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Roll No. : .....

Registration Number : MT23RCAPA011 **Date of Examination :** 7/8/23

Exam Centre : Old Rajinder Nagar ☐ Bhopal ☐ Online ☑

Test - 1

Code : TC703

RCA Batch 2023

GENERAL INSTRUCTIONS

This Question-cum Answer (QCA) Booklet contains 56 pages. Immediately on receipt of the booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.

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Question paper will be provided separately and can be taken by the candidates after conclusion of the exam.

.....

SUBJECT/PAPER
GENERAL STUDIES

Invigilator's Sign. : .....

[To be filled by the STUDENT]

Student's Queries for the Evaluator (if any write them below)

[To be filled by the EXAMINER]

Evaluator's response

(For filling by Examiners only)

Evaluator Code :

Q.No	Pg No.	Maximum Marks	Marks	Total
1	1			
2	3			
3	5			
4	7			
5	9			
6	11			
7	13			
8	15			
9	17			
10	19			
11	21			
12	24			
13	27			
14	30			
15	33			
16	36			
17	39			
18	42			
19	45			
20	48			
Grand Total				

Signature

MACRO COMMENTS

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4. For rough notes or calculation, the last two blank pages of this booklet should be used. The rough notes should be crossed through afterwards.
5. If you wish to cancel any work, draw your pen through it or write "Cancelled" across it, otherwise it may be evaluated.
6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

Candidates must not write on this margin

Q.1 भारतीय दार्शनिक चिंतन का ताना–बाना उत्तरी भारत का उतना ही ऋणी है जितना दक्षिण भारत का। स्पष्ट कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

The fabric of Indian philosophical thought owes as much to Northern India as to Southern India. Elucidate. (Answer in 150 words) 10 Marks

Indian philosophical thought originates from our rich civilizational history and the scholars from multiple regions and languages add value to it.

Northern India

↳ **Vedic Age** → Vedas, Upanishads and Puranas were source of philosophical thoughts

↳ **Mahajanpadas** → Scholars like Panini, Bharhe, Patanjali.

↳ **Maurya** → Chanakya with his Arthshastra
Gautama Buddha
Mahavira & Jain Monks

↳ **Gupta** → Navratnas like Bhaskra, Kalidasa.

↳ **Bhakti** → Saints like Meera from Braj region.

↳ **Sufi** → Idea of Wahadatul-Wujud from Bakhtiar Kaki & Nizamuddin Auliya

Candidates must not write on this margin

At the same time, the Southern India too has some eloquent thinker who guide the course of our society.

Southern India

↳ **Sangam Age** → Assemblies at Madurai.

↳ **Thiruvalluvar** → wrote Thirukkural

↳ Kannada thinker like Pampa, Ponna, Pampa.

↳ Rashtrakuta poets like Amoghavarsha.

↳ **Bhakti Saints** of South India like Shankracharya,

Hence, Indian philosophy has diverse perspectives aided from multiple regional personalities of different eras across the history.

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Q.2 सामाजिक परिवर्तन और सुधार के लिए भारतीय समाज का आवेग औपनिवेशिक शासन के प्रति इसके विरोध की एक प्रतिक्रिया थी। परीक्षण कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

The Indian society's impulse for social change and reform was a response to its opposition to colonial rule. Examine. (Answer in 150 words) 10 Marks

During the advent of British, Indian society was under the tight grip of dogma and societal bandages.

Colonial rule and the dawning of Indian social renaissance took place with the efforts of Raja Ram mohan Roy.

But most of the responses were anti colonial in particular and reformists in general.

↳ Women emancipation

↳ Challenges like sati, Devadasi system, Kulinism and NO widow Remarriage.

↳ Efforts from Raja Ram Mohan Roy to ban Sati (Sati Regulation 1829)

↳ Widow Remarriage Act 1856 → Ishwar Chandra Vidyasagar.

↳ Caste System and Untouchability

↳ Jyotiba Phule established schools

Candidates must not write on this margin

for women and depressed castes.

↳ Self respect and Justice Movement of Mudaliar and Ambedkar for dalit emancipation.

→ Muslim Education

↳ Sir Syed Ahmed Khan focus on progress of Muslim with education.

↳ Establishment of Anglo oriental College in Aligarh.

↳ The Indian intelligentsia which used the colonial policies in the beginning later turned to movements like Kuka Movement, Atmiya Sabha, Deccan education society and Indian Social Conference to keep social reform going.

Social reform led to emancipation of large section of people and create a new sense of national identity that play a keyrole in freedom struggle.

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Q.3 रूसी क्रांति को प्रभावित करने वाले कारक कौन–कौन से हैं तथा इस क्रांति के क्या–क्या परिणाम हैं ? भारतीय राष्ट्रीय आंदोलन पर इसके प्रभाव की विवेचना कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the factors that led to the Russian revolution and what are the consequences of this revolution? Discuss its influence on the Indian national movement. (Answer in 150 words) 10 Marks

Russian Revolution was a violent overthrow of the Tsarist Russia and establishment of a communist form of government.

- Russian Revolution 1917
  - February Revolution
    - Interim govt
      - October Revolution
- Factors that Led to Russian Revolution
  - Man poverty
    - Land distribution → Poor peasantry
    - Industrial workers → Exploitation.
  - Inflation
    - Due to world war I.
    - Shortage of essentials
  - Russian involvement in world war I
    - Anti popular stance of Tsar
  - Repressive attitude of Tsar Nicholas
  - Rise of communist ideology in Europe.

Candidates must not write on this margin

Consequences of Revolution

- Decree of Peace → Russia withdrew from the war.
- Decree of Land → Land distribution across Russia
- Socialistic Order → Centralised and public owned mode of production
- Purges on opponents → Stalin's reign of Terror.
- First Communist state in world under Lenin
- Influence on India
  - Rise of Revolutionary activities
    - Formation of HRA under Ram Prasad Bismil → Later Kakori incident
  - Communist Party of India → 1925 by MN Roy.
  - Spread of Socialistic Ideology → Leaders like Subhash Bose, JL Nehru.
  - Involvement of peasants and workers in movement. eg. AUP Kisan Sabha.

