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GENERAL STUDIES (TEST CODE : 874)

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Medium Eng./Hindi	ENGLISH	Registration Number	28070
Center	KB	Date	10/10/17

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	
2	12.5	
3	12.5	
4	12.5	
5	12.5	
6	12.5	
7	12.5	
8	12.5	
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10	12.5	
11	12.5	
12	12.5	
13	12.5	
14	12.5	
15	12.5	
16	12.5	
17	12.5	
18	12.5	
19	12.5	
20	12.5	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

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

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EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Answer the following questions in not more than 200 words each:

1. The greatness of the Mughal achievement in the political unification of India was matched by the splendour and beauty of the work of architects, poets, historians, painters and musicians who flourished in the period. Comment.

भारत के राजनीतिक एकीकरण में मुगलकालीन उपलब्धियों की महानता वस्तुतः वास्तुकारों, कवियों, इतिहासकारों, चित्रकारों एवं संगीतकारों के कार्यों की भव्यता एवं सुंदरता से अभिव्यक्त होती है, जो उस काल में फले-फूले। टिप्पणी कीजिए।

The Mughals not only politically unified India but also developed a unique and syncretic culture by assimilating the best of Islamic and Indian culture

Political Unification:

- * Under the reign of Akbar, almost the entire subcontinent, leaving South India, came under Mughal influence
- * There was decentralization with the rule of local kings who gave patra administered on behalf of the central authority - the Mughals

- * The Mansabdari system helped to maintain a balance between centralization and regional autonomy.

Cultural Enrichment

Architecture

- * The ~~more~~ Mughal style of architecture was an improvement on the Indo-Islamic architecture with more emphasis on grandeur and aesthetics.
- * The style of architecture blended the local tradition with the Persian tradition.
- * The climax can be observed in the Taj Mahal, Humayun's Tomb, Red Fort etc.
- * Pietra Dura technique on white marble is an outstanding and unique feature.
- * The arabesque techniques, jali work etc. also reached climax.

Paintings

- * The miniature paintings became popular with royal patronage.
- * Mughal miniatures mainly focused on secular themes like royal pomp, hunting, natural scenes etc.
- * Later it inspired the Rajasthan and Pahari school of miniatures

Literature

- * Most of the Mughal rulers were prolific writers and encouraged literary work
- * Autobiography like Baburnama, Tuzuk-i-Jahangiri etc are fine literary work.
- * Akbarnama, Ain-i-Akbari, Raddshahnama, etc ~~can~~ give a glimpse of Mughal life.

Music:

- * Music was encouraged by most Mughal rulers like patronage to Tansen by Akbar
- * Tansen introduced a number of new Ragas into Hindustani Classical Music and was ~~the~~ gave competition

2. Traditionally, India had developed wide-ranging water harvesting techniques in keeping with the local ecological conditions and their water needs. Substantiate with examples.

पारंपरिक रूप से भारत ने स्थानीय पारिस्थितिक दशाओं एवं अपनी स्थानिक जल आवश्यकताओं के अनुसार विविध प्रकार की जल संचयन (वाटर हार्वेस्टिंग) तकनीकों का विकास किया था। उदाहरण सहित पुष्ट कीजिए।

Water harvesting in India has a long and evolving history and tradition with examples of local innovation to meet water needs

Indus valley civilization

- * Evidence of water harvesting can be found in the form of planned connection of drains and presence of the Great Bath at Mohenjodaro

Tanks

- * Most of the temples in South India have a tank to store water showing the significance of rain-water harvesting

Baolis:

- * A large number of baolis are seen throughout North India signifying the local water harvesting techniques.

Eg: Agrasen ki Baoli in Delhi

Gobads

- * These are large depressions created in arid regions of Rajasthan and Malwa to store water for use in dry season.

Other forms

- * Large tanks were developed by Islamic rulers to store and conserve water.

Eg: Hauz Khas in Delhi

* Persian wheel has been used in many parts to draw up ground water.

All these innovation show a deep understanding of local ecology and apt techniques to tap rain water to meet the needs in the dry season.

3. Imperial rivalries of 18th Century Europe were played out in India as well. Comment in the context of the Carnatic Wars.

18वीं सदी के यूरोप की साम्राज्यिक प्रतिद्वंद्विताएं भारत में भी देखी गईं। कर्नाटक युद्धों के संदर्भ में टिप्पणी कीजिए।

18th Century imperialism was marked by the intense rivalry between England and France leading to conflicts all over the world

Indian Context

- * The British were in control at Fort St. George in Madras and French were slowly gaining influence in the region with their base in Pondicherry
- * Colonial rivalry led to conflict in the form of the Carnatic Wars.

