

Time Allowed : Three Hours

समय : तीन घंटे

ForumIAS

Maximum Marks : 250

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

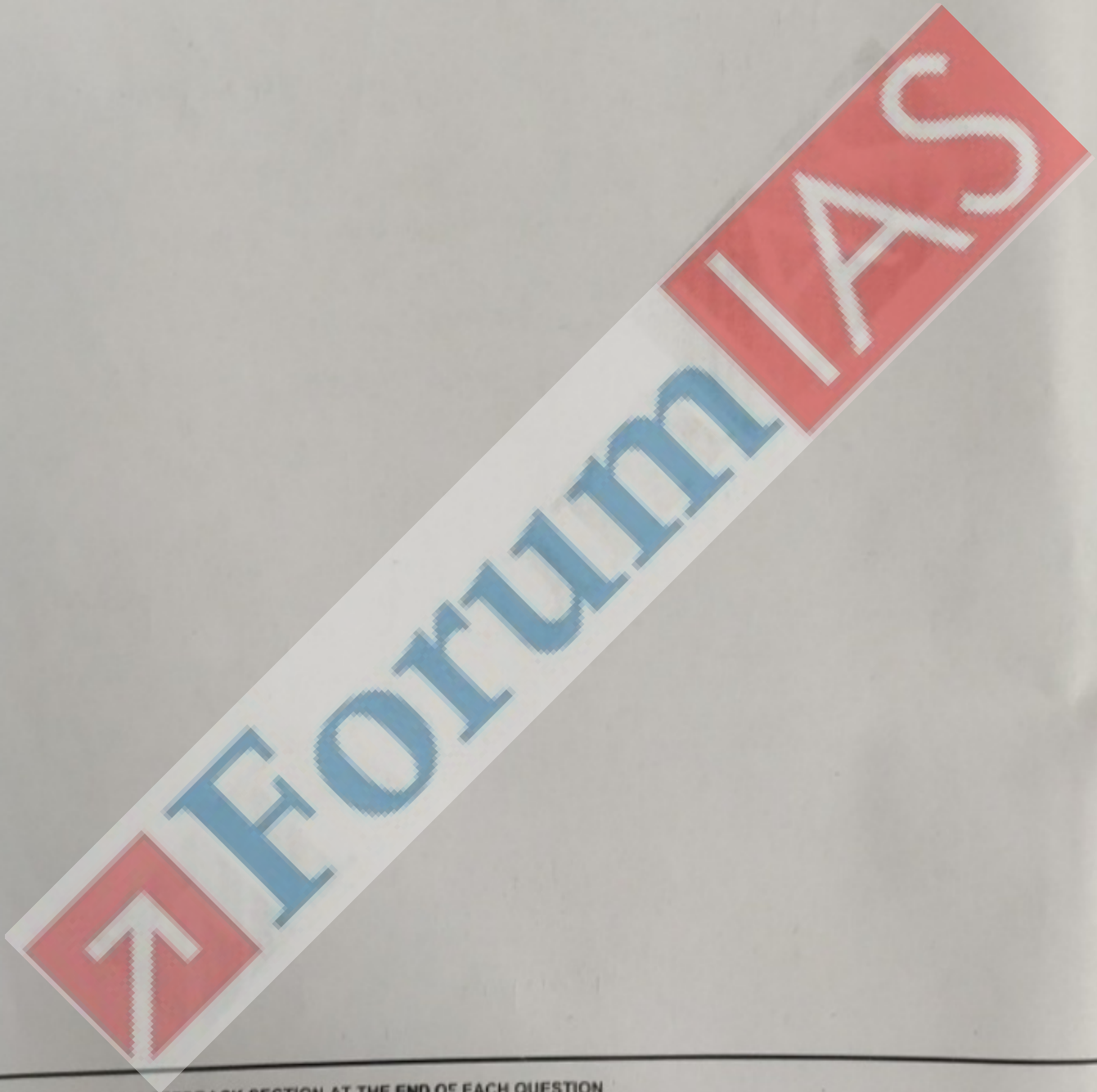
Name Of Candidate परीक्षार्थी का नाम	SWATI SHARMA		
Roll No./अनुक्रमांक	1910099200	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	1901	Date/दिनांक	24 August 2023

*Center Code : For Online - 1900 / Delhi : Karel 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।	
1			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।	
2			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।	
3			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 प्रदेश 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।	
4			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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Total/कुल अंक	250		For Student Only / केवल परीक्षार्थी प्रयोग हेतु	
Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
			4:00 p.m.	7:30 pm.
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input checked="" type="checkbox"/> Offline/ऑफलाइन <input type="checkbox"/>
*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 अपनी निष्पक्ष प्रस्तुति, अक्षरों के उपयोग, प्रस्तुति, तथ्यों और आंकड़ों या समग्र रूप कियी अन्य विषय वस्तु जो मूल्यांकन कर्ता को अपनी कॉपी में पसंद आती के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
			ECN CODE/ ईसीएन कोड :	EG/ईजी :
				① ② ③ ④ ⑤
				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)

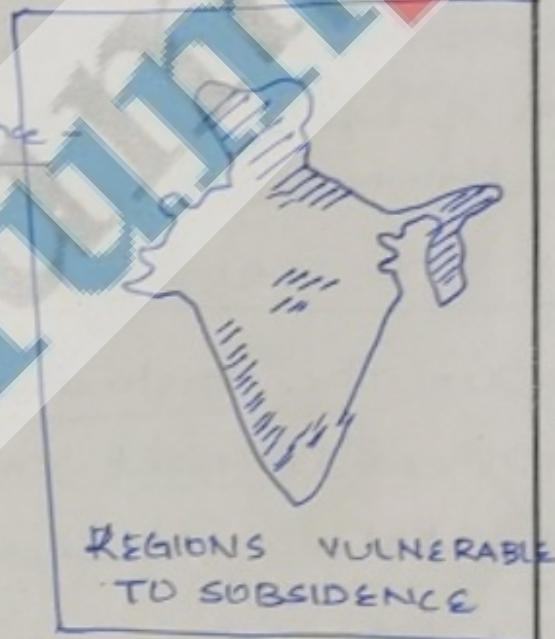
Land subsidence is gradual sinking or resetting of land surface of earth, due to removal or movements in sub-surface materials.