Hence, Russian Revolution changed the landscape of world in 20th Century

Candidates must not write on this margin

Q.4 पृथ्वी की सतह पर तापमान के असमान वितरण के लिए उत्तरदायी विभिन्न कारकों की चर्चा कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss the various factors responsible for the uneven temperature distribution on Earth's surface.
(Answer in 150 words) 10 Marks

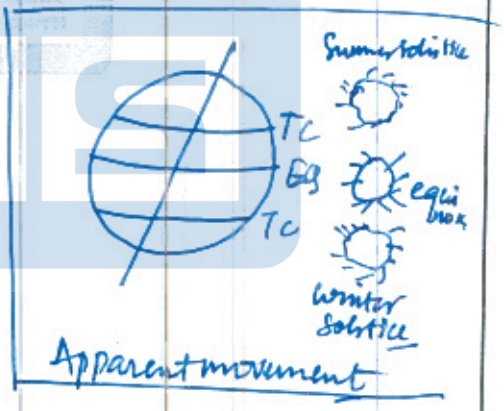
Temperature distribution across the earth surface is a complex phenomenon that also influences weather pattern and climate.

Factors responsible for uneven distribution of temperature

↳ **Insolation**

→ Lateral ~~movement~~ positioning of sun varies across seasons due to its inclination

eg. Slant angle at polar and subpolar led to reduced insolation and low temperature throughout the year.



↳ **Topography**

→ Uneven distribution of Land and water

— Land absorbs and lose the heat faster than water.

eg. Northern Continental part has higher temperature.

Candidates must not write on this margin

↳ Rotation and Revolution ≠> Latitude

↳ Position like Perihelion and Aphelion leading to differential heating.

↳ Cloud cover

↳ Equator has lower temperature than tropical region due to clouds.

eg. Deserts have no cloud cover and high temperature.

↳ Wind

↳ The wind from sea/ocean has moderating effects that led to moderate temperature in coastal region. eg. Kolkata, Mumbai.

↳ Air Density —| Altitude

↳ Thin air at High Altitude led to cooler temperature.

eg. Hill Station like Shimla.

This temperature difference influence wind pattern, habitation and biodiversity in the region

Candidates must not write on this margin

Q.5 जलवायु परिवर्तन के कारण हिमनदों के पिघलने का पारिस्थितिकी तंत्र और मानव समाज पर गंभीर प्रभाव पड़ता है। हिमनदों के पिघलने के कारण पर्यावरण पर पड़ने वाले प्रभावों और इस मुद्दे के समाधान के लिए किए जा सकने वाले उपायों पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

The melting of glaciers due to climate change has serious implications for the ecosystem and human society. Discuss the effects of melting glaciers on the environment and the measures that can be taken to address this issue. (Answer in 150 words) 10 Marks

According to IPCC report on Cryosphere, we are witnessing unprecedented thawing of Ice caps and retreating glaciers due to Climate Change.

Serious Implications for ecosystem & Human Society

↳ **Biodiversity loss**
↳ Loss of Habitat for animals (flora & fauna) eg. Snow leopard, Polar Bear.

↳ **River Surface flow**
↳ Overwhelming of streams leading to inundation of floodplains. eg. Beas River

↳ **Glacial lake outburst**
↳ Overturning led to flooding eg. Kedarnath

↳ **Land subsidence** eg. Joshimath.

↳ **Loss of Human Habitation** → Fragile Himalayan ecosystem.

↳ **Agricultural Sustainability** ⇒ Food insecurity in new future due to water scarcity.

Candidates must not write on this margin

Measures that can be taken

- **Net Zero Emission** → As prescribed during Paris Agreement and COP26 summit.
  - Decarbonising the Economy.
  - Renewable energy sources like solar and wind
  - Dephasing coal and fossil fuels.
  - Reduce GHG emission.
- **Capacity building in Mountain**
  - Ecofriendly practices
    - prevention of deforestation.
      eg. Green Himalayan Mission.
- **Freeing the river floodplain**
  - Habitation planning and prevention of overburdening in the name of tourism and development.

Melting glaciers are a ticking bomb and its unsustainability can prove to be detrimental if ignored. It requires efforts of government and civil society to address the same.

Candidates must not write on this margin

Q.6 श्वेत क्रांति भारत के पश्चिमी भाग में सर्वाधिक सफल रही। श्वेत क्रांति की इस क्षेत्रीय सफलता के कारकों की विवेचना कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The White Revolution was most successful in the Western part of India. Discuss the factors for this regional success of the White Revolution.

(Answer in 150 words) 10 Marks

White Revolution refers to the increase in the dairy production across India.

- Most successful in Western India
  - Main → Western UP, Gujarat, Rajasthan
  - Reasons
    - Use of technology → Latest breeds of Cows & Buffalos
    - Cooperative Movement
      - Eg. AMUL
    - Agricultural Residual
      - Used as Chara of cattle.
    - Ports and transportation
      - Export potential
      - Road Forward and Railway linkages

Candidates must not write on this margin

→ Governmental policies
  ↳ subsidies to Farmer
  ↳ Milk production Mission
↳ Agro processing industries
  ↳ Processing of Milk to Milk Products
↳ Capital
  ↳ capital intensive industry get investment from financial centres in Gujarat and Bombay
↳ Urban Agglomeration
  ↳ Surat, Mumbai, Delhi.

