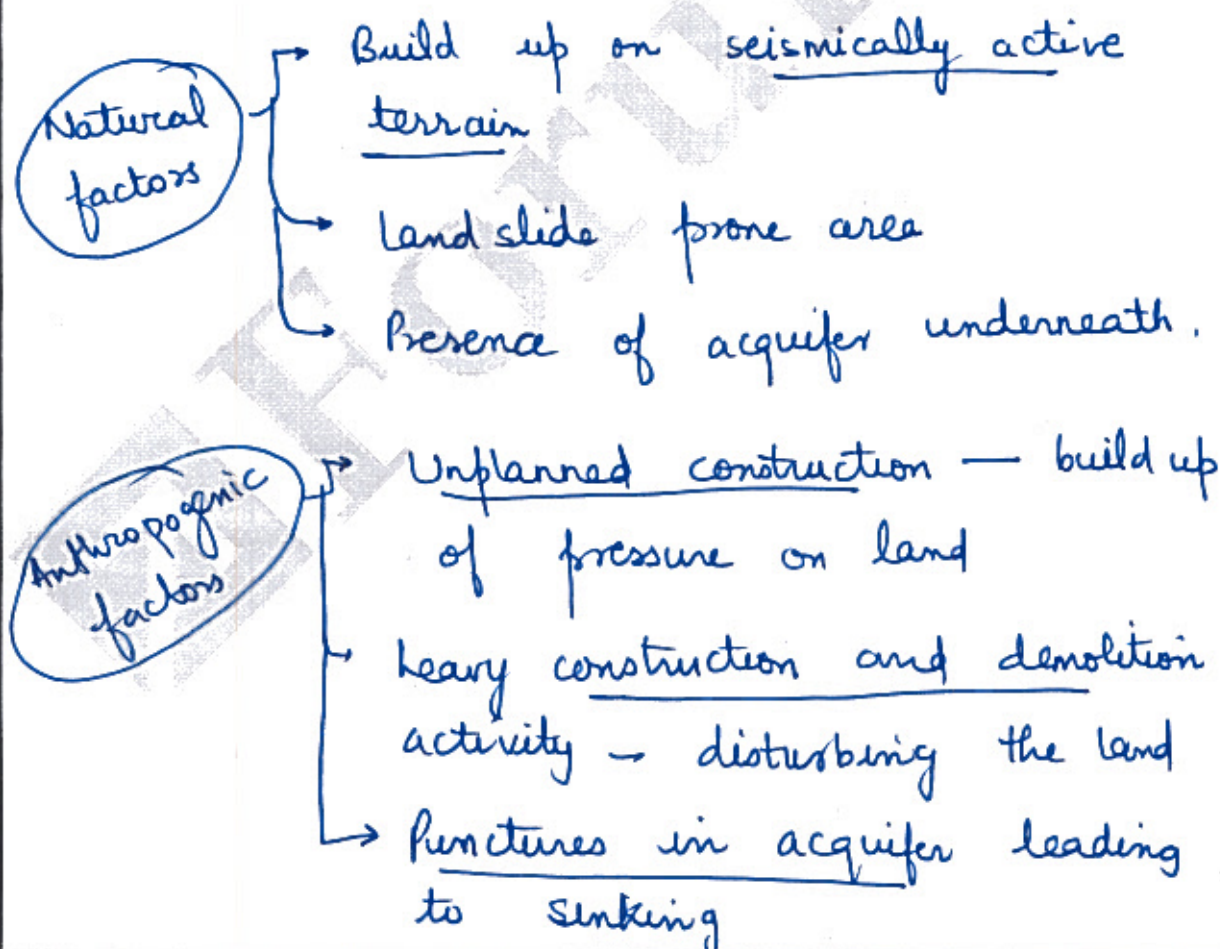
Q.1) What do you understand from land subsidence? Explaining various reasons behind land subsidence, recommend measures to arrest the calamity. (10 marks, 150 words)

भू-स्खलन से आप क्या समझते हैं? भू-स्खलन के पीछे के विभिन्न कारणों की व्याख्या करते हुए, आपदा को रोकने के उपाय सुझाएं। (10 अंक, 150 शब्द)

The recent news of land subsidence ~~has~~ in Joshimath, Uttarakhand has highlighted the calamity.

Land subsidence refers to the sinking of land due to underlying factors.

Reasons of land subsidence:



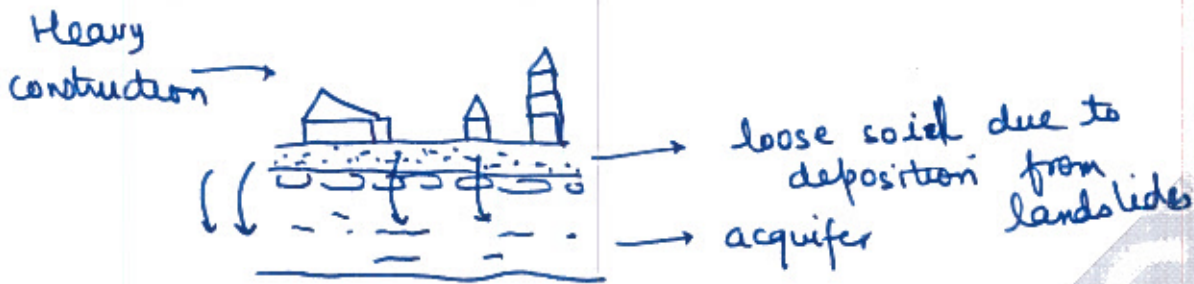


Fig: Land subsidence and factors

Measures to arrest the calamity

- (i) Planned construction - limiting the number of households.
- (ii) Surveying and mapping of land - Hazard zone maps
- (iii) Building laws - light weight materials usage.
- (iv) Proper drainage
- (v) Use of scientific methods for development projects. (Eg) Drilling instead of using detonators for making tunnels.

MC Mishra committee guidelines along with collaboration of institutions such as ISRO, IITs, GISI is needed to arrest the calamity

Feedback

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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

Q.2) Despite being rich in forest resources, why do tropical regions have limited growth of the lumbering industry in comparison to temperate regions? (10 marks, 150 words)

वन संसाधनों में समृद्ध होने के बावजूद, समशीतोष्ण क्षेत्रों की तुलना में उष्णकटिबंधीय क्षेत्रों में लकड़ी उद्योग की सीमित वृद्धि क्यों है? (10 अंक, 150 शब्द)

Tropical regions are home to rainforests of the world and are rich in forest resources. Forests in temperate regions are called boreal forests or

Tropical regions have limited growth of lumbering industry due to :-

- (i) Thick and closely ~~growth~~ grown trees having buttressed trunk — less presence of single stranded trees.
- (ii) Difficulty in access due to moist loose soil and undergrowth.
- (iii) High biodiversity and provide valuable resources to the local communities.
- (iv) Thickly populated areas.