The REASONS behind land subsidence

i) Natural reasons

→ High amount of rainfall can create water to act as lubricating agents

→ Movements inside the earth near surface at the mantle, can also lead to movements in plates leading to subsidence.



ii) Anthropogenic reasons

→ Large number of developmental activities in the ecologically sensitive regions (eg) - Himalayas

→ Mining inside the earth surface

→ Loosening of soil due to activities such as fracking, etc.

Land subsidence ^{can} have huge impact on loss of life, loss in GDP, ecological destruction. Hence, IN

ORDER TO ARREST THE CALAMITY -

- ① Maintain the sustainable balance between environment and development
- ② Afforestation to prevent degradation of land and conserve subsurface
- ③ Careful planning through assessments on events of land subsidence.

Land subsidence can become a disaster from hazard if not adapted on time.

Feedback

(For OFFICE use only)

#	③	④
AWIS		
CD & VA		
S & F		
P & R		
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)

The tropical regions are located near the equator between 0° - 30° N-S.

These are one of the productive ecological regions in world.

less disturbed due to ecological changes

TROPICAL REGIONS

- high insolation received
- high rainfall
- nutrients
- high growth of forests

However, the TROPICAL REGIONS HAVE LIMITED GROWTH of lumbering industry because →

i) The ^{nutrient} soils are washed away due to excessive rain hence making trees not so productive in nature.

ii) The trees present in tropical regions are very tall and filled with canopy, hence cutting down of trees become difficult.

iii) The region is also ecologically prone to risk of diseases. Not much human lives are present but forests are basis for the tribal communities residing there.

iv) Further, a large number of species are present in the tropical regions. Hence, lumbering could put species habitat at risk.

v) The hardwood category of lumbering is more found in tropical ~~temperate~~ areas, difficult to cut.

Lumbering industry provides livelihood to millions of people but it should be guided by pro-planet people approach.

Feedback

(For OFFICE use only)

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AWIS			
CD & V ₁			
S & F			
P & R			
Please put tick marks in the above table.			
Here G is Good, A is Average and P is Poor.			
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 occur in the 5° - 30° North - South of equator at tropics. These are the depressions formed due to low pressure system at the tropical regions.

The SUITABLE CONDITIONS FOR TROPICAL CYCLONE FORMATION -

- ① Warm sea surface temperature (above 25°C)
- ② Low pressure system
- ③ Coriolis force
- ④ Low vertical wind shear
- ⑤ Humidity and atmospheric instability.

The TROPICAL CYCLONES differ from
the EXTRA TROPICAL CYCLONES (ETC).

Tropical cyclones

- i) These can form only over water surfaces, formed at tropics.
- ii) These form due to low pressure system and coriolis force creating depressions.
- iii) They make landfall and end.
- iv) They are quiet destructive in nature due to high speeds.

Extra tropical

- i) They can form over land and sea surfaces, formed in temperate areas.
- ii) They are formed due to formation of fronts - warm and cold front meets.
- iii) They cover a larger area.
- iv) They are not so destructive and bring calm weather.

The cyclones are part of ~~the~~ geographical atmospheric and ocean circulation that has wide ranging effects on human and ecology.

Feedback

(For OFFICE use only)

	+	⊙	⊗
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Please put tick marks in the above table.			
Here G is Good, A Average and P is Poor.			
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?
(10 अंक, 150 शब्द)

Secularism stands for determining relation between state and religion.
Supreme court has underlined secularism as basic feature of Indian Constitution (S R Bommai).

The DIFFERENCES IN MODELS

INDIAN MODEL

1) There is no strict separation of religion and state but a principled distance.

2) There is presence of elements of religion in state.

WESTERN MODEL

1) There is strict separation of ~~power~~ religion and state.
eg - France bans public display of religion.

2) The state has no responsibility in affairs of

activities. The state should treat every religion as equal (Article 26) in maintenance

ii) Positive efforts can be taken by state in respect of any religion

religion. The religion is totally related to private sphere

iii) State has to act as separated entity from religion

The Indian model is often CRITICISED
FOR PROMOTING MINORITY APPEASEMENT

① In the name of secularism, political parties use religion as means to vote bank eg - Muslims by INC

② It creates insecurity between communities when state does something for one religious community and not other

Secular model of Indian constitution upholds the value of sarva dharma sambhar in Indian society.

Feedback

(For OFFICE use only)

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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.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 are the materials that have conductivity between conductors and insulators. They are the basic building blocks for IC products and other electronic products.

The SEMICONDUCTOR INDUSTRY IS UNEVENLY DISTRIBUTED

- ① Taiwan dominates the industry
- ② USA has substantial ~~reserve~~ capacity of chip manufacturing
- ③ Essential raw materials - rare earth metals are dominated by China, Russia, Ukraine

Hence, the industry is run through

global interdependence among nations

IT HAS FOLLOWING IMPLICATIONS-

i) Supply chain disruptions

eg - pandemic was a breakthrough
in supply chain of global chip
manufacturing

ii) Global trade war due to geopolitical
imperatives can threaten supply

iii) Increased cost of production

iv) Skills required for the industry
become scarce

v) Technology for extraction of
raw materials are not available
at one place.

Semiconductors are resource of
future. Steps should be taken to
synergise the supply chain and
spur growth of global semiconductor
industry.

Feedback

(For OFFICE use only)

	(C)	(D)
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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.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)

India is blessed with three seasons. The monsoon season arrives near in month of June-July and lasts till mid-September bringing wide ~~char~~ impacts.

The monsoon pattern in India is varied.