White Revolution has potential to spread across the country through strong infrastructural set up under Gokul Mission of government. It can aid to make farmer income sustainable

Candidates must not write on this margin

Q.7 पृथ्वी की आंतरिक संरचना की हमारी समझ में भूकंपीय अनुसंधान किस हद तक योगदान करता है? इसके महत्त्व का विस्तार से विश्लेषण कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

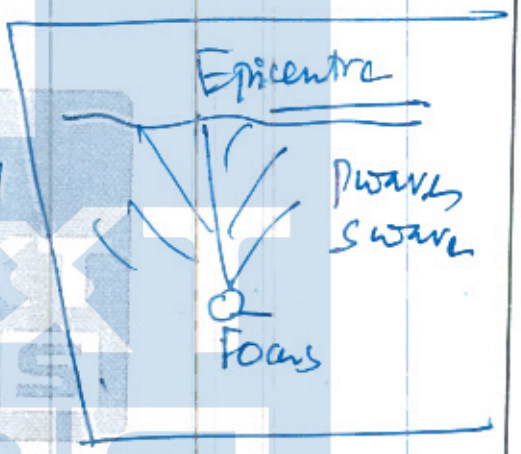
To what extent does seismic investigation contribute to our understanding of the Earth's interior structure? Analyze its significance in detail.

(Answer in 150 words) 10 Marks

Seismic investigation are key tomes to the Earth dissrophism phenomenen.

→ [Pwaves] travel the fastest and can move aswn solid, liquid and gases.

→ S waves can only travel through solid and its shadow zone tell us about the liquid nature of core of the earth.



→ [Surface waves] are formed due to interaction of waves (body waves) with crust and it can tell about composition of the earth crust.

Candidates must not write on this margin

Significance

→ Direct source of earth interior
  → Seismic mapping of the area
→ Zonation → 4 zones in India
→ Preparedness against disaster
  → Early warning system
→ Disaster Mitigation
→ Internal composition of Earth.

Hence, Seismic Investigation play a key role in the accessibility of earth surface and geophysical phenomenon

Candidates must not write on this margin

Q.8 जनसांख्यिकीय संक्रमण की गति भारत के विभिन्न राज्यों में भिन्न-भिन्न है, जिससे जनसंख्या वृद्धि दोधारी तलवार बन जाती है। टिप्पणी कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

The pace of demographic transition varies across different states of India making population growth a double-edged sword. Comment. (Answer in 150 words) 10 Marks

Demographic transition is result of the differential popular growth because of disparity in the replacement rates across states in India.

Different transition
- Different birth Rate
- Family Planning / Some
- Govt. Policies
- Literacy and Autonomy

Double edged swords

→ Population ~~Explosion~~ being Dividend
- Women — India has 65% population in working age group
- Demographic assets as labour export potential

Candidates must not write on this margin

→ Skilled workforce can push Indian economy

→ National Integration

↳ Movement of people from One State to Another to fill the labour deficiency

eg. Bangalore.

⇒ Population being threat

↳ Sand Soil Movement ⇒ Regionalism

↳ Demographic Disaster

↳ Poor education/Health

↳ Crime Rates

↳ Women missing due to Infanticide & Sex selection ⇒ Disbalance in society

↳ Lack of reproductive knowledge

↳ Disease burden = Social security threat

Hence, India need to put emphasis on the skill development and demographic enhancement to build on phase of "Amritkal.

Candidates must not write on this margin

Q.9 भारत में नृजातीय और सांस्कृतिक विविधता हमेशा से एकता के सूत्र में बँधी रही है। भारत की सांस्कृतिक एकता में योगदान करने वाले प्रमुख कारकों की चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

The ethnic and cultural diversity in India has always been bound by the thread of unity. Discuss the major factors that have contributed to the cultural unity of India. (Answer in 150 words) 10 Marks

India has been a salad bowl of the different identities.

People from different ethnic and cultural identities live here.

The sense of Indian nationality is driven through the notion of unity that existed based on the adaptation to ethnic and cultural diversity.

Eg. Celebration of various festivals of different religion together by people of India.

Share of cuisines and dresses and ardent influence of language on each other.

Factors that contribute to cultural Unity

Candidates must not write on this margin

↳ **Sense of nationhood** → Idea of one Citizen and equal citizen

↳ Constitutional protection to each culture

↳ **Respect** of each culture ⇒ History of Tolerance.

↳ Inter-linkage of practices

↳ Lack of forced imposition of practices, Languages

↳ Sense of Security regarding different Identity.

Still there are threats of communalism Separatism and Regionalism that need to be catered through early days building

Candidates must not write on this margin

Q.10 भारतीय समाज में विद्यमान सार्वजनिक और निजी जीवन में द्विभाजन जाति के उन्मूलन के लिए एक प्रमुख बाधा के रूप में कार्य करता है। औचित्यपूर्ण उत्तर लिखिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

The dichotomy in public and private life in Indian society acts as a major barrier to the annihilation of caste. Justify. (Answer in 150 words) 10 Marks

Caste is an archaic and segmentary social institution that ~~bind the~~ differentiate on purity & pollution

The public life in India Law change in social relation due to reform and the change in the employment pattern.

eg. Equal opportunity to all
No discrimination
No restriction to public place
Legal determination

But the private sphere is still under the grip of Caste influence

eg. Marriage is still practiced on the notion of Caste endogamy

Candidates must not write on this margin

Honour killings are common among inter caste couples which threaten the Identity

Reservation also led to a notion of discrimination despite being an affirmative action

Caste should be tackled as a Social change and not just legal provision

Candidates must not write on this margin

Q.11 स्वतंत्रता के बाद भारत को कई युद्ध लड़ने के लिए विवश किया गया था। हमारे द्विपक्षीय संबंधों पर भारत–पाक और भारत–चीन युद्धों के कारणों और प्रभावों पर प्रकाश डालिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

India was forced into numerous wars post Independence. Highlight the causes and impact of the Indo-Pak and Indo-China wars on our bilateral relationships. (Answer in 250 words) 15 Marks

India fought Five major military Conflict since Independence.

