230874_611202_1910110652_(2023-09-03 23:34:00)

TEST CODE	6	1	1	2	0	2

FIAS – MGP 2023 – Cohort 13 Alt – Sectional Test #8

Time Allowed : Three Hours
समय : तीन घंटे

ForumIAS

Maximum Marks : 250
अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	UTKARSH PATHAK		
Roll No./अनुक्रमांक	1910110652	**Medium/माध्यम**	English ☑ हिंदी ☐
Center Code/परीक्षा केंद्र		**Date/दिनांक**	

*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

Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक
1		
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20		
Total/कुल अंक	250	

INSTRUCTION / अनुदेश

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 कर्त्ता का विवेक :	**Start Time/प्रारंभ करने का समय :** 2:00 PM	**End Time/समाप्त करने का समय :** 5:00 PM
Total Marks/कुल अंक :	**Mode Of Examination/ परीक्षा की विधि :**	Online/ऑनलाइन ☐ Offline/ऑफलाइन ☐

*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 कर्त्ता 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।

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ECN CODE/ ईसीएन कोड :	**EG/ईजी :** ① ② ③ ④ ⑤	**Evaluation Date/ मूल्यांकन तिथि :**

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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.

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

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 the subsiding / lowering of a piece of land below its normal level. In recent times, the reoccurence of land subsidence has become a major challenge.

Reasons behind subsidence

1) Tectonic Reasons - when there is tension in the crust, the cracks develop and land moves in opposite direction

2) Deforestation and loss of vegetation - roots of trees keep the soil tightly held together

3) Construction and development activities - as in hilly areas - Road construction cause soil bed to weaken and subsidge.

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

4) Excessive Rainfall - rain water percolate and weaken soil grip

5) Earthquake and volcano eruptions

6) Mining, quarrying etc

Measures to arrest

1) Increased vegetation and afforestation.

2) Construction activities should be checked and planned.

3) drainage system adequate for excess rainfall.

4) Mining, quarrying should be restricted.

5) Explosion work should be also be restricted.

There is urgent need to address the issues as subsidence of land brings huge casualty of life and property every year.

Feedback
(For OFFICE use only)

#	G	A	P
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

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

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 on earth have presence of one of the most luxuriant vegetation. eg. - congo forest, amazon forest etc

Rich in forest Resources

1. Huge diversity of vegetation eg - trees, plants, shrubs, creepers.
2. Forest products - timber, resin, etc.
3. Variety of fruit and flowering plant.

Reasons for limited growth

1. Lumbering industry require exploitation of single variety of tree on large scale which is present in temperate region not tropical.

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(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

2. The Hardwood of tropical region make it difficult to cut the trees (Temperate region have soft wood).

3. Also in temperate region, ice/snow on land help in easy transportation of logs.

4. Also, tropical regions the growth of vegetation is very dense thus entering in forest & lumbering is difficult.

5. Also, tropical region see disease infestation like - Dengue etc.

In this way temperate region sees a wide scale development of lumbering industry & not tropical region.

Feedback
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#	G	A	P
AWIS			
CD & VA			
S & F			
P & R			

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TOTAL MARKS	

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

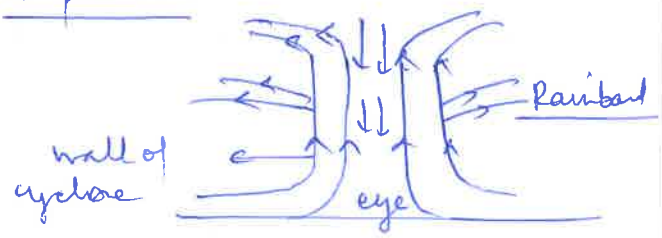
Q.3) What are the suitable conditions for the formation of a tropical cyclone? Also, bring out differences between a tropical and an extra-tropical cyclone. (10 marks, 150 words)

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 cyclone is a violent weather phenomenon which happens on a ~~meso~~ meso scale.

Conditions for formation

1. Temperature of ocean surface > 27°C
2. Absence of strong surface winds or vertical wind sheet.
3. Presence of coriolis force to make wind rotate.
4. Further, low pressure region.
5. Temperature enough to ensure large scale evaporation



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Difference between Tropical cyclone & Temperate cyclone –

1. Wind speed in tropical cyclone is 200-300 kmph while temperate cyclone has less wind speed (<100 kmph).
2. Temperate cyclone may also be created on land, not tropical.
3. Area of coverage is very large for temperate cyclone (1000 km - 2000 km) not for tropical.
4. There is front formation in ~~tropical~~ temperate cyclones.
5. There is no 'eye' in temperate cyclone
6. Temperate cyclone are also occur as 'family cyclone' not tropical.