FURTHER, there are

REASONS FOR

ERRATIC MONSOON -

1) El Niño - The

phenomenon near the east pacific coast can impact monsoons in India. El Niño leads to decreased rainfall as warmer air goes towards eastern pacific leading to rain at Peruvian coasts.

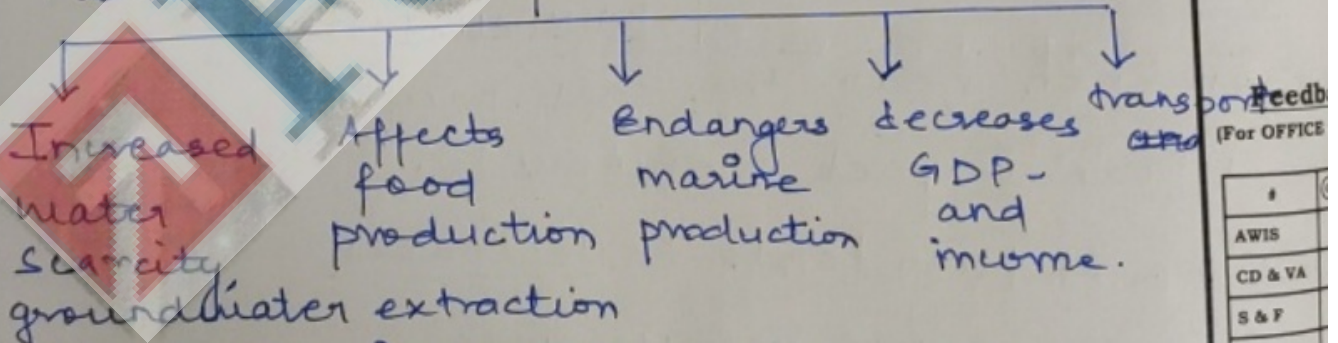


ii) Negative Indian Ocean Dipole when low pressure is created near Indonesia and eastern Indian ocean suppressing rainfall over the Indian subcontinent.

iii) Low trough formation at ITCZ can also lead to low rainfall. When the trough does not form above the Himalayas but below it.

iv) Climate change is a recurrent phenomenon that has impacted the variability of monsoons.

The POSSIBLE OUTCOMES of erratic monsoon:



Monsoon brings wealth and wellness in lives of people. It ~~can~~ helps gain sustainable living.

#	Feedback
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Please put marks in this table.	
Here G is Overall Average and Poor.	
TOTAL MARKS	

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 the largest continent of Earth. It has around 70% of freshwater availability and is home to ice caps and glaciers.

Antarctic is BECOMING AN AREA OF RENEWED HUMAN INTEREST -

i) The region is full of economic value

→ huge resource of oil

→ freshwater availability

→ glaciers and sea level connection

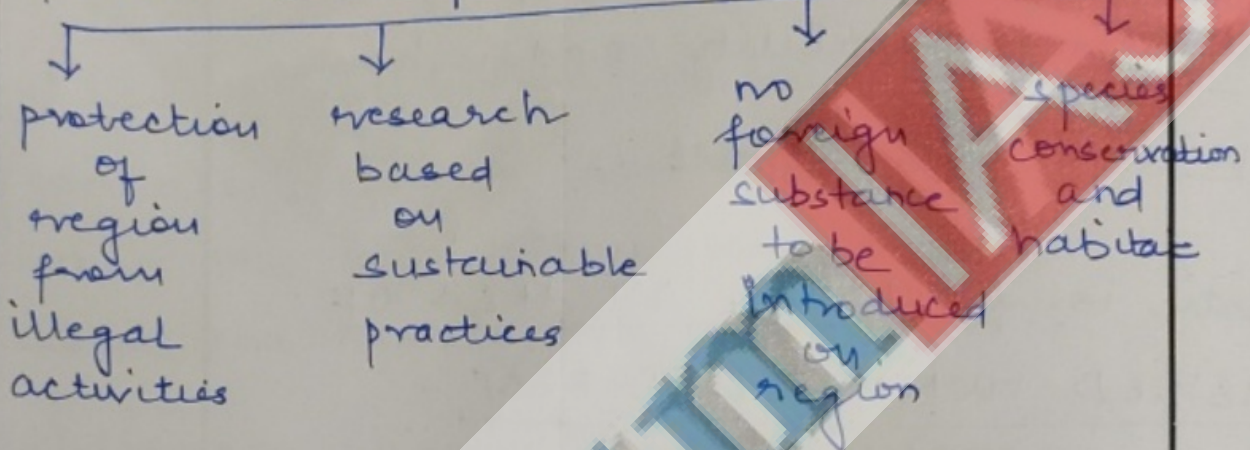
ii) It has a major role to play in atmospheric air circulation

iii) The region is under stress due to climate change

eg - warming of Antarctic led to

weakening of meridional overcirculation (AMOC)

India in its renewed interest has passed **ANTARCTIC BILL 2022**



i) The Bill helps make India a responsible partner in protection of Antarctic

ii) India is vulnerable to climate disasters. Antarctic glaciers can rise the sea level by 1.5 mm.

iii) The economic values at the region can aid GDP and growth.

The regions of earth that are susceptible to climatic harms should need a global approach to handle the situation

Feedback (For OFFICE use)

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Please put tick marks in the above table.	
Here G is Good, Average and P is Poor.	
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 coasts of India cover around
 km of the 2.7% of land
area of India.

The GEOGRAPHICAL FEATURES of

EASTERN
Coast

i) East coast is emergent in nature

ii) It is characterised by formation of deltas in the coast aiding growth of mangroves

iii) Due to siltation, ports are less developed

WESTERN
Coast

i) The coast is submergent in nature

ii) It has its significance due to presence of tidal activities and waves

iii) The tides are helpful in port development

Eastern coast

iv) These are the continuous piece of land area with low variations

v) The east flowing rivers such as Godavari, Krishna, bring huge siltation and form, hence, deltas

vi) The eastern coast is rich in minerals of water

Western coast

iv) These are narrower in bottom and discontinuous due to hills and cuts by rivers

v) The west flowing rivers such as Narmada, Mahi, Tapi aid the coast

vi) The backwaters (Kayals) near Kerala is famous for boat racing

Both the ~~coasts~~ coasts play a significant role in fisheries sector, aiding the blue economy.