Carnatic Wars

(1748)

* First Carnatic War was a result of the Austrian War of Succession manifesting in conflict in India also.

* French occupied Arcat and played a role in the succession of the Nizam at Hyderabad.

* The wars ended with the Treaty of Paris ensuring status quo.

Second Carnatic War (1756-60)

* It started with the Seven Year Global War for supremacy between England and France.

- * The British won a decisive victory in the Battle of Wandewash in 1760 and ensured its dominance in India.
- * The treaty of Asi - Lo - Chappelle ensured French remained confined to Pondicherry and limits on garrisoning was placed.
- * The ensure the hegemony of the British in Indian Affairs and paved the way for full scale colonialization.

The Carnatic Wars show how the imperial rivalries manifested in India during the 18th century and led to the foundation of British Empire in India.

4. The Lucknow session of 1916 was a watershed event during the freedom struggle of India due to various reasons. Elucidate.

भारत के स्वतंत्रता संघर्ष के दौरान 1916 का लखनऊ सत्र विभिन्न कारणों से एक ऐतिहासिक घटना थी। स्पष्ट कीजिए।

The Lucknow session of 1916 was a watershed event mainly due to different forms of reconciliation between the Moderates and Extremists and the Congress and Muslim League.

Undoing the Surat Split of 1907

* The Surat split between the Moderates and Extremists proved to be disastrous for both.

* The extremists faced brutal repression from the British and moderates lost their mass support and very dis-illusioned by the Morley-Minto Reforms (1909).

* This led both the faction to recognize each other's utility and led to a rapprochement.

* The Extremists, ^{led by Tilak} were welcomed back to the Congress in 1916 Lucknow Session

Congress - Muslim League cooperation

* The Muslim League was disappointed due to the annulment of Bengal partition in 1911.

* The congress gave its tacit approval to separate electorates provided in the Morley-Minto reforms

* This led the Muslim League led by Jinnah to reconcile with the Congress and work towards the common objective of Swaraj

Why is Lucknow session a watershed event?

- Ans 1. The union of Moderates and Extremists strengthened the Congress and prepared the ground for the Gandhian phase of mass movement.
2. The rapprochement of Muslim League and acceptance of separate electorate sowed the seeds of partition of India.
3. It proved the secular credentials of the Congress and assured the minorities that their voice would be heard.

All these had great ramifications in our Freedom Struggle and ultimately Partition.

5. Reforms initiated by the Justice Party became a model for social affirmative action in the country. Comment.

जस्टिस पार्टी द्वारा आरंभ किए गए सुधार देश में सकारात्मक सामाजिक कार्यवाही हेतु एक आदर्श बन गए थे। टिप्पणी कीजिए।

The Justice Party was an anti-Brahminical movement of started in the in Madras state 1920s, to secure the interests of non-Brahminical classes in the political arena.

Evolution

* The self respect movement started by EV Ramaswamy Naicker (Periyar) was led to mobilization of depressed classes in Madras in early 1920s.

* The Justice Party was formed to ensure the political representation of hitherto neglected classes and end Brahmin hegemony.

Model of action

1. Justice Party mobilized the weaker sections like scheduled castes for no political representation.
2. They rooted reservation of seats for the backward castes in proportion to their population.
3. They became the voice of the depressed classes and brought an end to dominance of upper caste in Tamil polity.

Social affirmative action model

1. The Justice Party showed the way affirmative action can be used to ensure inclusive political representation.

2. Their model of reservation of seats for depressed classes in proportion to their population was ~~was~~ endorsed by the maker of our constitution and applied on a pan-India scale

3. Justice party gave voice to the oppressed classes and highlighted the historical injustices done to them

4. They strived for social justice and equality in political representation

Thus they initiated the model of social affirmative action in India.

6. War in the Korean Peninsula proved to be disastrous for Korea, a missed opportunity for the United States and a defining moment for China. Examine.

कोरियाई प्रायद्वीप में हुआ युद्ध कोरिया के लिए विनाशकारी, संयुक्त राज्य अमेरिका के लिए एक खोया हुआ अवसर तथा चीन के लिए एक निर्णायक क्षण सिद्ध हुआ। परीक्षण कीजिए।

The Korean War is considered to be a watershed moment in world history whose ramifications are felt even today.

Events of Korean War

- * The Korean Peninsula was ideologically divided after the 2nd World War with the North following a communist way under the influence of China and the South following the democratic way under the influence of United States (US).
- * North Korea invaded the southern part in 1950 in an attempt to unify the Korean Peninsula.

- * US pushed back the aggressor North Korea and moved into the North Korea's territory.
- * This led to involvement of China and Russia on North Korea's behalf.
- * India played a significant role to ensure armistice and division of Korea along the 48th Parallel.

