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(To be filled by candidate)

**Code : TC071**

**Name of Candidate :** Sahil Meena

**Roll No. :** PTTP 220809

**Registration Number :** ..... **Date of Examination :** 29/08/23

**Exam Centre :** Old Rajinder Nagar ☑ Bhopal ☐ Online ☐

# MTS IGP 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.**

**Candidates must read the instructions on this page and the following pages carefully before attempting the paper.**

**Candidates should attempt the questions strictly in accordance with the instructions specified in the question paper and in the space prescribed under each question in the booklet. Any answer written outside the space allotted may not be given credit.**

**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. :** .....

*(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

## IMPORTANT INSTRUCTIONS

**CANDIDATES SHOULD READ THE UNDERMENTIONED INSTRUCTIONS CAREFULLY. VIOLATION OF ANY OF THE INSTRUCTIONS MAY LEAD TO PENALTY.**

### DONT'S

1. Do not write your name or registration no. anywhere inside this Question-cum-Answer Booklet.
2. Do not write anything other than the actual answers to the questions anywhere inside your QCA Booklet.
3. Do not tear off any leaves from your QCA Booklet, if you find any page missing do not fail to notify the supervisor/invigilator.
4. Do not leave behind your QCA Booklet on your table unattended, it should be handed over to the invigilator after conclusion of the exam.

### DO'S

1. Read the Instructions on the cover page and strictly follow them.
2. Write your registration number and other particulars, in the space provided on the cover of QCA Booklet.
3. Write legibly and neatly. Do not write in bad/illegible handwritings.
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 has a rich diversity dealing with complex questions of life in a rational manner.

**Philosophies of North India :-**

(1) There are six main Vedic philosophies such as Nyaya, Sankhya, Yoga, Uttar Mimansa, Vaisheshika, Vedanta.

(2) Buddhism :- dealing with cycle of birth and death and enlightenment (Nirvana)

(3) Jainism :- Person can get kaivalya by following strict moral order.

(4) Achinta Bheda Abheda :- by Chaitnaya Mahaprabhu which states that Man is indifferent and different to Brahma.

(5) Shuddhadvaita :- Man and Bhrama are same

Candidates must not write on this margin

## Philosophies of South India :-

① Tamil Shaiva Siddhanta :- which taught living life free of material lism

② Bhakti movement

- Nayanars (Shiva)
- Alvars (Vaishnavism)

Bhakti movement is based on love, devotion and submission to God rather than following rituals.

③ Advaita Siddhanta :- It states that Brahman is ultimate

④ Sangam philosophy :- established over generations and deal with various topics such as War, love etc.

Hence, we can say that each philosophy presents some intellectual principles for giving Enlightenment to human soul.

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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

Indian society has seen tremendous change in social structure from ancient times to medieval age and particularly during colonial times.

Indian society's impulse for social change and reform was a response to its opposition to colonial rule as:-

(1) Spirit of unity and brotherhood against british policy of divide & rule, as seen during Non-cooperation movement.

(2) Promotion of education to aware masses and to get higher posts in administration

(3) self-reliance or believe in self capabilities

(4) Rise of traditional customs & culture against colonial imposition.

Candidates must not write on this margin

(5) Participation of women at par with men against colonial wrath

(6) Sacrificing nature for collective interest

However, it is Britishers also who themselves brought on helped in bringing social reforms:-

(1) Women Empowerment → Banning Sati (Sati abolition Act, 1829)
→ Widow Remarriage Act, 1856
→ Sharda Act

(2) Promotion of scientific thought & education

(3) Gave a common language in the form of English so that people can connect with each other

(4) & ~~(5)~~ Separate electorates for Minorities, Untouchables for their upliftment.

Hence, we can say that change is the law of nature however, Britishers have fastened the speed of social change.

Candidates must not write on this margin

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 happened in february & October of 1917 against the autocratic government of Czar.