Feedback

(For OFFICE use only)

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

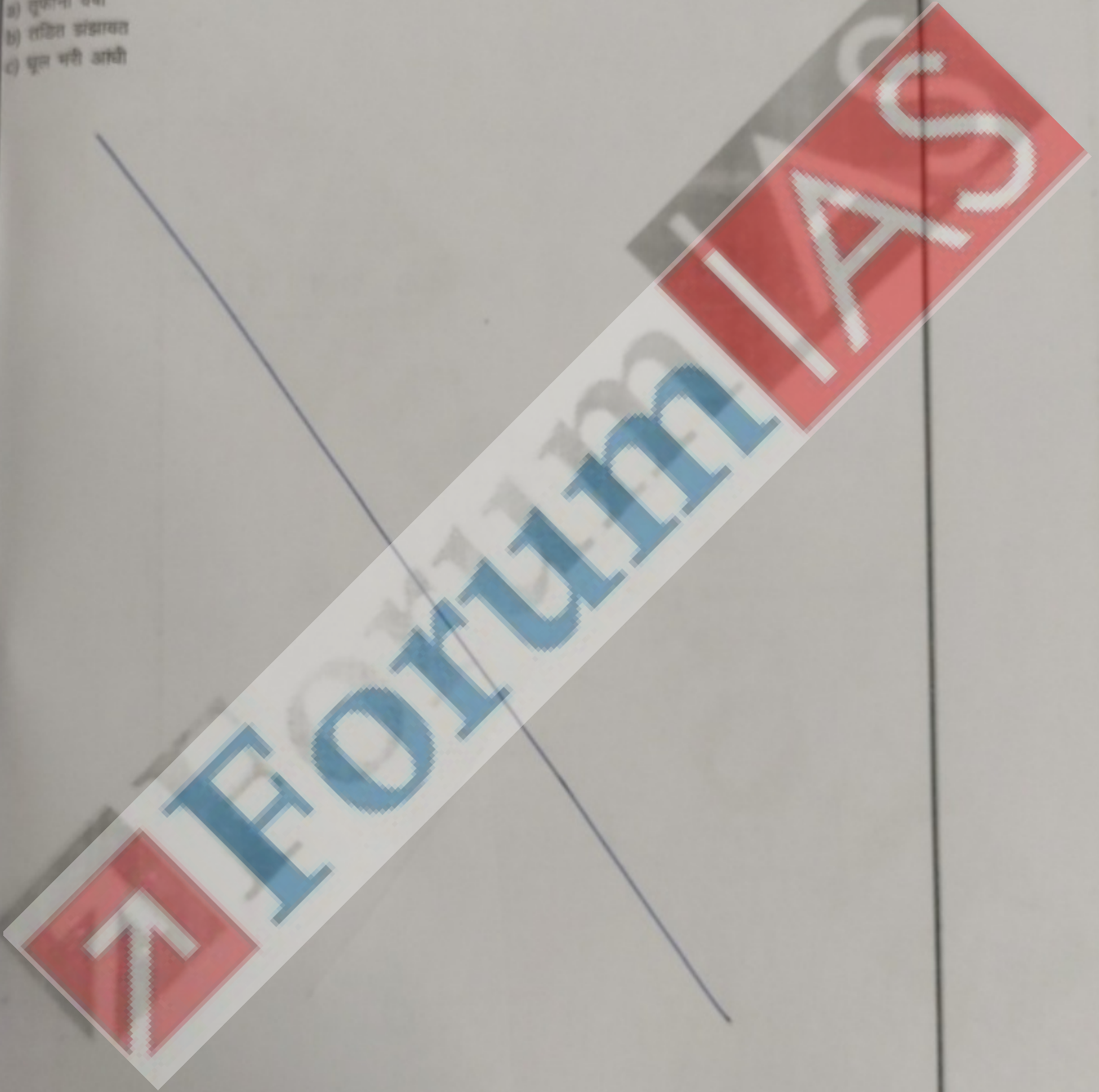
(10 marks, 150 words)