Impact on Korea

- * The peninsula continues to be divided and both regions are hostile to each other.
- * Though the people share common culture and history, they remain divided due to the Cold War.

Impact on US

- * US wanted a decisive victory and unification of Korea under a liberal democratic regime.
- * But involvement of China and Russia thwarted its plan.
- * North Korea continues to haunt US with constant threats of a Nuclear war.

Impact on China

- * The Korean war enhanced the image of China as a rising military power.
 - * It showed the world that China can stand up to the US.
 - * It led to international recognition of Mainland China and ultimately assured it a permanent seat in the UN Security Council.
- Thus the Korean War was disastrous for Korea, missed opportunity for US and a defining moment for China.

7. The Munich Pact brought neither peace nor stability in relations between European countries, rather it turned out to be an act of appeasement that made war inevitable. Comment.

म्यूनिख समझौते ने यूरोपीय देशों के बीच संबंधों में न तो शांति उत्पन्न की और न ही स्थिरता, अपितु यह तुष्टीकरण की एक ऐसी कार्यवाही सिद्ध हुआ जिसने युद्ध को अपरिहार्य बना दिया। टिप्पणी कीजिए।

The Munich Pact of 1939 was an agreement between Hitler's Germany and the United Kingdom under Neville Chamberlain, brokered by Italy (Mussolini), to allow Germany to annex Sudetenland of Czechoslovakia.

Reasons for Munich Pact

1. British sympathized with Germany for the harsh nature of Treaty of Versailles
2. It considered Communist Russia under Stalin as a greater threat and believed Germany under Hitler could prevent the spread of communism

3. Britain was not prepared for war and thought the Treaty could buy it some valuable time

Act of appeasement:

1. Munich pact was culmination of the policy of appeasement followed by Britain.
2. Britain ~~made~~ concluded a Naval treaty to show its soft side for Germany and continued to appease it till Munich Pact

How did it eventually lead to war?

1. Hitler used the policy of appeasement to strengthen Germany. He increased the size of the Navy and re-militarized the ruhr & Rhineland

2. Hitler flouted the terms of Treaty of Versailles with impunity and introduced conscription.
3. With no response from Britain, Hitler unified Austria with Germany.
4. Munich Pact allowed him to annex Sudetenland. He also went ahead to annex the entire Czechoslovakia.
5. The Policy of appeasement was treated as a sign of weakness by Hitler.
6. The Non-Agression Treaty with Russia in 1939 made the world realize that Hitler would ~~not~~ not contain Russia.
7. Hitler assumed appeasement as a permanent policy and annexed Poland leading to the 2nd World War.

Thus the Munich Pact eventually made the 2nd World War inevitable.

8. Explain how Gandhi's non-violent philosophy influenced Martin Luther King Jr.'s methods. Also discuss the contributions and accomplishments of King to ensure civil rights for all people regardless of race in America.

व्याख्या कीजिए कि किस प्रकार से गांधीजी के अहिंसावादी दर्शन ने मार्टिन लूथर किंग जूनियर के तरीकों को प्रभावित किया। साथ ही अमेरिका में नस्लीय भेदभाव के बिना सभी लोगों के लिए नागरिक अधिकार सुनिश्चित करने में मार्टिन लूथर किंग के योगदानों एवं उपलब्धियों की भी चर्चा कीजिए।

Gandhi's non violent philosophy
has gained a lot of international acclaim
with leaders like Martin Luther King Jr. →
Nelson Mandela etc. emulating his strategic
to bring freedom to the people.

Influence on Martin Luther King Jr.

1. Martin Luther King Jr. organized the
Civil Rights Movement of the 1960s on
the lines of Gandhi's non-violent
ideology.
2. He organized mass movements like
crossing the Selma bridge in defiance of

unjust law just like Gandhi broke
the Salt Law to start the Civil
Disobedience Movement

3. He believed in the power of masses
to show resistance to oppression
4. He used his powerful oratory skill
to enthuse the audience through speeches.
like 'I have a dream' just like Gandhi
used to enthuse Indians.
5. Use of Civil Disobedience, Non-cooperation,
Passive resistance etc are drawn from
Gandhi's ideology.

Contribution of Martin Luther King Jr.

1. His ~~was~~ Civil Right Movement infused self-confidence among the Black People
2. The movement ensured political rights for the coloured people ~~as~~ like right to vote.
3. It led to ushering of an era of social equality with discontinuance of discriminatory laws like Jim Crow
4. It united the American people into a community with equal respect and dignity to all

All these finally manifested in the election of a Black President in the US - Barack Obama

9. Apart from the linguistic reorganisation of states, the three language formula was an important part of government policy to address the language question in India. Discuss.