Thus, both are weather events but diff is their scale and intensity.

Feedback
(For OFFICE use only)

#	G	A	P
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TOTAL MARKS

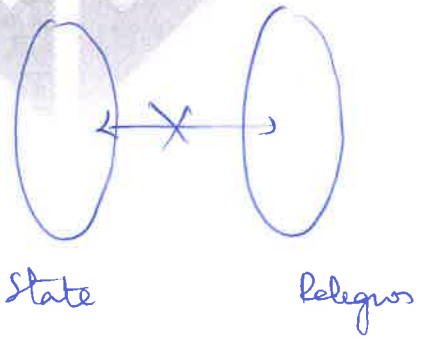
Q.4) Elucidate the differences between Western and Indian model of secularism. To what extent do you agree with the criticism that Indian model of secularism is susceptible to promoting minority appeasement? (10 marks, 150 words)

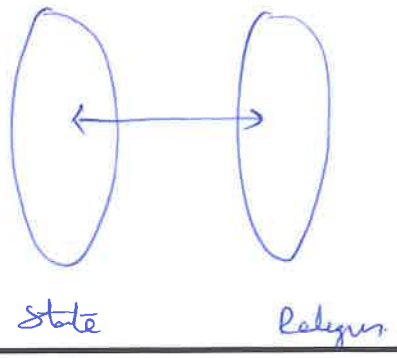
धर्मनिरपेक्षता के पश्चिमी और भारतीय मॉडल के बीच अंतर स्पष्ट कीजिए। आप इस आलोचना से किस हद तक सहमत हैं कि धर्मनिरपेक्षता का भारतीय मॉडल अल्पसंख्यक तुष्टीकरण को बढ़ावा देने के लिए अतिसंवेदनशील है? (10 अंक, 150 शब्द)

'Secularism' is the idea of separating the state and religion in their functions and restricting their interference.

Differences with Western and Indian Mode –

Western	Indian
1. In western model like US there is complete separation of state and religion	1. In India there is ~~no~~ separation but state can interfere in certain religious aspects.





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*) State can not bring reform in religious practices

*) No display of religious in public life as - France

* State can bring reform as - Ban of Triple Talaq
- Opening Temples

* One can practice and preach religion and also display it in public life as - carrying Kirpan.

⇒ The "principled distance" of Indian secularism has been termed to be as merely appeasement as - allowing Sikh to carry Kirpan, separate personal laws for Muslims.

⇒ however, this is not true picture rather Indian secularism promotes diversity among religions. Respect and promote different religious beliefs, practices and ideas.

Feedback
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TOTAL MARKS	

ForumIAS

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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)

Semiconductor industry which employs use of rare earth minerals, lanthanoids etc is crucial for growth of IT industry.

Multi dimensional impact

1. Strategic - as the semiconductor industry is dominated by few countries as- Korea, Taiwan. It brings strategic heft for these countries.

2. Economics - The uneven distribution and controlled supply chain has economic implications as- high prices of semiconductors, also restrict access for certain countries

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3) Social - as the supply chain is very restricted it affects the availability for lower income countries, high prices being ~~imp~~ inflation and affect other aspect of social life.

4) Security - the dependence on semiconductor for sectors like - defense, transport, electronic also has security implication.

5) geopolitics - it gives rise to various conflicts over resource control.

Semiconductor being crucial to growth and development needs a strategic approach to ensure a robust supply chain.

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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 refers to the phenomenon of periodic /seasonal reversal of wind pattern.

Reasons behind erratic Monsoon

1. El-Nino and La-Nina- When El-nino weakens the North-west Australian monsoon and subsequently the Indian Monsoon. La-nina strengthens the monsoon.

2. Indian Ocean dipole- if it is positive it enhances monsoon in Indian ocean

3. Madden Julian Oscillation a positive convective phase enhances and vice versa.

4. Sub tropical westerly jetstream- location of jetstream if south of Himalaya will

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negatively affect monsoon.

5) global warming - increased temperature of atmosphere affect wind pattern causing erratic monsoon.