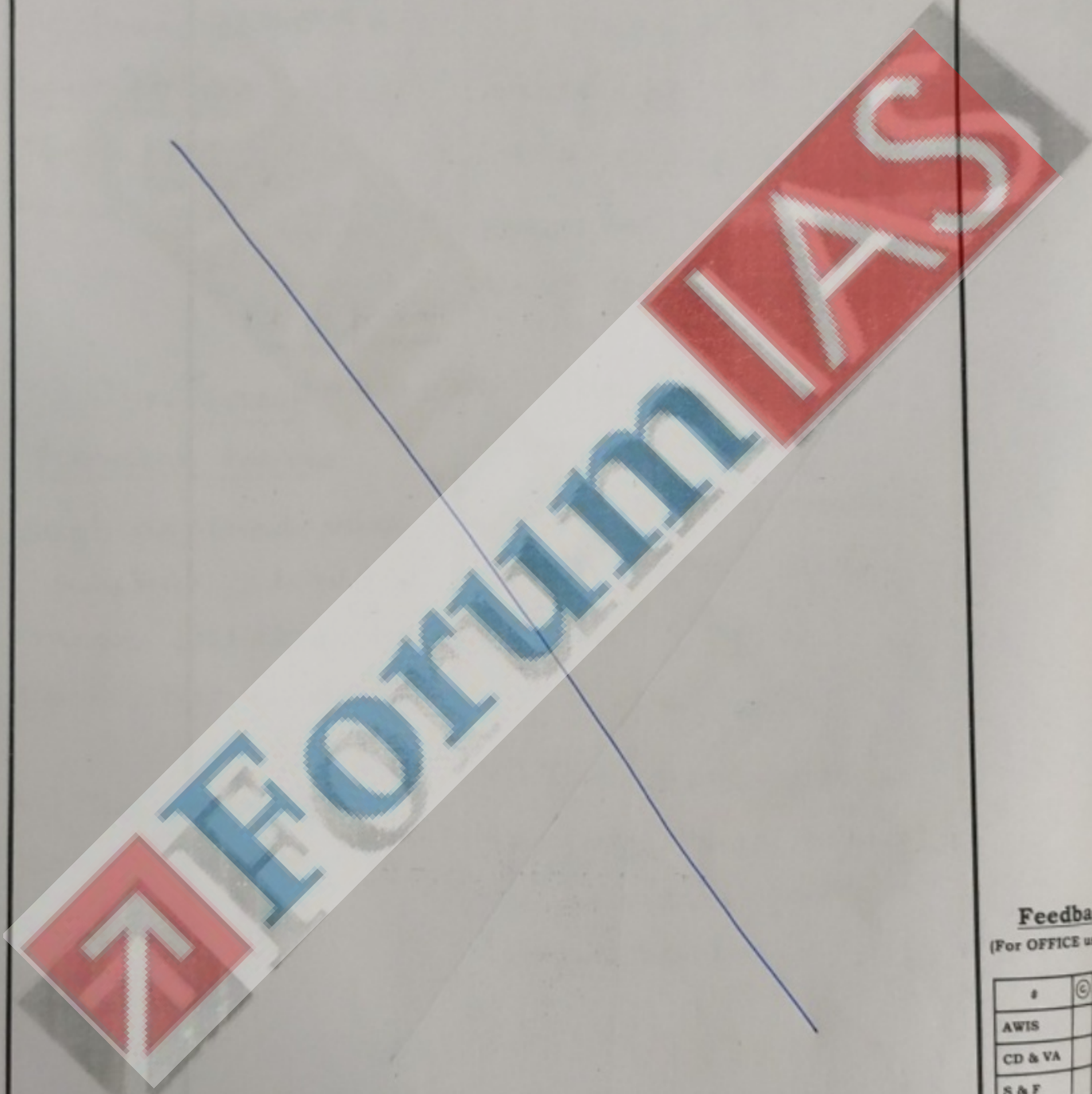
- a) Rainstorms
- b) Thunderstorms
- c) Duststorms

एक-रंग-कोडित मौसम चेतावनियों का अर्थ समझाएं :

(10 अंश, 150 शब्द)

- a) दूधानी वर्षा
- b) तड़ित झंझार
- c) धूल भरी आंधी





Feedback
(For OFFICE use)

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Here G is Good, A is Average and P is Poor.		
TOTAL MARKS		

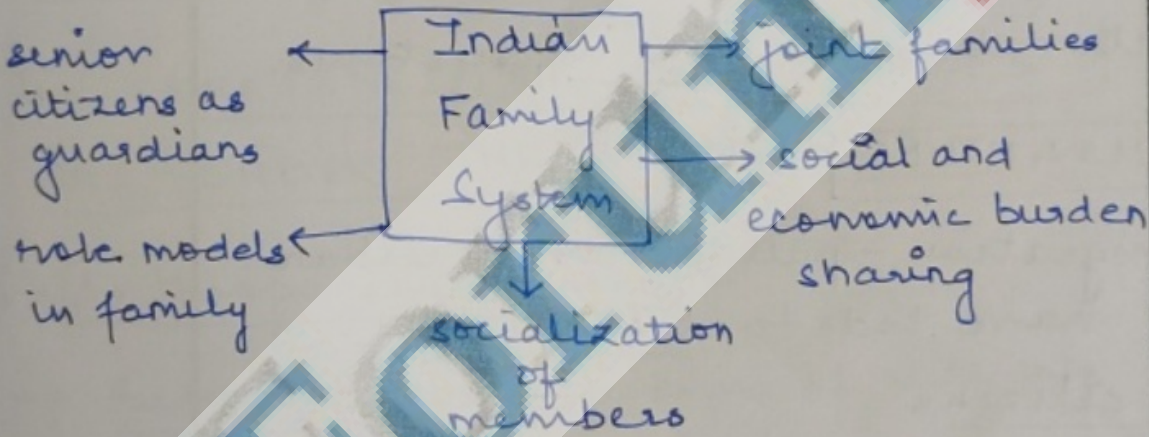
Q.10) How has globalization and urbanization impacted the Indian family system?

(10 marks, 150 words)

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

(10 अंक, 150 शब्द)

Indian family system is influenced by values of love, tolerance. It is a social institution that is defined as place where people live and depend on each other.



The IMPACTS ON INDIAN FAMILY SYSTEM →

GLOBALISATION -

1) there has been adoption of western family system leading to shift in to

nuclear family system

ii) The changing values attract globalisation of family system

iii) There has been a generation gap problem

But it has positively impacted -

→ creating values of tolerance.
stronger

→ legitimisation to live in systems

URBANISATION

i) The migration - pull factors of urban areas have led to isolation of senior citizens

ii) The responsibility sharing is reduced

Positive -

→ Women given role as equal partner

→ Changing rigidities in family system

The family system however remains intact with universal values of share and care.

Feedback

(For OFFICE use only)

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P & R		

Please put tick marks in the above table.

Here G is Good, A Average and P is Poor.

TOTAL MARKS	
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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 the most productive marine organisms in ecology. They are the organisms that cover 1% of earth surface but provide highest of productivity.

The EXISTENCE OF CORAL REEFS ARE UNDER THREAT DUE TO -

i) Anthropogenic causes -

→ Eutrophication - passing of nutrients into ocean lead to decreased

coral reefs → coral bleaching

→ High surface temperature due to global warming - coral reefs can sustain only at temperatures ranging between 25° - 27°C.

- Increased salinisation of ocean water
- Pollution of ocean water due to shipping activities - around 70% of global trade is done by oceans.
- Increased sea level due to rising climate change activities

(i) Natural causes -

- Tsunamis can affect coral reef ecosystem
- El Nino phenomenon
- Decreased sea level

There has been efforts to protect the coral reefs -

- ↳ Demarcation of Coastal Zone Management Plans and Committees at state levels.