राज्यों के भाषाई पुनर्गठन के अतिरिक्त, त्रि-भाषा सूत्र भारत में भाषा की समस्या का समाधान करने की सरकार की नीति का एक महत्वपूर्ण भाग था। चर्चा कीजिए।

The three language formula was introduced in 1968 on the recommendation of the Rothari Commission on Education.

Context of the Policy

1. Language was a major concern for many part of the country and there were demands for linguistic states.
2. After linguistic reorganisation of the states in 1956, a new bone of contention arised in the form of Official Language
3. The constitution in Article 343 say Hindi to be the Official Language after 15 years (i.e. 1965)

4. ~~And~~ Fear of imposition of Hindi led to violent opposition in South Indian states.
5. ~~At~~ To allay the fears, the Official Language Act, 1963 was passed with further clarification in 1966 to ensure use of English as Official Language as long as the Southern states desired.
6. To further address the language question, 3-language formula was introduced

Significance of 3-language formula

1. It stated that school education should be carried out in any preferred medium with the provision of learning 3 languages - Hindi, English and a regional language/ mother tongue

2. It addressed the question of preserving regional language through compulsory school education.
3. It appeased the people through assurance of due importance to local language.
4. It ensured minimum disadvantage to speakers of regional languages in obtaining government jobs.

Therefore the 3 language formula was an important step in the direction of ~~assessing~~ addressing the language question and has strengthened the integration of the country.

10. Enumerate the measures for the welfare of Unorganised Workers in India. In the context of problems being faced by 'domestic helps', discuss the need for additional measures to safeguard their interests.

भारत में असंगठित कामगारों के कल्याण हेतु किए गए उपायों को सूचीबद्ध कीजिए। 'घरेलू सहायकों' द्वारा सामना की जा रही समस्याओं के संदर्भ में, उनके हितों की रक्षा करने हेतु अतिरिक्त उपायों की आवश्यकता की चर्चा कीजिए।

Unorganised Workers are worker who work in a sector that is not provided with a regulation through a law and hence lack social security provision and are prone to discrimination.

Welfare Measures for Unorganised Workers

1. Unorganised Worker Identification Number (UWIN) helps to track an unorganised workers and provide them social security.
2. The Swavalamban Scheme ~~or~~ ensures social security through New Pension Scheme.

3. Rashtriya Swastha Bima Yojana (RSBY)

provides health insurance with cashless treatment

4. Am Aadmi Bima Yojana (AABY)

provides insurance to Unorganised workers

5. Pradhan Mantri Suraksha Bima Yojana and

Pradhan Mantri Jeevan Jyoti Yojana

provide accidental insurance and life insurance covers respectively

7. ~~Basic~~ Minimum Wage Act provides a

basic minimum wage to all workers

8. Pradhan Mantri Jan Dhan Yojana ensures

financial inclusion

Problems of domestic workers

1. Unregulated sector with no security.
2. Difference in bargaining power leads to exploitation
3. Fired without notice according to whims of the employer
4. Poor pay and employment of child labour.

Need of additional safeguards

1. Proper enforcement of Minimum Wage Act
2. Awareness among the people about the various schemes and provisions of the government
3. Organisation of workers to increase their collective voice and bargaining power
4. Ensuring social security of all workers through various schemes

11. The manner in which the mentally ill have been treated in India suggests that policy measures alone may not be sufficient to address the challenges faced by them. Discuss.

भारत में मानसिक रूप से रोग ग्रस्त व्यक्तियों के साथ जिस प्रकार का व्यवहार किया जाता रहा है उससे यह सिद्ध होता है कि मात्र नीतिगत उपाय ही उनके द्वारा सामना की जाने वाली चुनौतियों का समाधान करने के लिए पर्याप्त नहीं हैं। चर्चा कीजिए।

There is a stigma associated with Mental Health in India which cannot be removed by policy alone.

Stigmas related to mental health

1. People suffering from mental health problem are insane
2. Depression is just a mood swing and will go away naturally
3. Seeking help from a professional means the person is turning insane.
4. Mental health problems can be cured through superstition / religion.

Problem with Mental & Health in India

1. Discrimination faced by Mental Health patients
2. Poor awareness about mental health
3. Lack of trained professionals to deal with mental health
4. Stigmas associated with mental health.

Steps taken

1. Mental Healthcare Bill, 2016 is a positive start with a rights-based approach.
2. Suicide is proposed to be decriminalised
3. Advance directive has been institutionalised
4. Regulation of practices like electro-convulsive therapy

Way Forward

1. Intensive communication and education program to raise awareness
2. Ensure adequate trained professional through establishment of specialized institutions.
3. Debunking stigmas through sustained campaign and use of celebrities
4. Sensitization of the community towards need to address mental health issues.