The lumbering industry is mainly situated in temperate forest regions such as Canada and Russia.

Despite being limited growth, tropical forests are being cut rapidly due to:

- (i) Increasing population - clearing land for agriculture and plantations.
(Eg) Oil palms in Malaysia.
- (ii) To fulfil demands of wood. (Eg) Amazon rainforests being lost at rapid rate.
- (iii) Mining and construction of urban areas.

The lumbering industry provide wood for shelter constructions in the regions whereas in tropical regions - wood houses are less common. Thus the demand as well as supply along with natural factors are reason for distribution of industry.

Feedback

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TOTAL MARKS			

Q.3) What are the suitable conditions for the formation of a tropical cyclone? Also, bring out differences between a tropical and an extra-tropical cyclone. (10 marks, 150 words)

उष्ण कटिबंधीय चक्रवात के निर्माण के लिए उपयुक्त दशाएं क्या हैं? इसके साथ ही, उष्णकटिबंधीय और शीतोष्णकटिबंधीय चक्रवात के बीच अंतर को स्पष्ट कीजिए। (10 अंक, 150 शब्द)

Tropical cyclones refers to the weather phenomena that occur in the tropical regions due to interaction of warm oceans and wind patterns.

Suitable conditions for the formation of tropical cyclones are:

- (i) Sea surface temperature (SST) over 25°C .
- (ii) low vertical wind shear.
- (iii) Upper air divergence
- (iv) strong presence of coriolis force
- (v) calm environment



These conditions are usually developed during the end of monsoon — August and September.

Differences between a tropical and extra-tropical cyclone :

- (i) Regions — tropical cyclones are formed between equator and tropic of cancer whereas temperate cyclones are formed in temperate regions.
- (ii) Tropical cyclones are formed in sea and travel towards lands. Temperate cyclones can form on land as well.
- (iii) Temperate cyclones are formed as a result of formation of polar front.
- (iv) Temperate cyclones are more destructive in nature.

Cyclones leads to devastation and disruptions on land — saltwater ingress, demolition of houses and infrastructure. Early warning systems and preparedness help in mitigating the effects.

Feedback

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TOTAL MARKS			

Q.4) Elucidate the differences between Western and Indian model of secularism. To what extent do you agree with the criticism that Indian model of secularism is susceptible to promoting minority appeasement? (10 marks, 150 words)

धर्मनिरपेक्षता के पश्चिमी और भारतीय मॉडल के बीच अंतर स्पष्ट कीजिए। आप इस आलोचना से किस हद तक सहमत हैं कि धर्मनिरपेक्षता का भारतीय मॉडल अल्पसंख्यक तुष्टीकरण को बढ़ावा देने के लिए अतिसंवेदनशील है?

Secularism refers to the idea of treating every religion equally. (10 अंक, 150 शब्द)

Western model

- ✓ complete dissociation of state from the religion.
- ✓ negative model of secularism
- ✓ No spending in any religious activity by the state.
- ✓ No interference in religious activities

Indian model

- ✓ Association of state with all religions equally.
- ✓ positive model of secularism.
- ✓ Equal spending for promotion of all religions.
- ✓ Interference ^{by state} to ensure equal rights.
(Eg) Hindu temple trusts manager by the state

According to some experts, the Indian model of secularism is susceptible to promoting minority appeasement due to:

(i) State intervention in minority religions for its promotion and protection is permitted — this allows politicization of religious issues for vote-bank politics.

(ii) Some religions form majority ~~is~~ in specific regions — Sikhism in Punjab or Muslims in Lakshadweep — appeasement leads to increased chances of election win.

However, this ^{view} ~~has~~ has been discarded several times.

- ✓ Indian model promotes unity and respect for all religions.
- ✓ Promotes communal harmony.
- ✓ ~~Prevents~~ ^{Prevents} majoritarian politics and protect minorities from majority rule.

The Indian model has been successful in promoting development of all religions and their ideals, thus promoting unity in the diversity.

Feedback

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TOTAL MARKS			

Q.5) Discuss the multi-dimensional implications of uneven distribution of semiconductor industry in the world. (10 marks, 150 words)

विश्व में अर्धचालक उद्योग के असमान वितरण के बहुआयामी प्रभावों की चर्चा कीजिए।

(10 अंक, 150 शब्द)

Semiconductors refers to the micro-chips that power modern gadgets such as smartphones, automobiles among others. Few countries such as Taiwan, China, South Korea produce over 90% of chips globally.

Multi-dimensional implications of uneven distribution of the industry:

- (i) Supply chain that is vulnerable to shocks. (Eg) COVID 19 pandemic created huge shortage.
- (ii) Weaponisation of the supply chain — economic shocks to the importing countries.
- (iii) Strategic autonomy compromised due to import dependency.
- (iv) Current Account Deficit due to high

imports.

(v) Security and privacy apprehensions.

(Eg) Chinese companies being allegedly joint it.

Measures to reduce the negative implications

(i) Diversifying the supply chain - opening up of fabrication units in different countries. (Eg) India semiconductor mission.

(ii) Designing and developing supply chain semiconductors - utilising human talent.

(iii) Collaboration with countries in developing technology and investments. (Eg) India-US

(iv) Securing raw material for manufacturing.

Semiconductors forms the most important component in all technologies today. To have a strategic autonomy, it is important to have self-reliant domestic industry.

Feedback

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TOTAL MARKS			

Q.6) Examining the reasons behind erratic Monsoon, highlight the possible outcomes of the same. (10 marks, 150 words)

अनिश्चित मानसून के कारणों की जांच करते हुए इसके संभावित परिणामों पर प्रकाश डालिए। (10 अंक, 150 शब्द)

Monsoon are the seasonal change in wind pattern over the Indian ocean leading to rainfall in the subcontinent during April to September.

Reasons behind erratic monsoon:

(i) Effect of El-Niño and La-Niña -

El-Niño reduced rainfall whereas La-Niña increases the rainfall.

(ii) Increased sea-surface temperature due to climate change.

(iii) Effect of Indian Ocean dipole on the monsoon.

(iv) Difference in the snow levels in the Tibetan plateau

(v) Change in direction of jet streams over the sub-continent.

Possible outcomes of the erratic monsoon are :-

- (i) Unequal distribution in rainfall over the region — droughts and floods over different regions
 - (ii) Torrential rains in short time — cases of landslides. (Eg) Maharashtra western ghats.
 - (iii) Damage to the agricultural crops — leading to shortage of food — food insecurity and inflation. (Eg) Tomato
 - (iv) Water scarcity due to low recharge of groundwater and aquifers.
 - (v) Infrastructure damage. (Eg) Delhi-Yamuna floods
- Due to erratic monsoons, steps such as water harvesting structures, climate smart agriculture and resilient building are required.