**Factors that led to Russian Revolution:**

1. **Social factors**
   - Landless peasants & their hardship due to inequality
   - Low wages, low political rights to workers
   - Proliferation of Marxism & communism
2. **Economic factors**
   - High Inflation & unemployment due to Russian participation in WWI
   - Corruption, inefficiency in administration
   - Agricultural productivity decline due to outdated technologies
3. **Political factors**
   - Authoritarian rule under Nicholas II leading to Violation of rights of people

Candidates must not write on this margin

↳ Bolsheviks party organized by Lenin played a key role

↳ Reduction of the credibility of Monarch

**Consequences of this revolution are:**

(1) formation of Union of Soviet Socialist Republics (USSR) in 1922

(2) Government established by Lenin

(3) Empowerment of women by providing them equal rights & opportunities

(4) World was divided between two blocs (USA v USSR) known as Cold War

(5) Authoritarian government formed by Stalin later leading to widespread purges

**Influence on Indian National Movement**

- Inspired Revolutionaries like Bhagat Singh
- formation of Communist Party of India (1920)
- Mass participation of peasants during NCM
- Organization of workers as AITUC (1920)

Hence, Russian revolution was a watershed movement for the promotion of socialism.

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 is a interplay of various factors on the Earth's surface making this planet habitable.

**Factors Responsible for the uneven temperature distribution are :-**

1. **Latitude** : lower latitudes experience higher temperature than higher ones
2. **Altitude** :- Temperature decreases generally **6.4°C with 1 km increase** in height
3. Angle of rays of the sun
4. Prevailing winds or Atmospheric circulations ~~(-)~~ **(+)** increases temperature of a place prevailing in North India
5. Land Sea differential

Candidates must not write on this margin

↳ areas near the oceans experience moderate temperature than those are which at interiors

⑥ Ocean Currents

Areas near warm currents experience higher temperature such as Gulf Stream and vice-versa Labrador current

⑦ Natural phenomena like Vulcanism have cooling effect

Some phenomena can also increase temperature of a particular area but for a shorter time such as

↳ forest fires ⇒ Australia, 2021

↳ Oil plant burning

↳ Marine Heat Waves & Normal Heat Waves

↳ Western disturbance

Hence, we can say that temperature has resulted from role of various factors. However, in recent times there is a problem of Global Warming and we should take steps to prevent it.

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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 a study, 80% of the himalayan glaciers will be melted by 2100.

Implications of the melting of glaciers on ecosystem & human society are:

(1) change in River flow
↳ increase water availability in the short time but eventually decrease in long time

(2) Increase in frequency of Glacial Lake outburst floods (GLOFs)
↳ Chamoli disaster

(3) Drinking water problem for society

(4) Water availability for agriculture will decrease leading to food security crisis.

Candidates must not write on this margin

⑤ Decrease in tourism which will impact livelihoods of hilly people

⑥ Change of altitudes for crops cultivation. Ex Apple cultivation in Himachal has shifted to higher altitudes.

⑦ Extinction of many species of flora & fauna due to habitat destruction

Ex Himalayan quail has become extinct

Measures that can be taken are:-

- Planting of more trees to reduce Global Warming
- Planned urbanisation in Hilly areas
- Scientific research on specific issues
- International Collaboration between Countries & Scientists
- Sharing of best practices between nations

Government of India has taken many steps such as SECURE Himalayas, National Mission for sustaining Himalayan Ecosystem (NMSHE) to address this issue.

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 was started in 1970s to increase the milk production in the country for fulfilling the nutrition need of large population.

**Factors for success in Western part :-**

(1) Presence of Cooperatives :- Western part already have cooperative which led to success of white revolution. Ex Amul

(2) Early establishment during British times of milk factories

(3) Availability of green feed and fodder for cattles due to cultivation of wheat

(4) Presence of foreign breeds such as Jersey which have higher productivity.

Candidates must not write on this margin

(5) Establishment of headquarter of National Dairy Development Board also give a push to white revolution.

(6) Presence of food processing industries for convert it to Milk powder.

(7) Availability of tier-1 and tier-2 cities in the form of markets such as Delhi-NCR, Jaipur, Ahmedabad.

(8) Better credit facilities available for investment

(9) Success of Green Revolution in western part also contributed to it.