∴ Hence there is a need to make beyond govt. policy and create a social movement to bring mental health into our discussion and effectively manage it

12. Highlight the characteristics of Particularly Vulnerable Tribal Groups (PVTGs) and discuss the challenges faced by them. Also enumerate the measures taken by the government to address these challenges.

विशिष्ट रूप से सुभेद्य जनजातीय समूहों (Particularly Vulnerable Tribal Groups: PVTGs) की विशेषताओं पर प्रकाश डालिए एवं उनके द्वारा सामना की जाने वाली चुनौतियों की चर्चा कीजिए। साथ ही सरकार द्वारा इन चुनौतियों का समाधान करने हेतु किए गए उपायों को सूचीबद्ध कीजिए।

Particularly Vulnerable Tribal Groups
(PVTGs) are a group of 75 tribal groups who face unique challenges and hence need special attention. They were identified as Primitive Tribal Groups by Dhebar commission.

Characteristics

1. Poor social indicators like high illiteracy, ~~MMR~~ MMR, IMR, etc
2. Relative seclusion and shyness to contact
3. Declining population, threat of extinction
4. No written language
5. Primitive lifestyle with shifting cultivation, gathering etc

Challenges

1. Declining population means there is a need to for intervention to preserve them.
2. Poor social indicators require specialised attention
3. Need to provide basic services given their shyness to contact.
4. Need to preserve their culture
5. Need to improve livelihood through infusion of better techniques of agriculture
6. Limiting outside contact to prevent spread of diseases
7. Regulating tourism to ensure minimum disruption

Steps taken by Govt

1. The tribal sub-plan intends for holistic development of the tribal population through govt. schemes
2. Some states like Odisha have distinct plan for PVTGs
3. Implementation of Forest Right Act, 2006 to ensure sustained livelihood, and land rights etc to the tribal
4. PESA Act has been enacted to provide for local self-government

A lot more concerted effort is required to preserve the PVTGs and bring in meaningful development for them

13. While suburbanisation is a common phenomenon in most urbanising countries, it is occurring at a relatively early stage of India's urban development. Enumerating the reasons behind this development, highlight the challenges it is creating for Indian cities.

यद्यपि उपशहरीकरण अधिकांश शहरीकृत हो रहे देशों में एक सामान्य परिघटना है, किन्तु भारत के शहरी विकास के संदर्भ में यह अपेक्षाकृत प्रारंभिक चरण पर में हो रही है। इस विकास के अंतर्निहित कारणों को सूचीबद्ध करते हुए भारतीय शहरों के लिए इसके द्वारा उत्पन्न की जा रही चुनौतियों पर प्रकाश डालिए।

Suburbanisation is the process of expansion of residential areas into the rural-urban fringe, leading to change in land use pattern and lifestyle.

Trend in India

1. Suburbanization starts at a very early stage leading to predominant horizontal expansion rather than vertical expansion.
2. This has lead to huge urban sprawls with make our urbanisation "Hidden" and "Messy".

Reasons

1. Increased migration from rural areas due to various push factors like lack of employment opportunities, social discrimination etc
2. Attraction of cities due to glamorous lifestyle, better opportunities etc
3. High rent in cities leading to proliferation of slums and moving out of residential complexes into the suburbs.
4. Relatively pristine environment of the suburbs attract residential colonies.

Challenges

1. Continuous expansion of cities leading to messy urban sprawls
2. Proliferation of slums, shanties and squatter settlements

3. Problem of jurisdiction of Urban Local Bodies.
4. Change in land use in rural-urban fringe.
5. Increasing pollution in the suburbs
6. Increased congestion in the cities
7. Poor quality of life due to all these factors

There is a need to check rapid urbanisation and adopt a planned approach to ensure sustainable development

14. Various geographical and anthropogenic factors have rendered Brahmaputra Valley susceptible to recurrent floods. Discuss the causes and suggest suitable measures of mitigation.

विविध भौगोलिक एवं मानव जनित कारकों ने ब्रह्मपुत्र घाटी को बारम्बार बाढ़ों हेतु अति संवेदनशील बना दिया है। इसके कारणों की चर्चा कीजिए तथा शमन के उचित उपाय सुझाइए।

The Brahmaputra Valley is one of the most susceptible ^{areas} to recurrent flooding due to various reasons.