- War Post Independence
  - Tribal / Pak Army Attack on Kashmir 1947-48
  - Indo China War 1962
  - Indo Pak War 1965
  - Bangladesh Liberation War 1972
  - Kargil War 1999

- Causes
  - Indo Pak war
    - Partition → Origin of Pakistan based on animosity and religious conflicts.
    - Border / Territorial Ambiguity
      - Radcliffe Plan → No revealed
      - Kashmir's ruler indecisiveness to sign ~~ANNEX~~ accession agreement.

Candidates must not write on this margin

→ Political leadership of Pakistan being expansionist and insecure.

Indo China war

- → **Arrival of Dalai Lama** after the Chinese invasion of Tibet.
- → India's decision to give refuge to Dalai Lama angered Chinese authorities
- → Border dispute based on Johnson Line and McDonald Line.

Impact on bilateral relationship

Indo Pak

- → **Tension in diplomatic sphere**
  - ↳ Pakistan tried to internationalise the Kashmir issue.
- ↳ No economic integration of South Asia
  - ↳ Loss of opportunity to prosperity
- ↳ **Cross Border terrorism from Pakistan**
  - ↳ Militancy in Kashmir funded by the Deep State.

Candidates must not write on this margin

↳ Attacks → Parliament Attack 2001
Kandahar Hijacking.
Bombay Attack (26/11).

Indo China

↳ Long term disengagement between India and China.

↳ Sense of Apprehension eg. China Veto on India's bid for UNSC.

↳ Skirmishes at the border
- ↳ Galwan Crisis 2020
- ↳ Doklam Crisis 2017-18

↳ Banning of Chinese Apps and Vocal Criticism of Chinese aggression by India.

Despite these conflict, India put forwards terms of engagement with the neighbour as we know (We can't change our neighbours so we have to learn to live with them)

Candidates must not write on this margin

Q.12 बंगाल के समेकन की प्रक्रिया, जो प्लासी के युद्ध के बाद शुरू हुई तथा बक्सर के युद्ध में समाप्त हुई। क्या आपको लगता है कि अंग्रेज़ों के लिए प्लासी की तुलना में बक्सर का युद्ध अधिक महत्त्वपूर्ण था?

(250 शब्दों में उत्तर दीजिए) 15 अंक

The process of consolidation of Bengal, which started after the Battle of Plassey culminated in the Battle of Buxar. Do you think the Battle of Buxar was more important for the British than Plassey?

(Answer in 250 words) 15 Marks

Battle of Plassey was a watershed moment in Bengal and Indian history. It provided the avenue for entry to British in Indian political Landscape.

Importance of Battle of Plassey

↳ capture of a resource rich Bengal by British

↓

Revenue source

↓

For territorial Conquest and consolidation



↳ Port in eastern India and Fort William at Kolkata becoming the power centre of East India.

↳ British got bargaining power owing to its strong military and able leadership of Robert Clive.

Candidates must not write on this margin

The Consolidation of power which began at Plassey reached its Climax during the Battle of Buxar.

Significance of Battle of Buxar

↳ British forces defeated the Combined Army of Mir Kasim, Shujauddaulla of Awadh and Mughal Emperor Shah Alam.

↳ Mughal Emperor granted the Nizamat to British East India Company.

↳ Dual System of government came into existence

↳ Diwani and Nizamat Rights.

↳ Established empire of British in India with legitimacy and power.

Though Battle of Buxar cemented the place of British but it still was a regional power and the Buxar was

Candidates must not write on this margin

just a part of major journey.

Battle of Buxar though significant in history but in ~~not~~ my opinion, can't be termed as more important than Plassey.

Battle of Plassey gave the British a pathway to conquer the Indian regional states through diplomacy and disciplined army which was its hallmark in future conquest.

Battle of plassey can be called the beginning of British quest of India in which Battle of Buxar put the nail in coffin to the hopes of Indian regional rulers.

Candidates must not write on this margin

Q.13 संस्कृत साहित्य सामान्य रूप से और विशेषतः गुप्त काल में प्राचीन भारत के साहित्यिक इतिहास के लिए एक उच्च मानक स्थापित करता है। विवेचना कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Sanskrit literature in general and particularly in the Guptan age set a high watermark for the literary history of ancient India. Discuss. (Answer in 250 words) 15 Marks

Ancient India saw various literary text to be written in the field of philosophy, theology etc.

Sanskrit literature was the epitome of rich literary tradition.

- Sanskrit literature
  - Vedic
    - Vedas : 4 in numbers → Basis of Hindu Philosophy
    - Upanishads
    - Puranas → Stories aided to Vedas.
  - Dharmashastras and Books like Ashtadhyayi by Panini.
  - Prose → Patanjali → Mahabhasya
    - Natyashastra by Bharat Muni
    - Arthashastra by Kautilya

Candidates must not write on this margin

→ Amoghvarsha → Kaviraj marg.

→ Mattavilasa

Gupta Age ~~then~~ saw the golden period of literary development in Sanskrit

↳ Kalidasa → wrote poetry, prose, Drama

→ Abhigyanshakuntalam
→ Malvikagnimitram
→ Meghdutam (poetry)
→ Vikramorvashi

↳ Writer like Vishakhadutta who wrote Mudrarakshasa.

↳ Sushruta → wrote sanskritic text on Surgery.

↳ Aryabhatta and Bhaskar wrote Aryabhattiyam,

Gupta period saw the spread and refinement of Sanskrit literature which

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impact post Gupta writings of Banabhatta in Kadambari and Harsha's Ratnavali and other Medieval texts.