6) other - cyclones, depression, urban heat island etc

Outcomes of erratic Monsoon

1. Since agriculture is monsoon dependent it affect agriculture. cause crop to fail (if drought).

2. Urban flooding and also flooding in rural area.

3. Breeding of disease causing insects

4. Affect food security.

5. Affect livelihood of farmers.

6. Cause loss of life and property.

Situation demands more robust steps by employing technology to better predict monsoon.

Feedback
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TOTAL MARKS

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

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 a continent permanently covered in snow and rich in resources and fisheries.

Area of renewed human interest

1) Antarctic is highly rich in mineral resources as- crude oil, natural gas.

2) Abundant in fisheries thus drawing global attention.

3) With increased global temperature and thawing of ice new opportunities are opening for exploration of resources.

4) With better technology and equipment more better posed to explore now than before.

5) Also, dwindling resources need further

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exploration in new regions.

Significance of Antarctic bill 2022

1. It highlights India's interest in the region → mineral exploration and extraction.
→ Research and development
→ ensure it as a global commons.

2. Bill seeks to promote research & development to manufacture vessels suitable for region as ice breaker.

3. Bill further clarify on India's jurisdiction in the region.

4. It also control the introduction of stevie soil, waste etc thus ensure the bio safety of region.

A collaborative effort is needed to explore the resource while ensuring the health of antarctic ecosystem.

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TOTAL MARKS

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(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

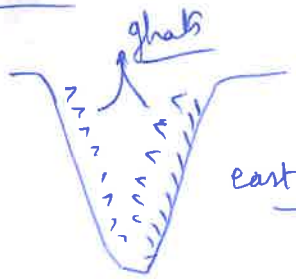
Q.8) How does the Eastern coast of India differ in its geographical features from the western coast? (10 marks, 150 words)

भारत का पूर्वी तट अपनी भौगोलिक विशेषताओं में पश्चिमी तट से किस प्रकार भिन्न है? (10 अंक, 150 शब्द)

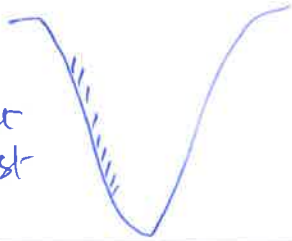
India is marked by variety of geographical features one of them being its coastal regions.

Difference among both coasts

1) East coast	Vest Coast
1. It is a wide region (100-200 S) Km.	1. It is a narrower region
2. It is marked by feature like - deltas, lagoons	2. Deltas are absent but estuary are present also lagoons.
3. It is emergent coast.	3. It is a submergent coast



east coast.



west coast

ForumIAS

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4. highly rugged with many rivers flowing across.

5. It is higher in it's elevation the sea level

6. There are absent.

7. Meets the Bay of ~~arabian Sea~~ Bengal

4. It is ~~highly~~ less rugged by many rivers flowing across it.

5. lower in elevation from ~~the~~ sea level

6. Marked by backwaters, Kayals etc

7. Meets the arabian sea

Both these coasts provide the unique physiography to India and serve purposes as - tourism, transport etc

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TOTAL MARKS

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) तडित झंझावत
c) धूल भरी आंधी

a) Rainstorm - Rainstorm are the weather disturbances associated with high rainfall associated with a very high wind speed.

Code - Red code - high alert and need action

IMD issues

Yellow code - Moderate alert and need updation.

green code - low alert and need preparedness.

b) Thunderstorm - are violent weather phenomenon with high wind speed, rainfall thunder and lightning.

Code - Red code - extreme alert and action on safety and

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

security of individual like - relief work, evacuation etc

Yellow - It is moderate risk, need to take precautions, remain inside homes, follow the instructions and guidelines

orange - it high alert, take measures remain updated.

green - low risk. need to be vigilant and follow guidelines.

Dust storm - is a violent storm with blowing dust and high wind.

green - low alert. need to be updated

Yellow - Moderate alert - take preparedness measure

orange - high alert - be vigilant

Red - extreme alert. evacuation and relief

Feedback
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TOTAL MARKS	

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

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 and Urbanisation are associated phenomenon. Globalisation refers to increased global interconnectedness and urbanisation means the growth of urban setup and linked rates of urbanisation.

Impact of Family System

1) Change in Nature of Indian Family -

→ family changed from Joint family to Nuclear family.

→ also → dual career family

→ female headed household.

2) change in functions of family

→ diminished role in spouse selection.