Geographical Causes:

1. The rapid change in elevation of the river channel near Sadiya leads to massive deposition of sediments
2. Decreased flow rate and increased sedimentation leads to formation of braided channel
3. Narrow valley region increases chances of flood

4. Saucer shaped valley makes the region prone to flooding
5. Heavy rainfall in North-East India due to monsoon make it susceptible to flood.

Anthropogenic Causes

1. Poor settlement planning
2. Large scale deforestation
3. No planning for management of channel
4. Encroachment into flood plains
5. Large number of dams on the river in China

Mitigation strategy

1. Better river basin planning with sustainable watershed management practices

2. No settlements in flood plains.
3. Creating embankment and check dams
4. Early warning system and disaster preparedness
5. Flood zone mapping and afforestation programs
6. Minimizing pollution of the river to maintain channel flow

All these measures can reduce the risk of frequent flooding and make the North - Eastern region safer

15. Give a brief account of Earth's heat budget. Also discuss how increasing concentration of carbon dioxide in Earth's atmosphere effects it.

पृथ्वी के ऊष्मा बजट का एक संक्षिप्त विवरण दीजिए। साथ ही चर्चा कीजिए कि पृथ्वी के वायुमंडल में कार्बन डाइऑक्साइड की निरंतर बढ़ रही सांद्रता इसे किस प्रकार प्रभावित करती है।

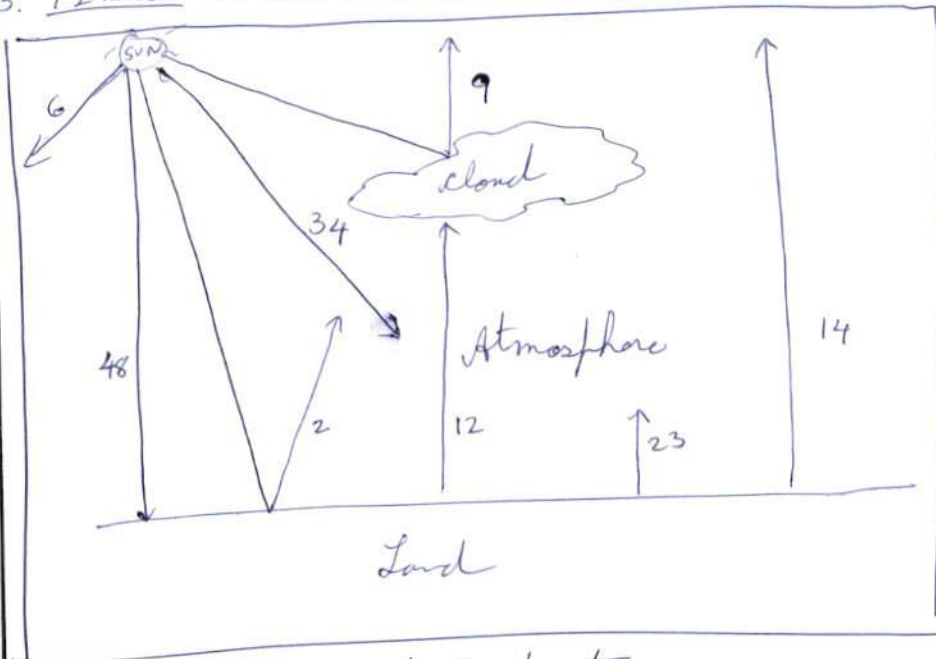
Earth heat budget is the accounting of the amount of heat energy incident on the earth surface and its subsequent release.

Earth's heat budget

1. Assuming 100 units of incident solar radiation
2. Some radiation is reflected by the clouds - ~~17 units~~ 9 units
3. Some of the sunlight is lost due to diffuse scattering - 6 units
4. Some amount is absorbed by the atmosphere - 34 units
5. Some radiation is reflected from earth's surface - 2 units
6. Rest 49 units reach the earth's surface

Radiation budget

1. 14 units is radiated from earth's surface and absorbed by the atmosphere
2. 23 units is radiated directly out from the earth's surface
3. 12 units is used in convection



Earth's Heat Budget

Role of Carbon Dioxide (CO_2)

1. CO_2 is a green house gas (GHG) which help in absorbing long wavelength infra-red radiation. This leads to warming of atmosphere.
2. Excessive CO_2 emission is now leading to global warming.
3. The portion of radiation absorbed by the atmosphere from the earth is increasing.
4. This can lead to catastrophic changes in weather phenomena.
5. Rising temperature of atmosphere disturbs the heat budget.

16. Give an outline of the major geological events that have shaped the present drainage system of Peninsular India. Also, explain why peninsular rivers are unsuitable for navigation but facilitate hydroelectric power generation.