Feedback

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Q.7) Why is Antarctic becoming an area of renewed human interest? Examine the significance of Antarctic bill, 2022 in protecting India's interest in the region. (10 marks, 150 words)

अंटार्कटिक नए सिरे से मानव हित का क्षेत्र क्यों बनता जा रहा है? इस क्षेत्र में भारत के हितों की रक्षा में अंटार्कटिक विधेयक, 2022 के महत्व का परीक्षण कीजिए। (10 अंक, 150 शब्द)

Antarctic is one of the seven continents located in southern hemisphere permanently covered by ice.

There is a renewed interest in the region due to :-

- (i) Research and in the climate change due to its ability to preserve samples from history
- (ii) Rich in resources such as fishes, minerals and land.
- (iii) Important strategically for countries as a new place of settlement.
- (iv) Opening up of avenues for tourism activities.

Significance of Antarctic bill in protecting India's interests:

- (i) Permitting of research activities in the region.
- (ii) Measures for regulation of tourism activities.
- (iii) Sustainable disposal of wastage.
- (iv) Banning of certain activities that harm the pristine ecology.
- (v) Conservation and protection of the region.

Antarctic offers unique geography to carry out research — climate change, space studies and matter — neutrinos etc.

The new bill helps in regulating the activities in the Antarctic.

Feedback

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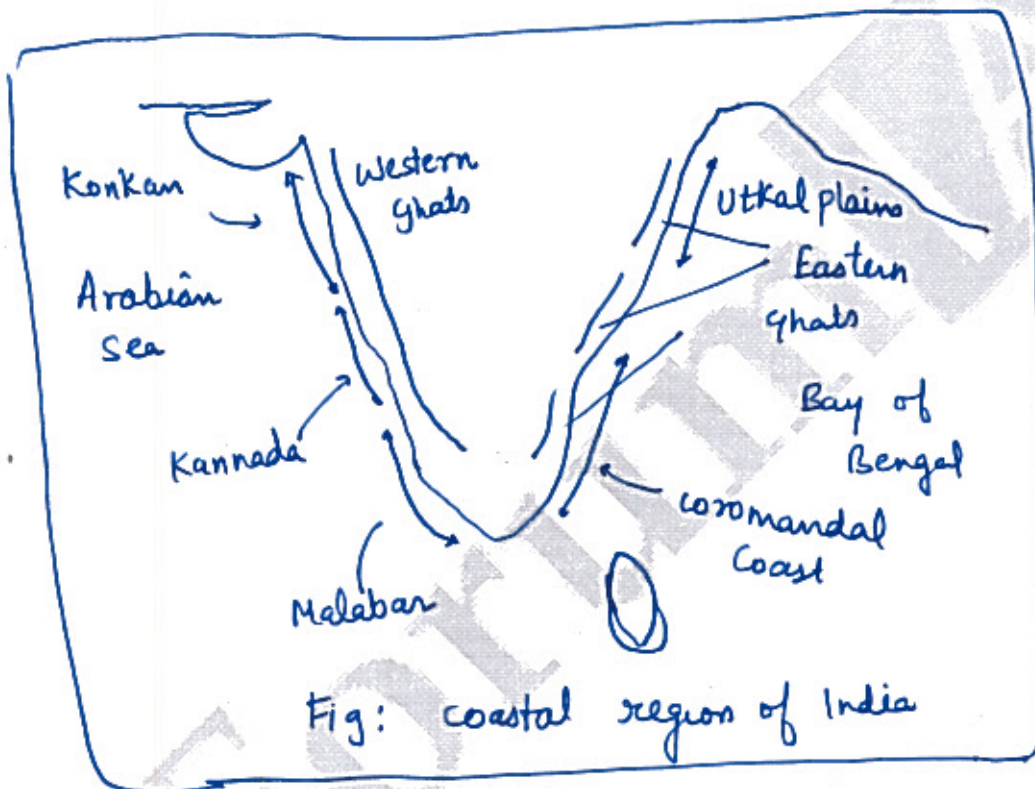
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TOTAL MARKS			

Q.8) How does the Eastern coast of India differ in its geographical features from the western coast? (10 marks, 150 words)

भारत का पूर्वी तट अपनी भौगोलिक विशेषताओं में पश्चिमी तट से किस प्रकार भिन्न है?

(10 अंक, 150 शब्द)

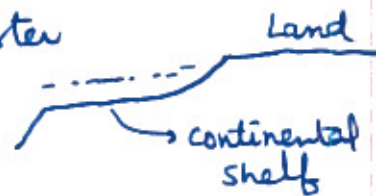
The coastal regions of India vary greatly in terms of biodiversity and landform. India has coastline of over 7500 Kms.



Differences in Geographical features:

- (i) Continuous mountain range along the west coast — western ghats whereas non-continuous range of mountain along the east coast — eastern ghats.

- (ii) Height of western ghats is taller than eastern ghats.
- (iii) Greater number of rivers emerge from western ghats such as Godavari, Krishna and Kaveri.
- (iv) Receives rainfall during the summer monsoon in western ghats whereas ~~East~~ East coast receives rainfall from winter ~~western~~ monsoon in Coromandel coast.
- (v) Tropical rainforests on west coast whereas wet deciduous forests on east coast.
- (vi) Wider continental shelf on west coast whereas it is shorter on east coast.
- (vii) More presence of natural harbour on east coast.



Despite their geographical differences, both support ^{rich} biodiversity and are effected by mining, deforestation and climate change.

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Q.9) Explain the meaning of colour-coded weather warnings for:

(10 marks, 150 words)

- a) Rainstorms
- b) Thunderstorms
- c) Duststorms

रंग-कूटबद्ध मौसम चेतावनियों का अर्थ समझाएं :

(10 अंक, 150 शब्द)

- a) तूफानी वर्षा
- b) तड़ित झंझावत
- c) धूल भरी आंधी

Colour coded weather warnings represents the level of threat that is possible due to oncoming weather phenomenon. It is released by IMD in India. It helps in taking preventive measures and preparedness for the disaster.

Red usually refers to the highest level of threat. — chances of high rainstorms, thunderstorms or duststorms

Green usually refers to lowest level of threat. (eg) light rain or storms that would not cause much effects

Feedback

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Q.10) How has globalization and urbanization impacted the Indian family system?

(10 marks, 150 words)

वैश्वीकरण और शहरीकरण ने भारतीय परिवार व्यवस्था को कैसे प्रभावित किया है?

(10 अंक, 150 शब्द)

Globalisation is a process of integration of the countries around the globe and urbanisation refers to the increasing urban areas and the population due to changing nature of job

These have impacted the family system in the following ways:-

Positive impacts

- Infusion of ideas of equality, liberty in the family system — reducing patriarchy and gender discrimination
- More avenues of economic opportunities for men and women — strengthening of ties — equality in gender.
- More power to women in decision making
- Changing gender roles and division of labour. Males taking up house care functions.