→ At the place of joint family

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joint households have emerged.

→ The hierarchy based setup of gender and age to determine status within family has changed.

→ Role of family as agency of socialisation, social control have changed with modern institutions as - schools.

→ Change in Value system

1. At the place of collectivism, individualism is taking place.
2. Delayed gratification to immediate gratification.
3. Commensality to separate kitchen.
4. Matrimonial relation more important than blood relation.

Thus, these two forces have led to disintegration of joint family

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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 sesile marine invertebrate who play an integral role in ensuring the health of marine ecosystem.

Epicentre of marine ecology

1. Coral reefs are called the tropical rainforest of oceans.
2. They provide shelter, food to plethora of marine organism.
3. Are the breeding grounds for fish, turtles etc.
4. They also regulate the marine environment by filtering out pollutants
5. Also protect marine life from

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extreme events like - storm, cyclone etc

Threatened due to causes

1) Natural -

1) Due to violent weather events like - cyclone, coral reefs get damaged. Tsunami.

2) Increased in global temperature - also threatens their existence as they can't withstand extreme temperature eg - Bleaching of Great Barrier Reef.

3) Change in salinity of water due to rivers or melting of glacier further impact corals.

2) Anthropogenic - There are main threat to corals.

1) Coastal pollution - pollutants effect-

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the visibility of ocean and affect photosynthesis causing bleaching.

2) Coastal vessel movement - these damage the barrier reefs.

3) Resource extraction - fishing ~~using~~ at large scale affect the ecosystem balance

4) Anthropogenic activity causing temperature of ocean to rise - as - increased GHG emissions

Step Needed
- → protect these regions
- → check unregulated fishing
- → prevent river pollution
- → collaborative approach.

Considering their importance to global ecosystem, immediate steps must be taken adopting a holistic and collaborative approach.

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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 entering of ocean water which is highly saline in coastal regions.

Causes of ingress

1. Natural causes - 1) as weather events like - tropical cyclone, storm surge it leads to entering of sea water in coastal regions.

2) subsiding of the land or upliftment of the sea - it leads to the disturbance in existing level and cause ingress.

3) Tides - high tide leads to ingress

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Anthropogenic -

1) Damage to mangroves - mangroves act as a barrier to protect storm surge to enter.

2) damage to corals - also corals act as a protection to violent storms etc

3) Infrastructure development like canals or ports in the coastal regions cause ingress.

Consequences of ingress

1) Affect the agriculture - as saline water reduce the fertility of the land and hence affect production.

2) Affect the vegetation - vegetation that can't bear saline water die

3) With vegetation loss → loss of habitat

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for animals and affect biodiversity of region.

3) Affect livelihood of ~~does~~ those dependent upon agriculture.

4) Also leads to food insecurity in region

5) In longer run may promote displacement of people.

Solutions to ingress

1. Promote the mangroves and coral reef as a barrier.

2. Creation of retention wall.

3. Check on infrastructure growth as - canals, ports.

4. Utilising any technological solution to gather data, issue warning and monitoring using satellite.

5. Hardy and resistant crop need to be promoted.

Need is of a collaborative effort to address this problem

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Q.13) The actualization of a seamless urban mass transport is hackled 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)

As per census 2011, 31% of India's population live in urban areas contributing to 65% to GDP.

Factors affecting Urban Transport

1. Unplanned growth of urban areas - there is lack of integrated approch in development.

2. Increased population due to increased migration.

3. Lack of resources - it requires huge capital investment to promote adequate transport infrastructure.

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4. Preference for private transport among public.

5. Lack of integration with peripheral areas of cities.

6. Lack of space to further create requisite infrastructure as - underpass of roads.

7. Lack of implementation of various measures in letter and spirit as - Smart cities Mission

8 Emerging problems as - Urban flooding

9. People protest to clear vegetation as - Aarey forest, Mumbai

Measures to curb

1) Integrated city planning where transport is integrated with city expansion and development.

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2) Address the issue of migration from rural areas eg - create smart villages along with smart cities.

3) Create awareness among people to increase use of public transport.

4) Make public transport more efficient and accessible to promote its use.

5) Adopt technological solutions to problems like - limited space - Multilevel parking

6) Promote green transport to cater to the environmental needs.

These measures along with speedy implementation of current schemes with a participate approach as - SCM 2015 etc can help address the problems.

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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)

Mineral wealth of a country is a crucial factor to determine the pace of its economy and geo-political status.