प्रायद्वीपीय भारत के वर्तमान अपवाह तंत्र को आकार प्रदान करने वाली प्रमुख भू-गर्भीय घटनाओं की एक रूपरेखा प्रस्तुत कीजिये। साथ ही स्पष्ट कीजिए कि ऐसा क्यों है कि प्रायद्वीपीय नदियां नौवहन के लिए अनुपयुक्त हैं लेकिन जलविद्युत उत्पादन को सुविधाजनक बनाती हैं।

Drainage system is the result of a long and continuous process of evolution.

Evolution of drainage system in Peninsular India

1. Presence of hard sedimentary and metamorphic rocks have given rise to a rectangular pattern of drainage.
2. Faults in the form of rift valleys have given rise to distinct channels.
eg: Narmada, Tapi
3. Northward Tilting of the peninsular block has led to long rivers flowing into the Bay of Bengal.

4. Western Ghats act as a water-divide between the river system draining into the Arabian Sea and Bay of Bengal
5. Vindhyas and Satpura act as water-divide between Himalayan and peninsular system
6. Emergent coast of eastern India give rise to deltas whereas submerged coast of western coast give rise to estuaries

Navigation in peninsular river

1. Navigation is very difficult due to its seasonal nature
2. Numerous waterfalls also hinder navigation
3. Hard rocks make it difficult to construct canals

Hydroelectricity

1. Numerous waterfalls make good prospect for hydroelectricity. Eg Narmada - Sruandhar falls, Sherate - Jog falls etc
2. Narrow channels facilitate creation of dams.

~~Here~~ Though navigation is difficult, hydroelectricity has immense potential

17. Elaborate with examples as to how government policies influence the location of industries. Also, mention the steps taken by the Government of India to stimulate industrial activity in backward regions.

उदाहरण सहित व्याख्या कीजिए कि किस प्रकार से सरकारी नीतियां औद्योगिक अवस्थिति को प्रभावित करती हैं। साथ ही, भारत सरकार द्वारा पिछड़े क्षेत्रों में औद्योगिक गतिविधियों को बढ़ावा देने हेतु उठाए गए कदमों का भी उल्लेख कीजिए।

Government policy play a major role in determining industrial location through various ways.

Role of Govt. Policy

1. Government decides the location of Public Sector Undertaking which can act as source of raw material for other industries. Eg: Iron and steel plants in

Rourkela

2. Govt. policy determine the transport network and connectivity. Eg: Visakhapatnam Port has led to many industries

3. Govt policy like Special Economic Zone (SEZ) incentivize industries in a particular area - Eg: Software Park in Bangalore and Hyderabad

4. Ports

4. Infrastructure projects of government lead to industrial corridors. Eg Western Dedicated Freight Corridor has catalysed Delhi-Mumbai Industrial Corridor

Industrial activity in backward area

1. Govt has invested heavily in iron and steel plants in the backward region of Jharkhand, Odisha and Chhattisgarh
Eg: Bokaro, Rourkela, Bhilai

2. The Barauni oil refinery and the Mathura refinery were also meant to boost industrial activity in backward region.
3. Gas pipelines through Bijaipur and Jagdishpur.

Hence the govt consciously tries to spur industrial activity in backward region through its policies.

18. Explain, in brief, the process of cloud formation. Also, elucidate how clouds can help in weather forecasting.

संक्षेप में बादल बनने की प्रक्रिया की व्याख्या कीजिए। साथ ही स्पष्ट कीजिए कि मौसम के पूर्वानुमान में बादल किस प्रकार सहायता कर सकते हैं।

Clouds are reservoirs of rainwater which are formed due to condensation of watervapour in the air.

Formation of Clouds

1. Convective clouds

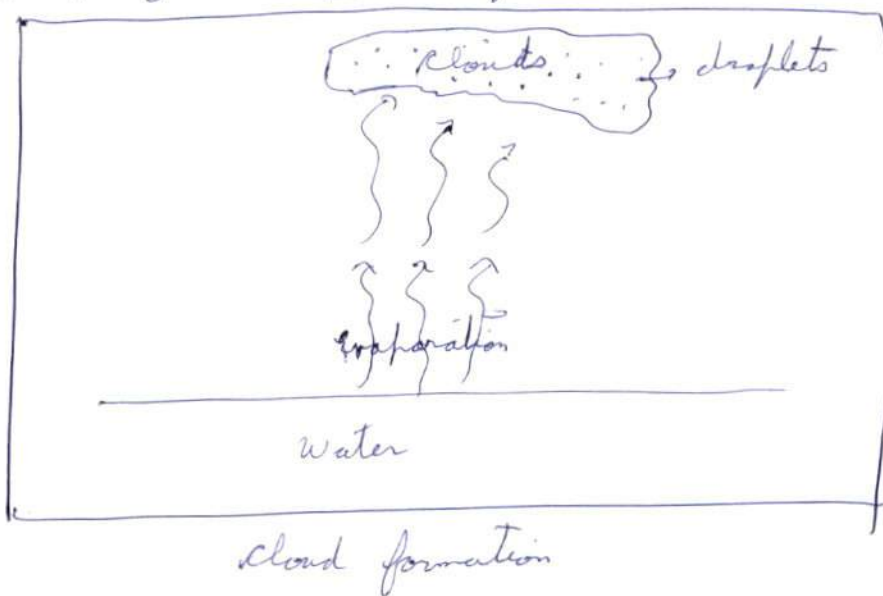
1. Insolation on earth surface leads to evaporation and uplift of water vapours into the atmosphere