↳ changing nature of socialisation of children — due to nuclear families

Negative impacts

- Changing values from joint family to nuclear family system
- Work stress — reduced work-life balance deteriorating quality of relationships
- Childcare outsourced to nannies which may lead to poor parenting
- Increasing amount of divorces.
- loss of social support that came from joint families
- Class-divides and valuing materialism over social relations.

Thus, the globalization and urbanisation had deep impacts on Indian family system transforming into a new entity.

Feedback

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Q.11) Coral reefs are considered to be at the epicentre of marine ecology; however, their existence is threatened due to a plethora of anthropogenic and natural causes. Comment.
(15 marks, 250 words)

प्रवाल भित्तियों को समुद्री पारिस्थितिकी के केंद्र में माना जाता है; हालांकि, उनके अस्तित्व को मानवजनित और प्राकृतिक कारणों की अधिकता के कारण खतरा है। टिप्पणी करें।
(15 अंक, 250 शब्द)

Coral reefs are formed by the symbiotic relationship of polyps and zooxanthellae. They are termed as the 'rainforest of the oceans'.

They are considered to be at the epicenter of marine ecology due to the following :

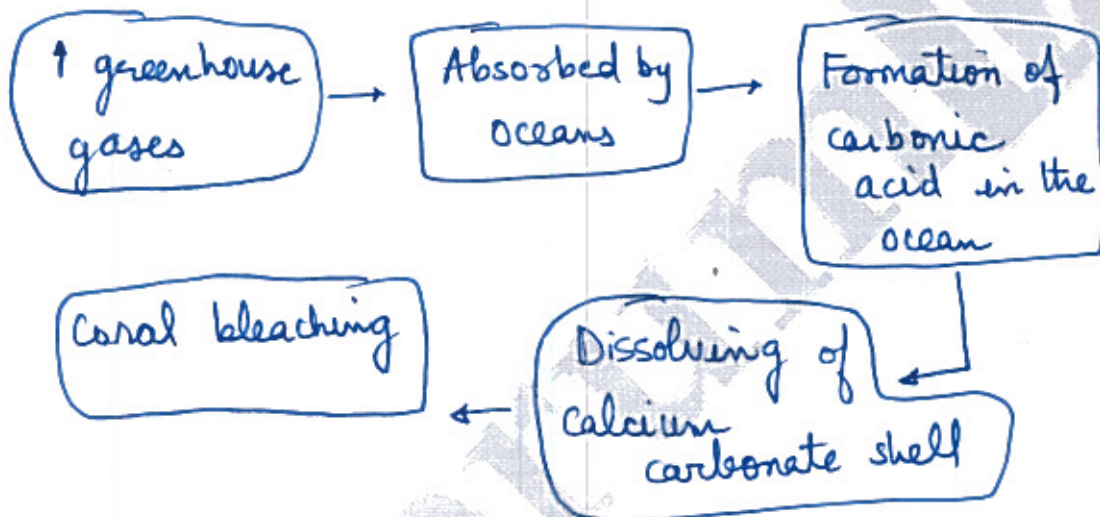
- (i) Supports large number of marine species - as habitat.
- (ii) Major producer of nutrients for the marine species.
- (iii) Acts as indicator of ocean health.
- (iv) Protects and prevents species from hazards.

However, they have been threatened by plethora of causes.

Natural causes → Disasters such as cyclones and earthquakes

Anthropogenic causes

(i) Global warming due to increased concentration of greenhouse gases in the atmosphere.



Global warming also alters the homeostasis of the corals.

(ii) Overfishing and bottom trawling damaging the corals.

(iii) Pollution of oceans — plastic dumping,

oil spills and surface run-off damaging the corals.

(ix) Use of coral reefs to manufacture limestone.

Measures to prevent the damages and restore health

(i) Fulfilling the NDC targets, reducing emissions and moving towards net zero.

(ii) Use of technology to restore corals

(Eg) Biosock technology.

(iii) Preservation of coral reefs by declaring them protected.

Coral reefs form important part of marine ecology and must be protected from the devastating effects.

Feedback

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Q.12) Discuss the causes for salinity ingress along with its various consequences and potential solutions. (15 marks, 250 words)

लवणता अंतःप्रवेश के कारणों के साथ-साथ इसके विभिन्न परिणामों और संभावित समाधानों पर चर्चा कीजिए।

(15 अंक, 250 शब्द)

Salinity ingress refers to the process of ingression of saltwater into land and freshwater resources.

Causes

- (i) Cyclone landfall onto the surface causing salinity in coastal areas
- (ii) Reducing the groundwater level by its overuse leading to increase in salinity
- (iii) Rise in sea level due to global warming.
- (iv) Construction and mining activities

Consequences of salinity ingress

- (i) Renders the agricultural land in coastal areas unfit for crop production.

- (ii) Natural freshwater sources — rivers and lakes become unfit for human consumption
- (iii) Increased inland salinity — deterioration of soil.
- (iv) Changes in salinity level of freshwater — disruption in species ecology leading to biodiversity loss
- (v) Reduced productivity of fisheries sector and agriculture — economic loss.

Potential solutions to salinity ingress

- (i) Mangrove plantations across the coastal regions — salt tolerant and economic benefits from wood and biodiversity.
- (ii) Reducing the carbon footprint to reduce the hazards of cyclone and sea level water rise.

- (iii) Growing of salt-tolerant crops in saline soils. (Eg) Millet cultivation
- (iv) Promoting shrimp farming in lands rendered useless due to high salinity (Eg) Punjab
- (v) Promoting sea-weed farming.
- (vi) Rainwater harvesting structures creation to improve groundwater level.
- (vii) Structural constructions such as - seawalls to prevent ingress.

Salinity ingress causes impacts to ecological and economy. Measures such as above are needed. With the increasing incidences, a collaborative approach is needed.

Feedback

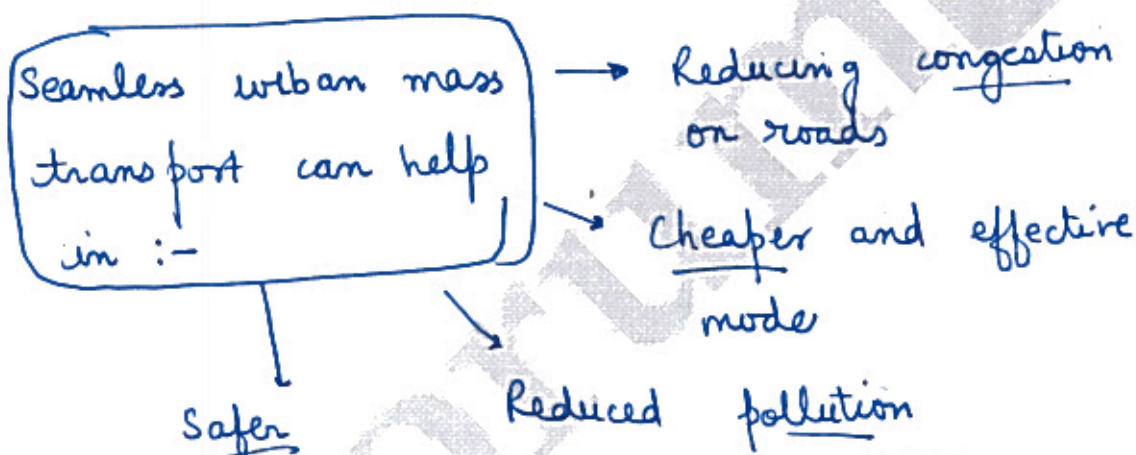
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Q.13) The actualization of a seamless urban mass transport is hobbled by a slew of factors. Identifying these factors, recommend measures to create a robust paradigm for urban mass transport. (15 marks, 250 words)