Significance of Mineral Wealth

1) Energy security - minerals like coal, crude oil, natural gas availability is necessary to achieve energy security - New found 'Lithium' reserve in Ladakh region further give it a impetus

2) Economic importance - mineral availability at home reduces the import bill and promote economic growth. Currently import all its lithium

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3) Strategic importance - the mineral supply chains are susceptible to the vagaries of global conflicts as volatile Middle East region affect oil supply chain.

Social - Ecological impact

1. Mineral extraction requires to clear that particular area it adds to problem of 1. displacement, Rehabilitation
   2. loss of livelihood
   3. loss of identity and culture

2. It further create problems for people in the nearby regions with increased pollution - as lithium extraction will lead to leaching of chemicals in ground water thus polluting it.

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3) Further smelting process of Lithium ore will lead to air pollution in the region.

4) The extraction need also clearing of the vegetation in the region thus, 1. loss of habitat
2. loss of biodiversity
3 affect ecosystem services
4. species extinction.

5) Extraction of lithium while on one hand will create jobs in the region, it will affect current livelihood as agriculture etc

The extraction of mineral is associated with both positive impacts and negative externalities. Need is to adopt a balanced approach under expert guidance.

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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)

'Regionalism' is the phenomenon and ideology whereby people nurture more loyality to the region they belong rather to the state / Nation of which it is a part.

Reasons behind regional sentiments

1) Historic Reasons - When British separated India among Princely state and provinces. Even after independence, people kept their loyalty with thier princely state region.

2) Economic disparity in the region

→ Certain regions have lacked in repearing equal benefit

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from the process of development.
It has led to a feeling of relative deprivation among people and promoted regionalism. eg - Vidharbha, gorkhaland

3) Political aspirations - of regions to have more political representation in governance as - Bodoland.

4) Political parties and leadership - have utilised the sentiment of people and further pushed it eg - 1. Shiv sena
2. Akalidal.

5) Language, culture, ethnicity - as demand of tulaland.

These feeling of regionalism combined with cultural assertiness may lead to demand of separate state.

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When culture of people is threatened by the majority it becomes one of the major factor to extreme regionalism of demand of separate state.

eg - 1) When in Srilanka, the Sinhalese dominated the and imposed their culture on Tamils it led to LTTE movement.

2) In Assam, when Assame language was made compulsory in administration. Manipuri, Nagas felt threatened of their culture → led to separate state of Manipur, Nagland.

Regionalism combined by leadership fuels separatist sentiment among people.

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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)

Vulnerability of Regions affected by earthquake related disasters –

1 → circumpacific belt – It is the most affected region by earthquake and related disasters like – Tsunami

2 Indo-alpine Region or Himalayan alpine Region – There is the

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2nd most affected region by earthquake

(3) Sunda Region - It is 3rd most affected Region by earthquake (near Indonesia, Andaman region)

(4) others - Mediterranean Region, Caribean region also are highly vulnerable to earthquake.

Mechanism and occurance of earthquake

1. Different rocks within the surface of earth are held by friction but when their tendency to move apart overcomes the friction force.

2. It cause sudden moment of the rocks and release huge amount of energy in the form of seismic waves called earthquake wave.

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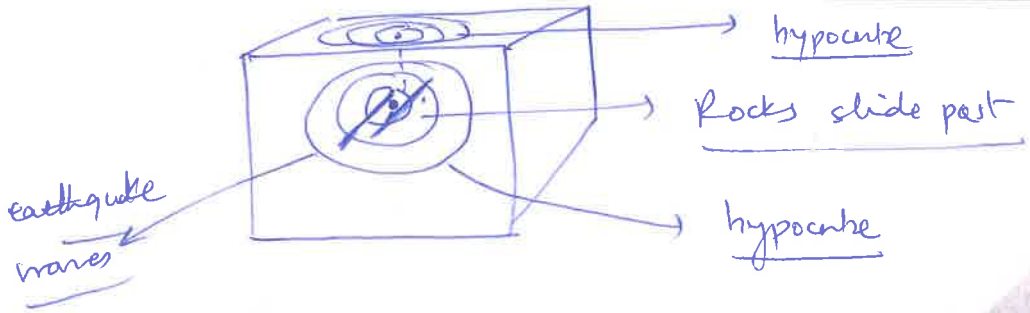
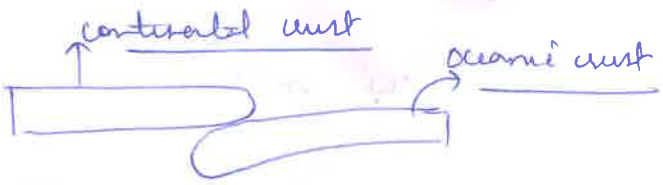


3) The waves from centre of movement travel to surface and create ripples on the surface called earthquake.