Sanskrit literature develop not just in isolation but influenced text from vernacular regions in Kannada, Tamil, Malayalam to enrich its core and diversify the literature

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Q.14 महासागरीय नितल का विन्यास उन भूगर्भीय प्रक्रियाओं के बारे में आवश्यक जानकारी प्रदान करता है जिन्होंने पृथ्वी की सतह को आकार दिया है। महासागरीय नितल की प्रमुख विशेषताओं और समुद्र विज्ञान के अध्ययन में उनके महत्त्व की चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The configuration of the ocean floor provides essential information about the geological processes that have shaped the Earth's surface. Discuss the major features of the ocean floor and their significance in the study of oceanography. (Answer in 250 words) 15 Marks

Ocean mapping after world war I gave insights to the rich diversity in Oceanic Configuration

Essential Information about geological process

→ ~~Continental Shelf~~ Sea floor Spreading

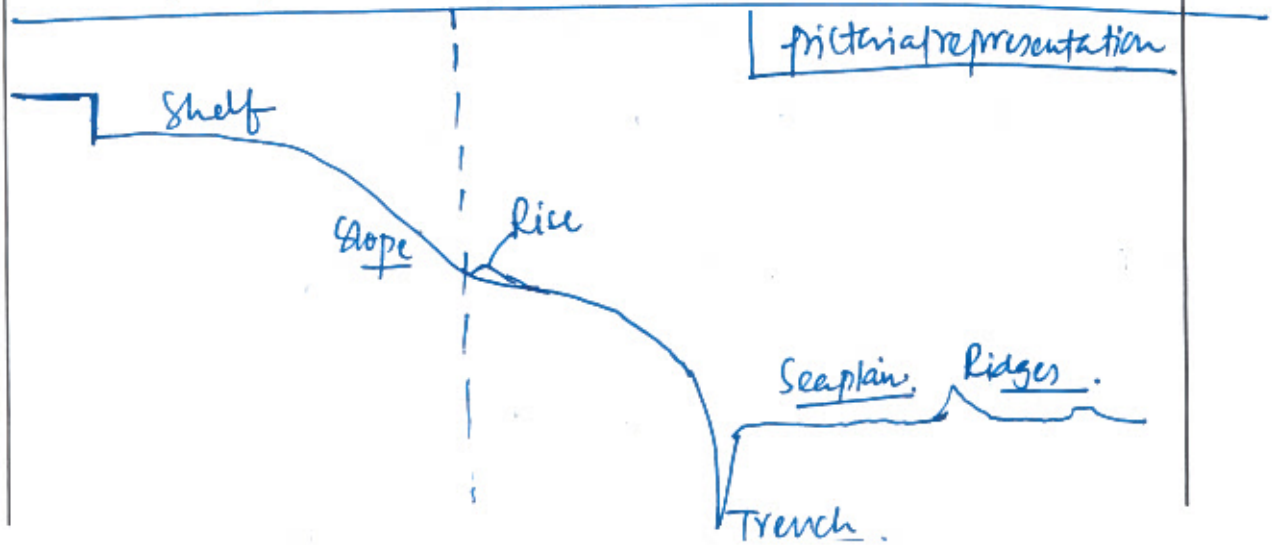
↳ Mid Oceanic ridges → Vent out Magma to allow sea floor spreading

↳ Subduction Zone

↳ where plates dives inside each other.

Major feature of Ocean floor

pictorial representation



Candidates must not write on this margin

→ **Continental Shelf** ⇒ Large tract of flat land beneath sea surface.
↳ Link between ~~earth~~ land and ocean surface.

→ **Continental Slope** → Sudden gradient in the continental plate.

→ **Continental Rise**

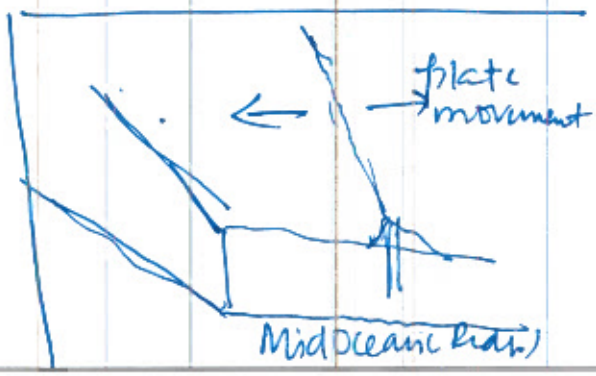
→ **Submarine canyon** → Gully erosion of fresh water stream into the ocean

→ **Deep trench**
↳ Subduction of plates leads to trench formation. eg. Mariana Trench
↳ Deepest parts on earth.

→ **Sea Abyssal Plain**
↳ Flat surface with loose sediments.

→ **Mid Ocean Ridges**
↳ Divergent boundary
↳ Vent to allow Magma to the surface.

→ Chain of mountain below water.



Candidates must not write on this margin

Significance in Oceanic study

→ Sea floor spreading at divergent boundary taught about the Magnetic orientation of Earth Interior.

→ Seismic activities around Trenches and Ridges influence the Ocean currents.

→ Direct source of Earth's Interior

→ Minerals found in the Continental Shelves, Plains

↳ Rare earth metals → Key to fourth Industrial revolution

→ Climate Change Studies

→ Understand the Anamoly in geophysical phenomenon.

Ocean mapping by UNCLOS in a rule based manner set new avenues of exploration.

Candidates must not write on this margin

Q.15 दुर्लभ पृथ्वी तत्त्वों (दुर्लभ मृदा धातुएँ) की बढ़ती माँग के साथ, उनका वितरण वैश्विक अर्थव्यवस्था का एक महत्त्वपूर्ण पहलू बन गया है। वैश्विक स्तर पर दुर्लभ पृथ्वी तत्त्वों के वितरण, उनके उपयोग और उनके निष्कर्षण के पर्यावरणीय प्रभावों पर चर्चा कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

With the growing demand for rare earth elements, their distribution has become a critical aspect of the global economy. Discuss the distribution of rare earth elements across the world, their uses, and the environmental impact of their extraction.