एक निर्बाध शहरी जन परिवहन की वास्तविकता कई कारकों से प्रभावित होता है। इन कारकों की पहचान करते हुए, शहरी जन परिवहन के लिए एक मजबूत प्रतिमान बनाने के उपायों की सिफारिश कीजिए। (15 अंक, 250 शब्द)

Urban mass transport refers to modes of transport such as metro-rail, ~~or~~ buses, rapid rails that help in movement of people effectively and efficiently.



However, its actualisation is hobbled by a slew of factors such as :-

- (i) Unplanned urbanisation : leading to =
 - a) difficulty in setting up a transport system that works effective.
 - b) Long transit routes between place of

work and residence.

(ii) Infrastructure issues :

a) Lack of road connectivity and properly paved roads.

b) Low number of buses or metro-rails that could handle the population.

(iii) Poor management — leading to delays
This makes people shift to personal vehicles.

(iv) Rapid urbanisation :- demand-supply mismatch.

(v) Lack of effective policies — favoring personal transportation.

(vi) Low capacity of public sector due to shortage of funds and capability.

(vii) Social pride and respect associated with owning private vehicle.

Measures to create robust paradigm for urban transport:

- (i) Effective and efficient management of present transportation systems.
- (ii) Transit-oriented development model to reduce transit distance.
- (iii) Inclusion of PPP models such as HAM for funding and technology infusion.
- (iv) Policy support to incentivise the use of urban transport.
(Eg) Delhi government free buses for women
- (v) Multi-modal connectivity for interoperability of transport system.
- (vi) Common mobility card for seamless payment

Seamless urban transport is the need considering rapid urbanisation and India's goal of achieving climate targets.

Feedback

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Q.14) The economic and strategic significance of mineral wealth of a country cannot be seen in isolation from the associated socio-ecological impacts of their extraction. Discuss in light of the newfound lithium reserves in Northern India. (15 marks, 250 words)

किसी देश की खनिज संपदा के आर्थिक और रणनीतिक महत्व को उनके निष्कर्षण से जुड़े सामाजिक-पारिस्थितिक प्रभावों से अलग करके नहीं देखा जा सकता है। उत्तरी भारत में खोजे गए नवीनतम लिथियम भंडार के प्रकाश में चर्चा कीजिए। (15 अंक, 250 शब्द)

Recent discovery of the lithium reserves in the UT of Jammu and Kashmir have started discourse on their economic and strategic significance. These reserves are touted to be important for strategic autonomy of the country.

Significance of mineral wealth of a country

Economic

Availability of raw material for industries

Employment in mining and manufacturing

Significant contribution to GDP

Reduction in CAD by lowering of imports

Boost to domestic manufacturing

Resilient supply chain

Strategic

Reduced dependence on other countries for raw materials.

(Eg) China is major producer of lithium - over 50%.

Strategic autonomy due to reduced dependence

Creation of strategic assets within the country. (Eg) Li-ion batteries and semiconductors

Technology boost for extraction and manufacturing — spinoff in defence industry.

However despite its significance, there are impacts of their extraction

Social impacts

Displacement and rehabilitation of people residing in the areas

Difficult living conditions due to polluted air and water.

Decline of traditional livelihood and work as labour in industries.

Ecological impacts

- Pollution of water and air due to mining activity.
(Eg) lithium mining leads to large amount of water pollution
- Groundwater depletion
- loss of biodiversity
- Increased ~~sos~~ susceptibility to disasters such as landslides, earthquakes etc.

Thus, despite their significance, there are impacts due to their mining too.

Way forward

- ✓ Balancing the economic and strategic needs with the environment sustainability
- ✓ Sustainable practices in utilisation minimising the ecological impacts

The minerals such as rare earth metals and lithium are critical for future growth and strategic aspect. However their socio-ecological impacts must also be kept in mind

Feedback

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Q.15) Examine the reasons behind generation of regional sentiments? Do you agree that regional sentiments and cultural assertiveness may lead to the issue of separatism? (15 marks, 250 words)

क्षेत्रीय भावनाओं के उत्पन्न होने के पीछे के कारणों का परीक्षण कीजिए। क्या आप इस बात से सहमत हैं कि क्षेत्रीय भावनाएँ और सांस्कृतिक मुखरता अलगाववाद के मुद्दे को जन्म दे सकती है? (15 अंक, 250 शब्द)

Separatism refers to the ideology of creating a separate state or nation by the people due to some underlying factors such as regional sentiments and cultural assertiveness.

Regional sentiments may be generated due to:

Positive factors

- Similarity in culture among people
- Underlying history that led to feeling of close-ties. (Eg) Munda Rebellion
- Good socio-economic indicators and governance structure.

Negative factors

- Development deficit as compared to other regions. (Eg) Hill regions of Mizoram or Jharkhand region of earlier Bihar

- Discrimination among people belonging to different culture. (Eg) Manipur - Kuki and Meitei people
- Violence and low opportunities as compared to others
- Differences in cultural values/practices than the majority. (Eg) Nagas

The regional sentiments and cultural assertiveness can lead to issues of separation in following ways:

- (i) Differences in ~~cultural~~ culture and inability to identify with the people of the country.
(Eg) Demand of Greater Nagalim by the Nagas.
- (ii) Negative sentiments for the majority due to discrimination and development deficit leading to separatist demands.
(Eg) Jharkhand movement

- (iii) Cultural assertiveness and love for the region to have self-rule.
(Eg) Khalistan demands among some Sikhs.

However, there does not always lead to separatist issues, rather:

- (i) Help in regional development by raising the specific issues.
- (ii) Creation of diversity that helps in resolution of challenges in better way.
- (iii) Cultural diversity leading to regional tourism boosting the economy.
(Eg) Sikkim state.

Thus, the regional sentiments does not always leads to separatist demands and are rather one of the factors.

Improving development, correcting the historical injustice and integration of cultures will help in reducing the issues of separatism.