- ii) C.R Z norms outlaw coral mining in India
- iii) Galapagos campaigns
- iv) Environment Protection Act
- v) Marpol convention to reduce pollution

Further measures are needed to protect coral reefs -

- ① Reducing chemical usage in agriculture and industrial sectors
- ② Global partnerships for proper monitoring of policies
- ③ Survey of coral reef conditions
- ④ Adherence to paris climate goals - NDCs to prevent climate change to above 2°C

⑤

Coral reef protection are essential for a productive marine ecology and achievement of SDG 14.

Feedback
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TOTAL MARKS	

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 is the proportion of salt present in water. to the criteria to differentiate salinity stands at 35 ppm.

Salinity can be CAUSED due to varied reasons -

- i) Increased sea surface temperatures can cause salinity in oceans
- ii) Decreased oxygen level due to formation of dead zones can increase salinity
- iii) High rate of evaporation is one of major causes of salinity
- iv) The closed areas of oceans are more saline than open. (eg) - Dead sea

✓) Absence of intermixing with currents can also lead to high salinity

(eg) - Arabian sea is more saline than Bay of Bengal

The increased SALINITY CAN HAVE
VARIOUS CONSEQUENCES -

① It can disturb the ecological productivity of oceans

(eg) - coral reefs can be impacted by high salinity

② It impacts species distribution

(eg) - dolphins require freshwater and saltwater depending on distribution

③ Increased salinity can lead to economic loss of GDP

(eg) - the fish stocks are adversely

affected by increased salinity

④ It can trigger increased sea surface temperature

⑤ salinity can also lead to depletion of freshwater resources

There are **POTENTIAL SOLUTIONS** to mitigate ~~and~~ increased salinity -

① Less utilization of chemicals in agriculture

② Mangroves to be planted at shorelines to act as filters of water

③ Prevent coastal erosion
eg - CZM Act

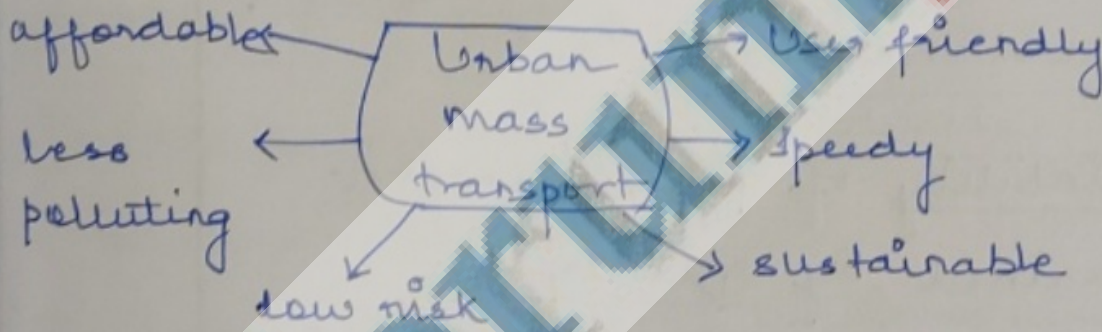
④ Planting trees to allow albedo to reduce high evaporation

Salinity is an essential feature of oceans, Increased salinity can harm ecology and humans.

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~~ population makes up to 31% of India's total population. With increased urbanisation, the urban mass transport becomes essential.



There is a growing need of urban mass transport

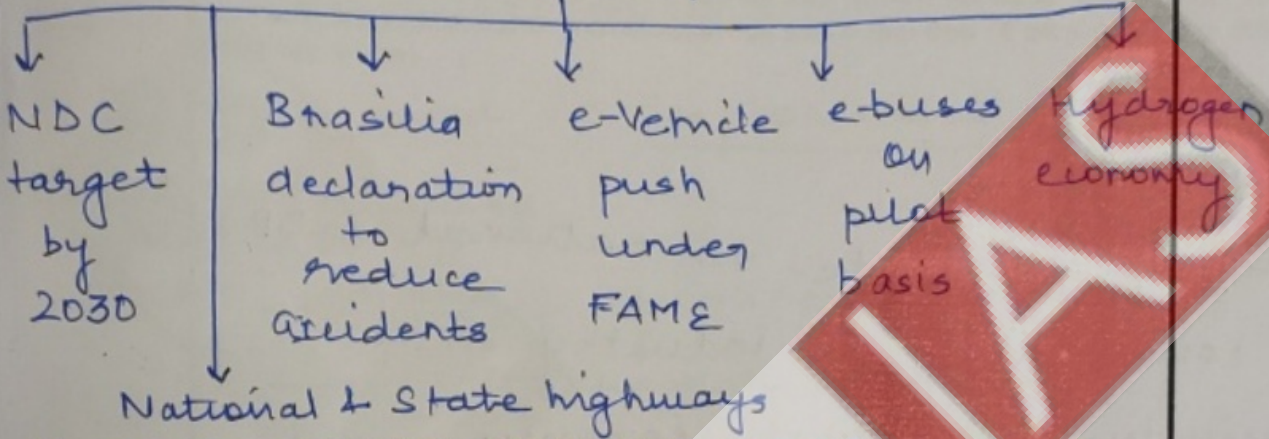
- Increasing urban population
- congested urban areas with high population density
- low capability of management of local bodies

→ Increasing pollution levels
eg - Delhi ranks as most polluted
city among all world cities.

The URBAN MASS TRANSPORT is
however, HACKLED by factors →

- i) Preference for private transport
over public transport with increased
income and resources
- ii) Availability of mass transport
is constrained by quality
eg - public buses are uneconomical
to run even by transport contractors
- iii) Time taking mass transport
- iv) Long distances are not covered
under mass transport
- v) Improper funding and
maintenance of transport facilities.