(Answer in 250 words) 15 Marks

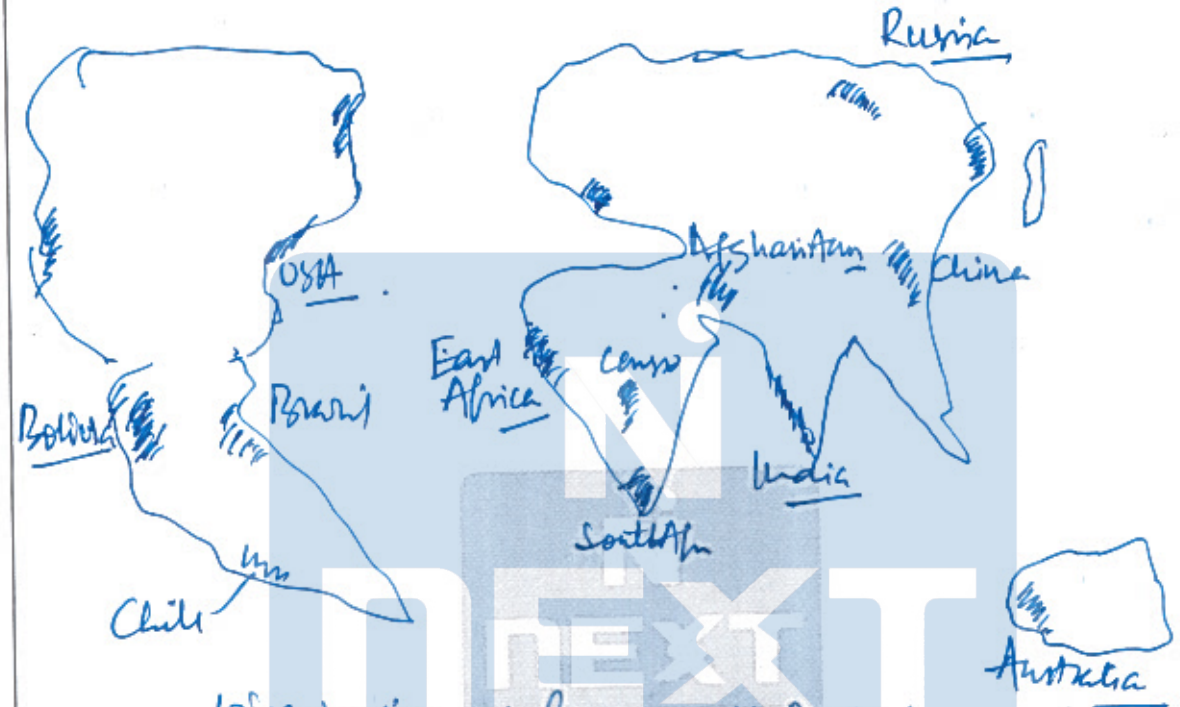
Rare earth metal/elements are set of 14 elements which are found scarcely in combined form that their extraction is not economically viable

eg. Yttrium.

- Growing Demand
  - → Critical for Fourth Industrial Revolution
    - → Key element in high speed Superfast machine/computer eg Quantum
    - → Chip Manufacturing and Fabrication eg. TSMC, Micron
  - → Climate change technology ⇒ Clean fuel
    - → Used in Critical Solar, Energy Storage devices and system eg. Advanced Battery, Hydrogen fuel cell etc.

Candidates must not write on this margin

Distribution of Rare earth elements



Distribution of Rare earth Metal

→ Sea Shore → Deposit of Monazite Sand ⇒ Source of Metal

Uses

- Chip Manufacturing
  - ↳ Used in Fabrication
- ↳ Battery Manufacturing
  - ↳ Storage devices for fuel cell - Solar energy.
  - → EV usages,

Candidates must not write on this margin

↳ Quantum Computer and Supercomputing

↳ Latest technology like Smart device (IOT)

↳ Space technology

↳ Light and Sustainable

↳ Shuttle energy source eg. Spacecrafts

↳ Defence equipement

↳ Advanced Weapon System eg. Missile

Important environment

↳ High waste → Low concentration in ores

↳ Leaching of Heavy Metal to Soil

↳ Pollution of water (Eutrophication)

↳ Deforestation → For mining & Quarrying

↳ Marine ecosystem

↳ Corals and fish biodiversity affected.

↳ Poisonous gaseous effluents

Rare earth metal - are the future but we need International cooperation for its sustainability

Candidates must not write on this margin

Q.16 पहाड़ी राज्यों में पर्यटन, इस क्षेत्र की पारिस्थितिक वहन क्षमता से अधिक हो जाने का खतरा है। इस प्रवृत्ति के लिए योगदान करने वाले कारकों का विश्लेषण कीजिए और इस घटना के संभावित पर्यावरणीय प्रभावों का मूल्यांकन कीजिए। इन राज्यों में धारणीय पर्यटन को सुनिश्चित करने के लिए क्या उपाय किए जा सकते हैं?

(250 शब्दों में उत्तर दीजिए) 15 अंक

Tourism in the hilly states is threatening to exceed the ecological carrying capacity of the region. Analyze the factors contributing to this trend and evaluate the potential Environmental impacts of this phenomenon. What measures can be taken to ensure sustainable tourism in these states?

(Answer in 250 words) 15 Marks

Tourism in the hilly states are booming owing to the marketing and rise of disposal income & govt. efforts.

Being source of income, it has threatened the ecological capacity as seen in places like Joshimath.



Threats

↳ ~~Uncontrolled~~ Land Subsidence → Mass wasting

↳ Biodiversity loses

↳ Erratic weather phenomena like rainfall.

↳ Pollution .eg. Plastics

Candidates must not write on this margin

Factors

↳ **Uncontrolled Development Practices** like Quarrying, Construction of roads & building.

↳ No Environmental Impact Assessment

↳ Lack of public consultation.

→ Development at steep slopes.

→ Overwhelming influx of tourist eg ~~Delhi~~ Hilly station adjacents to Delhi Mumbai.

Environmental Impact

↳ **Flooding** → Due to Land encroachment.

↳ Led to Property & livelihood loss

↳ Affect Natural flow of streams.