Feedback

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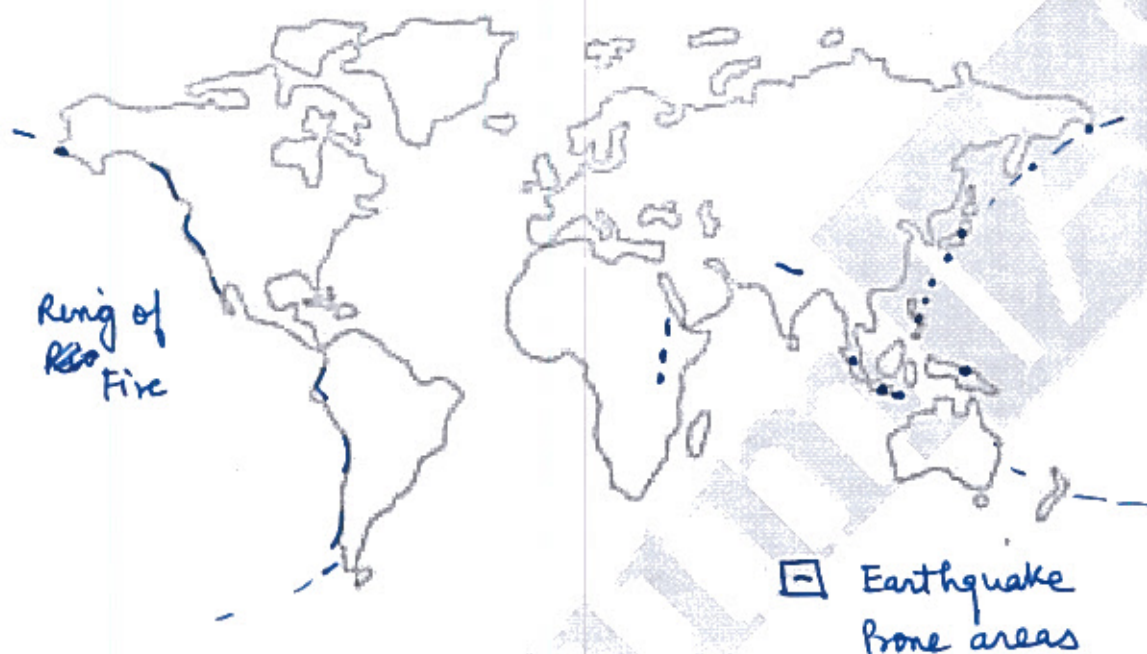
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Q.16) Explain the mechanism and occurrence of earthquake. With the help of map given below, throw light upon the vulnerability of regions affected by earthquake and earthquake related disasters. (15 marks, 250 words)

भूकंप की क्रियाविधि और घटना को समझाइए। नीचे दिए गए मानचित्र की सहायता से भूकंप और भूकंप संबंधी आपदाओं से प्रभावित क्षेत्रों की संवेदनशीलता पर प्रकाश डालिए। (15 अंक, 250 शब्द)



Earthquake is the release of energy along the fault lines — leading to shaking of the earth.

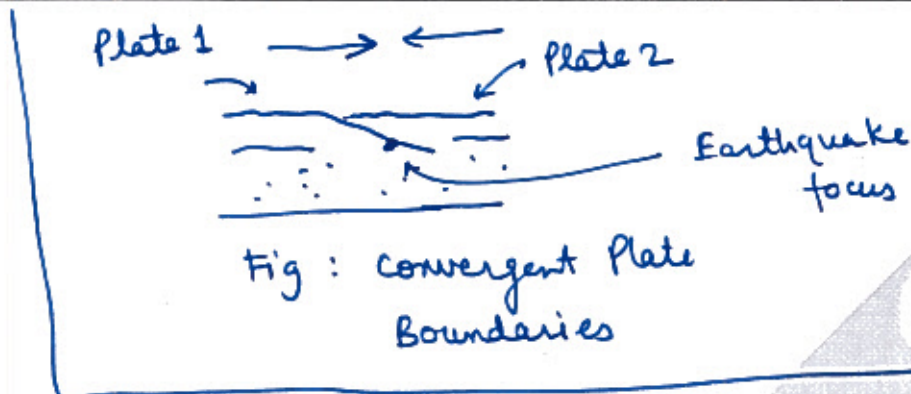
Mechanism of the occurrence of earthquake:



Shift in the tectonic plates →

Built up of pressure along the fault lines

Sudden release of energy



Vulnerable regions :

- (i) Along the fault lines of the tectonic plates
- (ii) Areas of heavy construction and mining activity — anthropogenic cause.
- (iii) Detonation of powerful bomb. (Eg) Nuclear bomb

Impact of earthquake :

- (i) It triggers other disasters — such as:
 - a) landslides in mountainous regions
 - b) Fires and demolition of buildings in cities
 - c) Tsunamis in oceans.

- d) Sinking of land
e) Floods due to breakage of dams/walls.

Earthquakes causes socio-economic as well as ecological impacts. Earthquake resistant buildings as well as proactive measures can help in reducing its effects.

Feedback

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Q.17) Enumerating different types of tides highlight their significance. Also, explain how tides are different from waves. (15 marks, 250 words)

विभिन्न प्रकार के ज्वारों की गणना उनके महत्व को उजागर करती है। यह भी समझाइए कि ज्वार-भाटा तरंगों से किस प्रकार भिन्न होते हैं। (15 अंक, 250 शब्द)

Tides are the rise and fall in the sea level due to certain factors.

These occur due to affect of gravitational forces of moon and the sun and their impact on seas.

Different types of tides are :-

(i) Diurnal tides :- There are the variations in tides in the day. There are usually one-high and one-low tide in the day.

(ii) Spring Tides :- when the sun, moon and the earth align in a straight line — the tides are the maximum. It happens during new moon and full moon nights

(iii) Neap tides : This occurs when the sun, moon and earth are not aligned. It forms a low tide

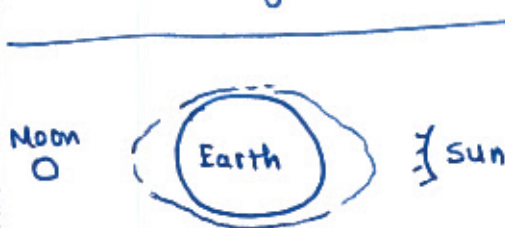


Fig: Spring Tide

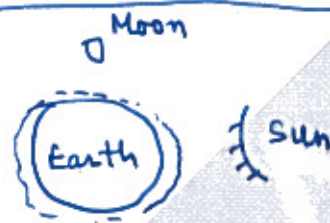


Fig: Neap tide

Significance:

- (i) Helps in generation of electricity through tidal energy.
- (ii) Material from the sea is collected over the coast.
 - helps cleaning up the seas
 - provides some useful resources
 - Provides nutrients to the fishes collected from land.
- (iii) Helps in cleaning up of the beaches.
- (iv) Inter-tidal zones are rich in

biodiversity — edge effect. (eg) Estuaries.