To push urban mass transport, Government has taken several steps



Further STEPS NEEDED TO CREATE A ROBUST PARADIGM →

- i) Change in behavioural attitude towards mass transport
- ii) Increasing Ease of living requires change in quality of mass transport
- iii) Push towards reducing risks
- iv) Connecting longer distances with speedier services.

Urban mass transport needs to be holistic in nature to reduce disparities and advance circular economy.

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 महत्त्व 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)

Minerals contribute to national GDP by contributing in industry and agriculture sector of economy.

The MINERAL WEALTH has significance

STRATEGIC

ECONOMIC

→ It aids to bargain choices between nation

eg - Taiwan on semiconductor chain

→ It can help connect with global value chains

→ It aids growth of sectors

→ It provides push for exports

eg - urea imports impact balance of payment

→ Increase income

However,

Mineral extraction have SOCIAL -
ECOLOGICAL IMPACTS -

i) It may lead to displacement of
tribal population

eg - around half of mineral resources
in Jharkhand, Chattisgarh, Odisha are
in PVTG belt

ii) It creates problems of development
with environment

eg - areas mined leave traces of
high groundwater extraction,
soil pollution

iii) It can lead to ecological hazards

eg - land subsidence can happen
in hilly areas

- Kradgil committee outlined the
impacts of mining on Western ghats

iv) It can lead to disturbance in
crustal plates - leading to earthquakes
induced by mining; floods, etc.

eg - Jashimath landslides

The new LITHIUM RESERVES found in Jammu & Kashmir can -

- I) Improve India's resilience in semiconductor industry and EV batteries
- II) Decrease reliance on China, Taiwan, Hongkong for imports
- III) Make India hub for semiconductor chips eg - PLI for semiconductors, FAME scheme.

However it raises concerns -

* It can lead to displacement of local community.

* The Himalayas are ecologically fragile areas - loss of biodiversity.

* Mining can induce tectonic shifts and landslides.

Mining industry contributes to around 40% of manufacturing GDP. It is important to keep it sustainable.

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 हैं? (15 अंक, 250 शब्द)

Regionalism is known as rise of regional sentiments due to distinct culture, language, region from the mainstream society.

The REASONS behind rise of regional sentiments -

- i) Economic backwardness - The low level of development demands leads to regional aspirations
 (eg) - Chhattisgarh was demanded due to uneven development in Madhya Pradesh
- ii) Protection of culture and ethnicities -
 (eg) - The demands of Bodoland

in Assam is due to protection of culture

- Dravidian land is aspired on reason of cultural unity

iii) Autonomy - ~~that~~ Regional aspirations also arise from demand for autonomy

(eg) - Nagalim - intra state separatist tendencies

iv) Sons of soil doctrine -

(eg) - Marathi's demand for Marathawada.

The regional aspirations and cultural assertiveness are positively impacted -

as -

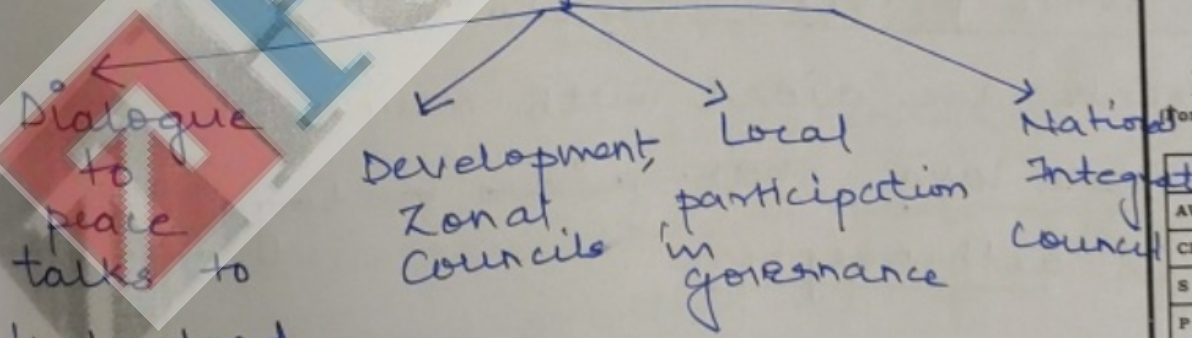
→ They lead to regional balanced development

→ Democratisation of issues

→ Voices of unheard are tackled along with unity.

- However, it may also lead to -
- Issue of SEPARATISM -
 - When regional aspirations are not addressed, it can lead to separatism
 - (eg) - East Pakistan separated due to lack of autonomy in decision making.
 - The cultural assertiveness requires assimilation and toleration, absence of which can lead to separatism
 - (eg) - the small states of Yugoslavia was disintegrated

STEPS TO RESOLVE REGIONALISM -



Regionalism needs to be addressed to prevent separatism and maintaining development with integrity.

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TOTAL MARKS	
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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 a d. shaking of earth surface due to shifts and movements in tectonic plates. The plate movements are aided with movement of molten lava that guides leading to in asthenosphere.

The MECHANISM OF EARTHQUAKE -
The earthquake is due to movement

of plates in the mantle (asthenosphere).
The plates are divided into continental
and oceanic plates. (Plate tectonic
theory - Alfred Wegner)

OCCURENCE - When two plates meet
each other at convergent boundaries,
there is release of waves at epicentre
leading to earthquake on surface.

eg) - Turkey earthquake due to
meeting of Eurasian and Syrian
plate.

The regions affected by earthquake
and related disasters are

VULNERABLE due to -

i) Loss of lives and property -
earthquake can lead to fall
of buildings, destruction of
public facilities.

ii) It can trigger tsunamis that can affect the coastal areas.

iii) It can induce landslides, floods in the areas of hilly terrain

iv) It leads to loss of GDP due to high expenditure on mitigation and adaptation.

The earthquake can be handled by NIDMA guidelines -

- creating earthquake resilient infrastructures
- checking license of constructors
- creating shelter homes in event of earthquake

There is a need to understand the disaster risk reduction process

by identifying cause-effect relations to pre-adapt to earthquake.