↳ Sudden Disasters like Landslides leading to further loss of biodiversity

↳ **Climate Heating of hill** ⇒ Glacial Retreat ⇒ Sustainability issues.

↳ **Tectonic activities** leading to loss of lives.

Candidates must not write on this margin

Measures needed to be taken

↳ **controlled tourism** ⇒ Limited permit.

↳ **Check construction** → through Robust Social and scientific audit eg. HP.

↳ **Sustainable Practices** promoted at Hills like complete Ban on plastics.

↳ **Check Dams** and **Engineering Structures** based on local geophysical phenomenon

↳ Earthquake resistant structures

↳ National Mission on Himalayan Ecosystem

Best practices: Bor-Billing in Himachal Pradesh

↳ Temporary structure made up of sustainable material for habitation

↳ cleaning of river streams and social involvement through panchayats

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Hill ecosystem need acute care as they are prone to disasters and hub should be sustainable enough for its dwellers.

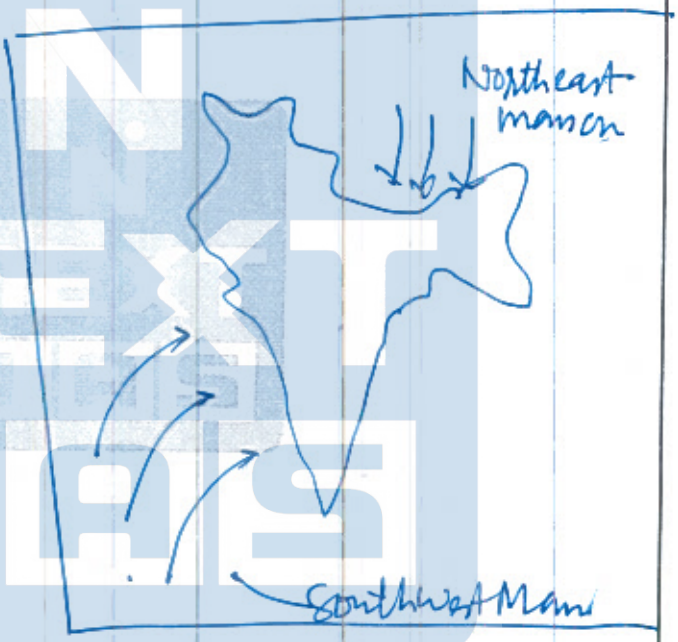
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Q.17 भारतीय मानसून विभिन्न जलवायविक कारकों से प्रभावित एक जटिल परिघटना है। भारत में मानसूनी वर्षा की तीव्रता और वितरण के निर्धारण में महासागरीय और वायुमंडलीय कारकों की भूमिका का आलोचनात्मक परीक्षण कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The Indian monsoon is a complex phenomenon influenced by various climatic factors. Critically examine the role of oceanic and atmospheric factors in determining the intensity and distribution of monsoon rainfall in India. (Answer in 250 words) 15 Marks

Indian Monsoon is the reversal of the wind owing to the northward movement of the ITCZ over Tibet.

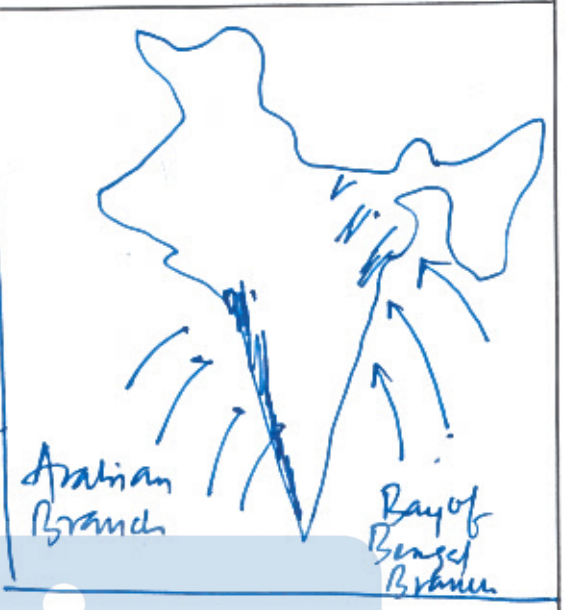
Complex Phenomenon
↳ Due to Climatic factors like
→ Insolation
→ Wind
→ Air Mass
→ Sea surface temperature
→ Rotation.



Role of Oceanic and atmospheric factors

Distribution
↳ Oceanic
→ Arabian Sea and Bay of Bengal are source of moisture for the Monsoon wind.

Candidates must not write on this margin



→ It pours the area in western coast due to western Ghats.

→ Bay of Bengal branch provide rain to eastern & North-eastern part of country

→ North east monsoon in Tamil Nadu.

Atmospheric

→ Monsoon winds bifurcate after hitting Kerala.

→ Its Arabian sea branch pour rainfall in west coast and Gujarat.

→ Bay of Bengal branch in eastern India

→ **Easterly Jet stream** plays key role in advent of Monsoon creating lower pressure in hinterland.

Intensity

Oceanic

→ Arabian sea being warmer than Bay of Bengal (Sea surface temperature) led to more moisture laden and high intensity rainfall. eg. Mumbai floods

Candidates must not write on this margin

Atmospheric

↳ Advent of Westerlies led to decrease in Intensity and departure of the monsoon wind from Indian Subcontinent

↳ **Cyclonic circulation** in eastern India often cause intensification of the rainfall.

Indian Monsoon also got affected due to La Nina and El Nino Circulation which affect the rainfall intensity

Indian Monsoon is the key stone of Indian Agricultural economy and much more than a weather phenomena

Candidates must not write on this margin

Q.18 हमारे समाज में परंपराएँ परिवर्तन को क्यों बाधित करती हैं? प्राचीन रीति-रिवाज़ों पर आधारित मूल्य-मान्यताओं के विरुद्ध सामाजिक विधान किस सीमा तक सहायक हो सकते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

Why do traditions in our society impede change? To what extent can social legislation be instrumental against old customary practices? (Answer in 250 words) 15 Marks

Social Change is the process of transition of the social norms acting to the changing social structure and relation

eg. Caste system, women role in family

Tradition impede change

↳ **Protection**

↳ Inertia of change leading to old redundant practices

eg. Child marriage, Dowry system.