Tides are different from waves in the following ways :-

- (i) Tides are formed due to gravitational forces whereas waves are formed due to rotation and effect of wind on the sea surface.
- (ii) Waves do not lead to change in sea level.
- (iii) Waves are constant throughout the year and flow without any pause.
- (iv) Waves help in the movement of ships.

Waves and tides are geographical phenomenon impacting humans since ages. However, the impact of climate change and subsequent sea level rise is risking livelihood of coastal population.

Feedback

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Q.18) With special reference to India, elucidate how globalisation-a multifaceted phenomenon-has had positive socio-economic outcomes on one hand and widened the gaps between the haves and have nots on the other? (15 marks, 250 words)

भारत के विशेष संदर्भ में, यह स्पष्ट कीजिए कि कैसे वैश्वीकरण - एक बहुआयामी घटना - के एक तरफ सकारात्मक सामाजिक-आर्थिक परिणाम हुए हैं और दूसरी तरफ अमीर और गरीब के बीच की खाई को चौड़ा किया है?

(15 अंक, 250 शब्द)

Globalisation refers to the phenomenon of integration of culture, economy and society around the globe.

India embarked on the path with its economic reforms of 1990s.

Globalisation has had positive socio-economic outcomes in the following ways:-

- ②) Economic
- Increased investments in the economy. Several sectors opened up for FDI
 - Employment creation in industrial and service sectors
 - High GDP growth rate (8%)
 - Improvement in per capita income
 - Infrastructure development.

↳ Advancement in technology - due to increased interaction and investment

- Social
- Improved education and health
 - People to - people ties increased.
 - Migration to countries such as UAE, USA for better opportunities
 - Tourism increased - cultural contact.
 - Better standards of living

However, globalisation also widened the gaps :-

(i) Increased inequality : Concentration of wealth in the hands of few.

(Eg) Oxfam report - richest 1% hold 40% wealth

(ii) Regional disparities :— Rural-urban divide and North-South divide.
Urban areas flourished and southern states became more prosperous.

(iii) Jobless growth — The growth in service sector could not employ agricultural sector workers. Lack of skills widened the gap.

(iv) Preference to education in English and computer — lower opportunities for others.

Due to this, rise in slums in urban areas, poor social and health infrastructure and discrimination in access to opportunities can be seen. (low ranking in social mobility index)

Thus, globalisation has led to positive as well as negative outcomes. Though overall standards of living has increased, it has also led to increased inequality and divide among the people.

Feedback

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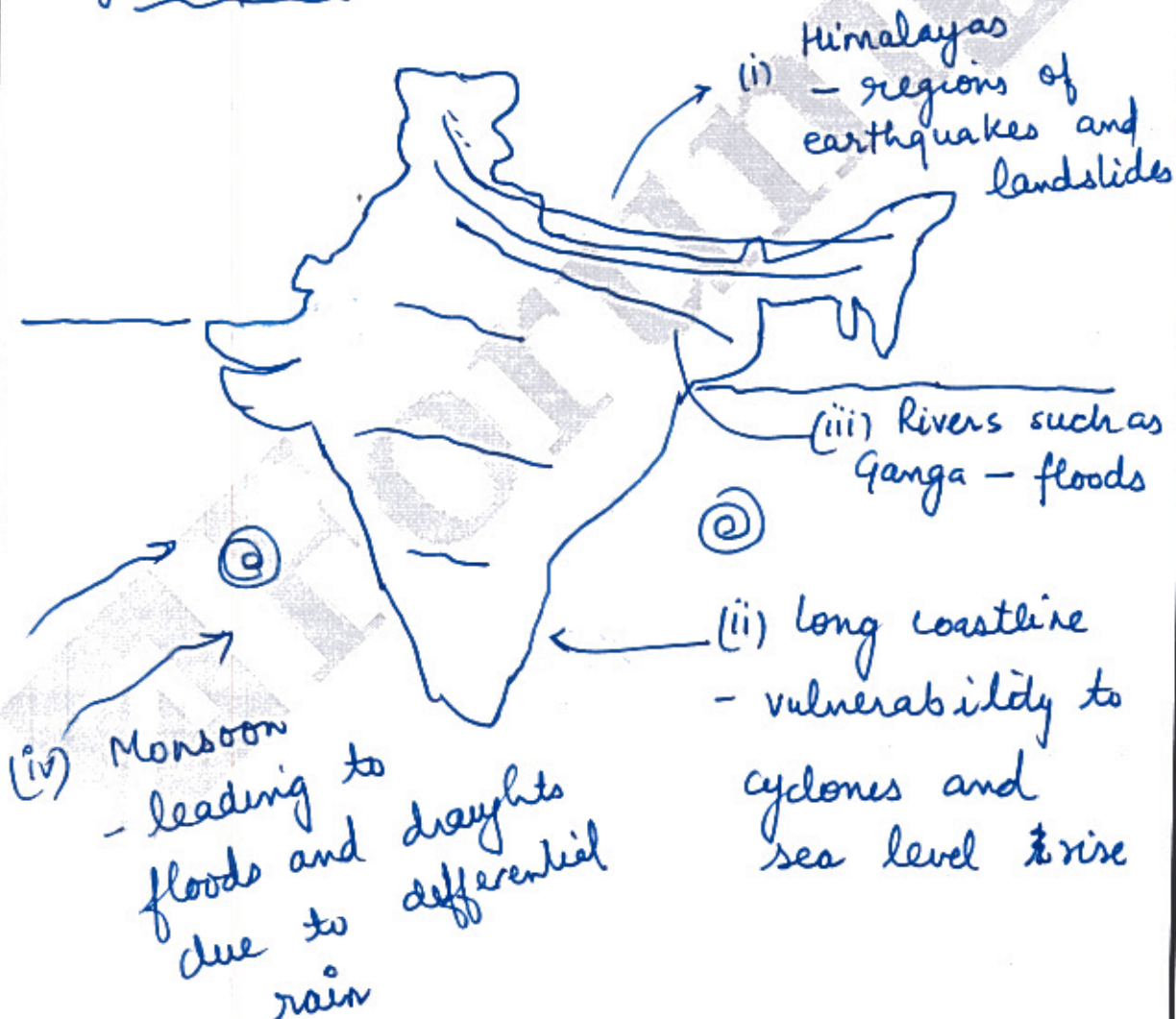
Q.19) What makes India one of the most vulnerable regions to climate change? Discuss the role of governments, citizens, and businesses in building climate resilience. (15 marks, 250 words)

क्या-क्या चीजें भारत को जलवायु परिवर्तन के लिए सबसे संवेदनशील क्षेत्रों में से एक बनाती हैं? जलवायु नम्यता के निर्माण में सरकारों, नागरिकों और व्यवसायों की भूमिका पर चर्चा कीजिए। (15 अंक, 250 शब्द)

According to Climate Vulnerability Index by Germanwatch, India is one of top 10 most vulnerable regions in the world.