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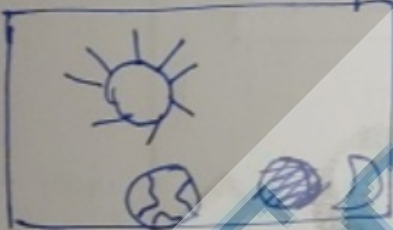
Q17) Enumerating different types of tides highlight their significance. Also, explain how tides are different from waves. (15 marks, 250 words)

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 a rise and fall of ocean water due to effect of sun and moon and centrifugal force of earth.

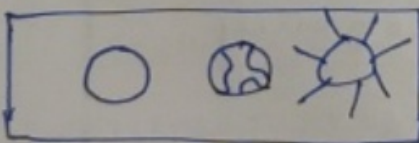
These are varied TYPES OF TIDES -

i) Neap tides - these occur every week when sun, moon and earth are perpendicular in position.



- These are characterised as high tides are lower and low tides higher.

ii) Spring tides - These occur every 15 days - on new moon and full moon - when sun, moon and earth are in linear position.



- These tides are higher than

usual and lower than usual.
Spring tides have more force than
neap tides.

The SIGNIFICANCE OF TIDES can
be seen due to following reasons -

- i) They bring freshwater nutrients
on the shore hence, increase the
availability of fish stocks.
- ii) The tides help in navigation of
ships. It becomes easier to
come to shores for trade and
transit.
- iii) Tides are a source of renewable
energy. They aid in reducing
dependence on fossil fuels and
promoting sustainable economy.

The **TIDES ARE DIFFERENT FROM WAVES** -

Tides

- rise and fall of ocean water
- these are affected by forces of sun, moon and earth
- they are local or regional in nature
- they play a wide role in coastal erosion and development

Waves

- movement of ocean water
- these are affected by ocean currents, topography, etc
- they play a pivotal role in bringing water from other hemispheres
- they are more prominent in beaches and bars.

The oceanography ranges from region to region. It is important to sustainably manage the ocean resources (SDG14)

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 is the interaction of $\&$ economy, social and goods & services across countries. It is a multifaceted phenomenon due to its impacts on every section and across sectors.

It has led to POSITIVE OUTCOMES

SOCIAL

i) Intermixing of cultures creating a global village.

ii) Adoption and enhancement of societal patterns

eg - live in culture gaining acceptance among Indian patterns

ii) Globalisation of commodities

- (eg) - hip hop and Indie music
- Veg hamburgers by Macdonalds

ECONOMIC

i) There has been increased growth rate in countries

ii) Better expertise and knowledge shared

- (eg) - IT sector boost due to globalisation

iii) Ease of doing business promoted

However, globalisation has also led to WIDENING OF GAPS between have and have nots -

i) Increased inequality among masses

- (eg) - Oxfam Report 2022 - now 5% of global top elite hold ~~more~~ 60% of wealth

ii) The globalisation has led to underdevelopment of ^{Global} South and development of Global North

(eg) - Africa and G7

iii) It has led to unequal impacts on women and vulnerable sections -

(eg) - trafficking has increased

iv) The market forces aided by globalisation has also create a divide in matters of climate adaptation

v) In India, globalisation has led to degeneration of lower castes while upholding demands of upper castes.

Globalisation has led to differential impact. But it is like force of gravity in 21st century that cannot be ignored.

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, India is among top 10 countries vulnerable to climate change.

India is considered as one of MOST VULNERABLE REGIONS TO CLIMATE CHANGE -

i) Huge demography -

According to UN Population Fund, India has crossed China to become most populous nation that makes it vulnerable to climate change

ii) Developing economy -

India is still a developing economy with most people engaged in

agriculture sector. That makes funding and adaptation quite difficult.

iii) > Low income population with around 15% multidimensional poor

(NITI aayog) puts strain on mitigation

iv) > Long coastline of 7500 km makes it susceptible to floods, tsunamis with rising climate change

v) > Presence of hotspots makes India under hotspot of biodiversity threats

vi) > Increasing urbanisation and climate change also makes it vulnerable due to heatwaves, urban floods, etc.

Hence, there is a NEED TO BUILD

CLIMATE RESILIENCE using a multi stakeholder approach -

→ Government

- Survey and assessment using Sendai framework
- Funding to climate adaptation.
 - around \$10 trillion needed by India
- Awareness generation

→ Citizens

- using 4R approach towards a circular economy
- sustainable living (LiFE)
- civil society engagements

→ Businesses

- ESG norms adherence
- Environmental Assessment for projects
- CSR norms

Climate resilience is important to build a \$5 trillion economy using sustainability.

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)

Desert ecosystem refers to biome region where rainfall is less than 50 cm accompanied with high evaporation and insolation.

DESERTS ARE RAIN DEFICIT, FORMED DUE TO VARIOUS REASONS

i) Cold deserts - They are located in interior of continents formed due to -

→ rainshadow area

→ continentality and distance from sea

eg) - Gobi desert of China
- Ladakh desert in India

i) Hot deserts - These are formed in tropical (sub) High pressure belts.

→ offshore winds

→ rainshadow area - eg

→ high insolation, low rainfall

→ presence of cold currents

eg - Thar desert in India

- Sahara desert in Africa

The deserts can be stony, sandy, others depending on characteristics of region.

The flora and fauna of desert regions are adapted to survive water deficit conditions.

① Waxy leaves and small leaves

eg - cactus

to conserve ~~evaporate~~ water from evaporating.

- (i) Seeds of flora are stored ~~in~~ and ~~store~~ bloom at night
 - (ii) Deep tap roots to reach waters from ground
 - (iv) Photosynthesis using green stems.
 - (v) The animals store water in their body. (eg) - camels in hot deserts.
 - (vi) Concentrated discharge of waste materials
 - (vii) In cold deserts, the animals have thick layer of fat under body to keep themselves warm and prevent heat loss
- Desert conditions are difficult to survive and one of least productive regions. Adaptations to survive show survival needs of flora and fauna.

Feedback

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