↳ **Value system**

↳ Old value system in conflict with Modern Identity.

eg. Women in Household with no economic social rights

Candidates must not write on this margin

→ Patriarchy → Strong influence on the psyche ⇒ Power relation
eg. Male being breadwinner

↳ Caste Supremacy ⇒ Untouchability
eg. Denial to Dalit Men to ride Horse during his wedding.
Dalit Children not allowed to eat together mid day meals

Social legislation are step taken by the State to put a framework of Justice and equality as enshrined in our Constitution.

Impact against old practices

↳ Ban on Child marriage
↳ Reduction in Child marriage and increase in average marriage age of girl (24 years)
↳ Still, 20% of child marriage in world happen in India

Candidates must not write on this margin

↳ Dowry Legislation
  ↳ Penal Offence to take or give dowry
↳ Still, it is common as gifts and even among government functionaries.

↳ Untouchability → Article 17.
  ↳ Prevention against Atrocity Act
  ↳ Check atrocities against tribals and depressed.

eg. Recent incidents in MP, public urination Honour Killing common in Village.

↳ Inheritance to Girl Child
  ↳ Equal distribution as per law.
↳ Still Girls are blackmailed and emotionally abused to write their property to her brother.

Hence Social legislation need to be implemented through strong movement for conscience building

Candidates must not write on this margin

Q.19 मलिन बस्तियाँ ऐसी 'समस्याएँ' नहीं हैं जिनका 'समाधान' किया जाना है – बल्कि वास्तव में, ये बुनियादी ढाँचे के प्रावधान और सामाजिक–आर्थिक मुद्दों को शामिल करने वाली असंतुलित और स्वार्थपरक नगरीय नीतियों का एक परिणाम हैं। विश्लेषण कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Slums are not 'problems' that have to be 'solved' – but are indeed a result of lopsided and vested urban policies covering infrastructure provision and socio-economic issues. Analyse.
(Answer in 250 words) 15 Marks

Slums in Dharavi and Delhi are inhabitable as per various civil organisation.

Slums are the unregulated habitation colonies in Urban areas formed due to illegal encroachments and unauthorised Constructions.

Not a problem to be solved

↳ Slums have poor population who is dependent on Urban economy for their livelihood-

↳ Slum dweller can't own other avenues of habitation

↳ Key to Urban development.

↳ Labour supply.

Result of lopsided and vested Urban ec policies

Candidates must not write on this margin

Infrastructure provision

↳ Lack of affordable housing

↳ Immigrants are forced to acquire an unregulated area like floodplain. eg. JJ colonies.

↳ No Civic Amenities

↳ Lack of water supply, Electricity

↳ Lack of Regularisation

↳ No application in Master Plan.

Socio economic issue

↳ low Disposable Income

↳ Due to petty jobs

↳ Lack of social mobility

↳ Intergenerational poverty.

↳ Poor education ⇒ No Aspiration → Crime Rate in Cities.

↳ Lack of family Planning

↳ Health Hazard

Candidates must not write on this margin

→ No Social Security

↳ No Union and Social cover like insurance.

Measures needed

↳ Initiatives like PM Awas Yojana (Urban) and Affordable Rented Complex for Habitation to Migrant Labours

↳ Regularisation and Redevelopment of Slum areas with adequate amenities
eg. Dharavi Slum Development Project

↳ Better educational opportunities through government & private institution
eg. EWS Reservation

↳ Urban MGNREGA like in Rajasthan

↳ Social Security

Slum are the places that need to be reimagined and reinvisioned under AMRUT & Smart Cities to make a 'Samridhha Bharat'

Candidates must not write on this margin

Q.20 साम्प्रदायिकता आर्थिक अभाव से बल प्राप्त करती है, और सामाजिक बहिष्कार के वातावरण में फलती–फूलती है, जिससे असंतोष और विभाजन के लिए उर्वर भूमि तैयार होती है। टिप्पणी कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

Communalism gains strength from economic deprivation, and thrives in environments of social exclusion, creating fertile ground for discontent and division. Comment.

(Answer in 250 words) 15 Marks

Communalism is a feeling of Antagonism based on religion/sectarian ~~feel~~ ideology.

It often originates from non-religious phenomenon and led to clashes and animosity among groups.

Communalism gaining strength from economic deprivation

↳ Resource Crunch → Economic competition among individual turning into animosity

↳ Monopolisation

eg. Meat Market due to Halal Certification

↳ Poverty ⇒ Leading to frustration and General discontent

Candidates must not write on this margin

→ Lack of social mobility ⇒ Poor education

→ Economic engagements creates trust and build inter personal relationships

Thrives in Social exclusion

↳ Ghettoisation

↳ Segmented nature of habitation on religion line

↳ Homogenisation of localities and villages

↳ prejudices

↳ prevent social intermixing

↳ Wedge between communities

Fertile Ground for discontent

↳ Clashes eg. Nuh violence
Delhi Riots 2020
Muzzafarpur riots 2013

↳ Violence against women
eg. Kuki-Meiti violence.

Candidates must not write on this margin

→ **Polarisation**
↳ fueled with social division
among division

→ **Migration** of people leaving their homes . eg. Kashmiri Migrants
Manipur, Mizoram Meiti

Communalism is a threat to a 'Sadbhav' based India and an impediment to make India the true picture of modern civilization

Hence to uphold the principle of constitution, it should be tackled not just at legal level but with social efforts

Candidates must not write on this margin

Space for Rough Work

NEXT IAS