2. When moisture laden air ascends due to convection or orographic barrier, condensation takes place

3. This leads to formation of tiny droplets of water around hygroscopic nuclei

like dust / smoke particles

4. Coalesce of these droplets, increase their size and cause rainfall



How clouds help in weather forecasting?

1. Clouds are a predictors of rainfall.
Specific clouds like cumulonimbus and nimbostatus cause rainfall
2. Clouds help in reflection of insolation
3. Clouds also absorb radiated heat energy

4. Clouds can indicate the arrival
of thunderstorms or cyclones

19. The socio-economic and ecological consequences of soil degradation are far-reaching. Discuss. Suggest measures that can be taken to restore soil fertility and arrest soil degradation.

मृदा निम्नीकरण के सामाजिक-आर्थिक एवं पारिस्थितिक परिणाम दूरगामी प्रभाव डालने वाले होते हैं। चर्चा कीजिए। मृदा उर्वरता को पुनर्स्थापित करने एवं मृदा निम्नीकरण को रोकने हेतु किए जा सकने वाले उपाय सुझाइए।

Soil degradation is the process of loss of soil cover or fertility through erosion, salinity, alkalinity etc

Socio-economic consequence

1. Soil degradation can reduce the agricultural produce
2. It can lead to frequent drought leading to food scarcity
3. It can make land unfit for economic cultivation and lead to agrarian distress
4. It can lead to social unrest due to declining productivity

5. Ultimately it can lead to the sad consequence of farmer suicide.
6. Excessive use of fertilizers to restore soil fertility poses health risks.

Ecological consequence

1. Soil degradation can lead to desertification.
2. Soil erosion can lead to badland topography and frequent floods.
3. It can lead to loss of biodiversity due to impact on vegetation.

Measures to arrest soil degradation

1. Afforestation and reforestation.
2. Sustainable agricultural practices like climate smart agriculture, organic farming,

crop rotation, micro-irrigation etc.

3. Proper land use management.

4. Better irrigation practice through
integrated watershed management and micro-
irrigation

5. Limited use of chemical fertilizers.

6. Land reclamation

7. Use of lime to reduce soil acidity

All these measures can counter soil
degradation and lead to sustainable
development

20. Development of island territories requires a careful balancing of environmental and tribal concerns with exploitation of economic potential. Elaborating on the threats faced by island territories of India, comment on the recent measures proposed by the government regarding their development.

द्वीपीय क्षेत्रों के विकास हेतु संभावित आर्थिक क्षमताओं के दोहन के साथ ही पर्यावरणीय एवं जनजातीय चिंताओं के मध्य विवेकपूर्ण संतुलन की आवश्यकता है। भारत के द्वीपीय क्षेत्रों द्वारा सामना किए जाने वाले खतरों को विस्तार से बताते हुए, उनके विकास के संबंध में सरकार द्वारा हाल ही में प्रस्तावित उपायों पर टिप्पणी कीजिए।

Island territories serve many vital purpose and their development is of urgent need.

Indian islands

1. Andaman and Nicobar islands
2. Lakshadweep Islands
3. Bar islands and delta islands.

Environmental concerns

1. Excessive Tourism has led the waste accumulation
2. Settlement expansion has led to deforestation

3. Human activities have led to coral bleaching and destruction of mangroves

Tribal concerns :

1. Islands are home to a group of Particularly Vulnerable Tribal groups (PVTGs).
2. Tourism has led to exploitation of Tribals. E.g. Jarawas made to dance for food.
3. Human contact has introduced new diseases.
4. Disruption of tribal lifestyle.
5. Conserving tribal language and culture.

Measures proposed

1. Comprehensive scheme for Conservation and Development of islands.

2. Regulation of tourism by Jorawa
reserve
3. Providing basic facilities
4. Documenting tribal culture and
encouraging interaction
5. Protecting traditional knowledge
6. joint conservation efforts