Reasons for climate vulnerability:

geographic factors:



other factors:

- (i) High population density along the river plains and coastal areas.
- (ii) High incidence of poverty - reduced resilience to climate shocks.
- (iii) Infrastructure deficit due to poor investment in mitigation and resilience

Role of the following in building climate resilience:—

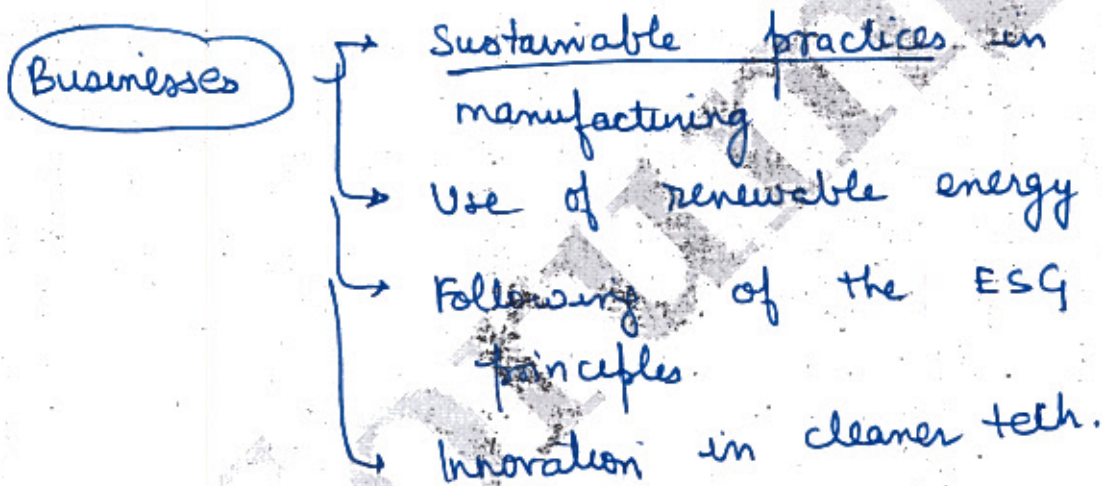
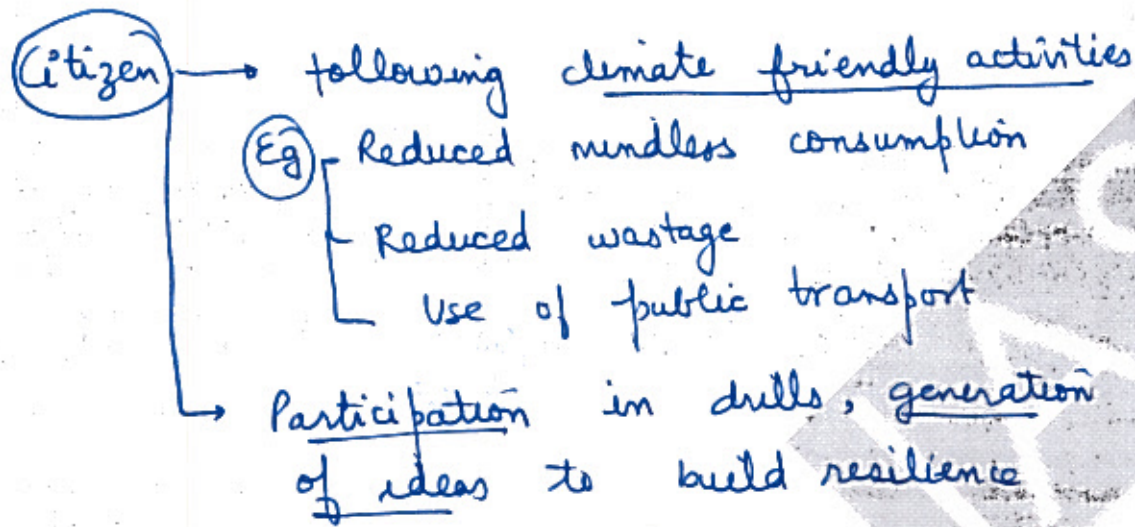
Government

→ Supportive policies that focuses on resilience in the infrastructure creation

→ Implementation of climate goals and fulfilling NDCs - renewable energy (50%) of total, carbon sink creation

→ Resilience in agriculture through approach such as

climate smart agriculture



All the stakeholders are required to mitigate the effects of climate change. India being one of the most vulnerable country need to collaborate and implement practices that reduce the effects of climate change.

Feedback

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Q.20) All deserts are rain deficit, but are formed due to different reasons. Discuss. Also, analyse various adaptations in the flora and fauna to survive the water deficit conditions.

(15 marks, 250 words)

सभी मरुस्थल वर्षा के अभाव वाले हैं, लेकिन इसका निर्माण विभिन्न कारणों से होता है। चर्चा कीजिए। इसके अलावा, जल की अभाव की स्थिति से बचने के लिए वनस्पतियों और जीवों में विभिन्न अनुकूलन का विश्लेषण कीजिए।

(15 अंक, 250 शब्द)

Deserts are the areas of land that receive very low rainfall (less than 25cms) and have very minimal vegetation and biodiversity.

Although, all deserts are rain deficits, they are formed due to different reasons:—

(i) Effect of continentality

Some areas fall outside the areas of rainfall due to their distance from the coast. (Eg) Gobi deserts.

(ii) Effect of cold currents

These ~~are~~ ^{have} ~~an~~ ^{desiccating} effect on the oncoming rainfall ~~too~~ which reduces moisture in the ~~air~~ wind.

(Eg) Atacama desert.

(iii) Sub-tropical high pressure belts : These reduces the formation of clouds due to high pressure in the region.

(Eg) Sahara desert

(iv) Rain-shadow effect of mountains - suppress rainfall. (Eg) Thar desert due to Aravali ranges.

Various adaptations in the flora and fauna to survive the water deficit conditions :

- (i) Deep roots which help in gathering moisture.
- (ii) Thick and waxy leaves which reduces the loss of water due to transpiration.
- (iii) Succulent leaves to store water.
- (iv) Nocturnal animals to reduce the effect of heat in daytime.
- (v) Ability to convert fat into water.

(vi) Thick urine - to minimise water loss

Desertification has increased due to anthropogenic factors leading to increased area under deserts. Activities such as roof rainwater harvesting, afforestation, agro-ecological farming can help in halting it.

Feedback

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Mentor Feedback Questions

- 1
- 2
- 3
- 4
- 5

Test Goal

- 1 ☐
- 2 ☐
- 3 ☐

Outcomes

-
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Marking Scheme

Mark	Good	Average	Below average
10 Marker	3.75 – 5.0	3.0 – 3.5	< 3.0
15 Marker	5.75 – 7.0	4.0 – 5.5	< 4.0
✓✓	Key / Relevant Point		
✗	Vague / Irrelevant		

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