4) other cause - mine collapse, meteor hit etc

5) other major reason is subduction of earth's crust generating seismic waves

eg



eg. Alpine-Himalaya - Indian plate ~~go~~ collide with Eurasian

Circumpacific Region - oceanic plate (pacific), North american plate, philippines, nova scotia, Juan-de-fuca interact.

eg Mediterranean region - African & Eurasian plate interact

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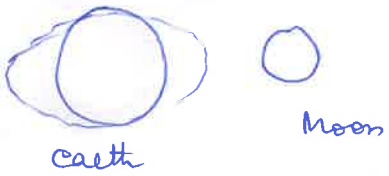
Q.17) Enumerating different types of tides highlight their significance. Also, explain how tides are different from waves. (15 marks, 250 words)

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 periodic Rise & fall of ocean waters due to the forces of gravitation of sun, moon, rotation of earth etc.

Types of tides and significance

1) Spring tides - This occurs when the sun and moon are aligned in one direction



(sun

This creates high-high tides and low-low tides. (highest and lowest tide)

2) Neap tides - This occurs when Sun and Moon are perpendicular to

each other.

Since gravitional force of Moon dominates as it is closer it leads to high tide in direction of ~~Sun~~ Moon and low tide in Sun's direction. These are the lowest high tide and low tide

3) Normal high and low tide - are normal high and low tide other than the previous 2 positions of Sun and Moon

Significance

1) Tides help in the movement of ocean vessel inland and out with high and low tide

2) Various ports are based on tidal movements as - Hooghly port

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3) It helps in distribution of river and ports.

4) It has tidal energy, used for producing energy.

5) Create suitable salinity, being nutrient for mangroves.

Difference from Waves

Tide	Wave
1. are periodic rise and fall of water	1. Waves are movement of ocean water. (water not move only kinetic energy pass away)
2. affected by gravity of sun and moon	2. are mainly affected by wind
3. are periodic and time is decided	3. Not with waves. they are random)
4. Water falls and rises and moves	4. only falls and rise not move

These tides and waves are important in determining the marine climate and ecology

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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 increased interconnectedness among geographies located apart and exchange of ideas, people and goods.

Multifacted phenomenon → social impact
→ economic affect
→ political impact

Positive socio-economic impact

1. Economy - 1. globalisation has increased the global trade

2. It has ensured integration of supply chains thus better requisition of raw material.

3 globalisation has created various

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However, it has widened the gap between have and have not's

1) The newer jobs created have been reped by only certain segment of society who had requisite skill / education

2) It further has led to growth of urban and industrial cluster in certain regions only

3) The benefits of liberalisation of economy have been reaped by only few sectors of economy thus negatively affecting the small industry handicraft.

4) Cheaper imports have further aggravated problems of small enterprises, artisans etc.

Globalisation is a double edged sword with certain positive and negative outcomes as well.

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new economic opportunities with increased industrialisation and newer sections of economy as- IT so, promoted employment

4. It has led to creation of supra economic bodies as- IMF, WB to better regulate global economy.

Social impact -

1. It has led to phenomenon of urbanisation and better amenities to improve quality of life → better education
↘ better healthcare

2. It has led to better communication hence improved social connection as- social media

3. It has led to highlighting of social issues as- gender discrimination, ageism and drawn attention to it.

4. globalisation has also led to cultural integration, cultural secularism

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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)

Climate change is now the reality that the world is facing. India also is not saved ~~to face it~~ from its negative consequences.

Reasons for Most Vulnerable Region

1. India is surrounded by seas on three sides so make it highly prone to increased sea level.

2. It is affected by the Monsoon so, any affect on Monsoon due to climate change will bring droughts and floods in the region

3. Also the glacier located in the Himalayan region directly affect India.

4. The developmental approach in India is not inclusive of the ecological aspect.

5. Large dependence on agriculture for livelihood is one of crucial reasons.

6. The increased sea temperature increase the frequency of cyclones in the regions.

D. Role of Stakeholders

1) Government -

1) Government need to adopt the ecological perspective in development process → better EIA
→ Rigid Coastal Zone Regulations

2) Invest in climate change mitigation and adaptation measure

- electric Mobility
- Hydrogen as fuel
- Renewable energy at the place of coal, petroleum
- carbon capture technology

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3) Ensure global collaboration as - ISA.

4) Schemes and incentives to promote mitigation - PM-KUSUM, Rooftop solar panel
- Cap and trade scheme

Business - 1) Invest in mitigation and adaptation.

2) Promote Public Private Partnership to support government effort

3) Switch to Renewable energy sources.

4) Ensure sustainable production process.

5) CSR fund for mitigation projects.

Citizens - 1) Adopt Lifestyle for environment (as PM said)

2) So, adopt practices that are environment friendly as- use sunlight not washing machine

3) Bring the support in society to help government implement schemes.

4) use resources wisely & sustainably.

Collaboration among all stakeholders is needed to adopt climate resilient practices.

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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 हैं। चर्चा कीजिए। इसके अलावा, जल की आभाव की स्थिति से बचने के लिए वनस्पतियों और जीवों में विभिन्न अनुकूलन का विश्लेषण कीजिए।

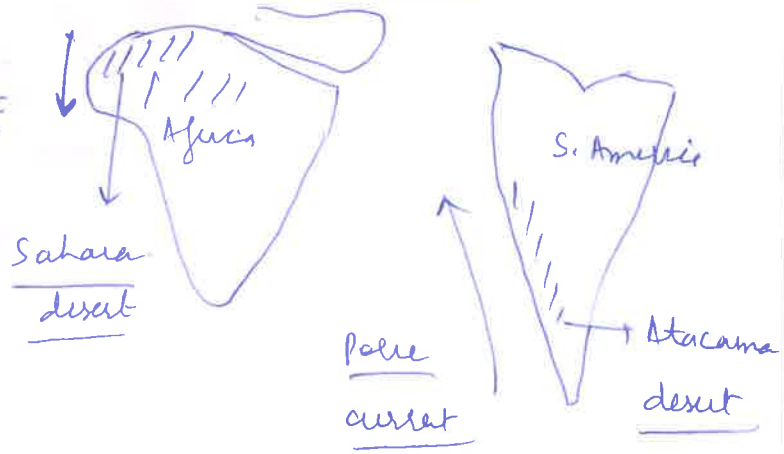
(15 अंक, 250 शब्द)

Desert are geographical regions marked by scanty rainfall and soil humidity is very low.

Reason for formation

1) Role of ocean current - Regions located near cold oceanic current are devoid of rainfall as - high pressure is created.

eg. cold current



2) Are located in Tropical region so, high evaporation of water.

ForumIAS

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

eg - Thar desert of India

3) Leeward side of Mountains - thus rainfall is scanty - eg - Patagonia desert is in leeward of Andes

4) Cold temperate Region

↳ creates high pressure so, rainfall is scanty eg - are - 1. Ladakh desert
2. Gobi desert etc.

Adaptions of flora & fauna

1. Thick stem and spongy - thick stem reduces the evaporation and spongy stem leads to storage of water.

2. Leaves turned to thorns - it

ForumIAS

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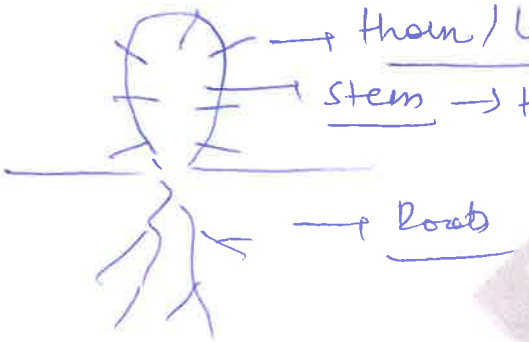
reduces evaporation from leaves as surface area decrease eg - Cactus



3) Roots are very deep in search of water and also has very delicate fibrus to absorb water.

Fauna – 1) have thick skin and furs to protect from heat of desert and prent transpiration eg. Camel

2) Tounge is modified so be able to eat thorny vegetation.

3) Storage of food & water – as humps in camel.

4) The feet has soft sponge to be able to walk on desert as – camel feet.

Feedback
(For OFFICE use only)

#	Ⓖ	Ⓐ	Ⓟ
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	