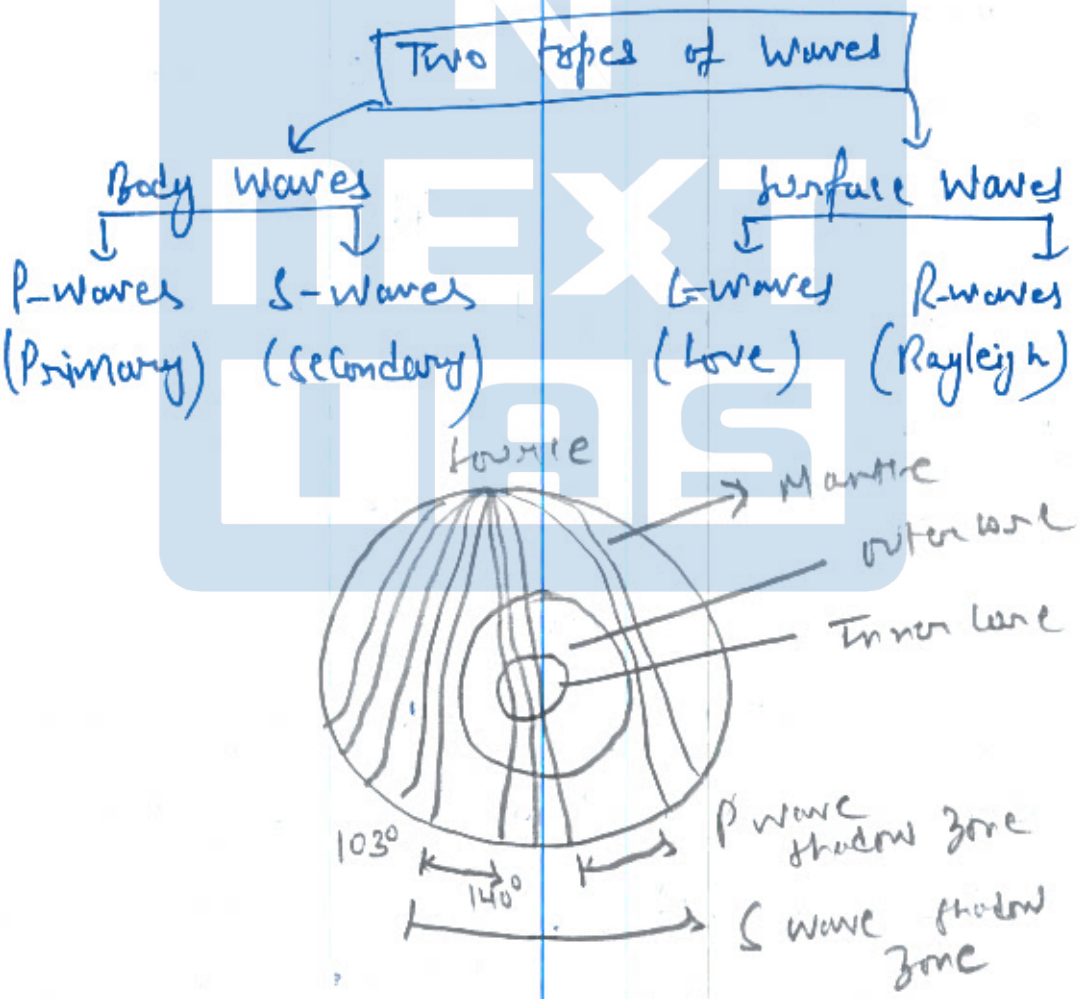
States like Bihar, Odisha are investing in R&D to catch up with the western states for white revolution. However, white revolution is better distributed its benefits than green revolution.

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

Waves are forms of energy released during an earthquake and contributes to our understanding due to their properties like different speeds in different states of Earth interior.




① P-wave can travel through solid, Liquid and gas but

Candidates must not write on this margin

S - waves can travel through solids only. It shows that outer core is liquid

(2) Moho's discontinuity between Crust to Mantle and Gutenberg discontinuity between Mantle & outer core also shows Interior due to difference in velocities

(3) Velocity difference shows the presence of Asthenosphere

(4) Thickness of Crust also be understood by it
- Oceanic Crust (thicker)
- Continental Crust (thinner)

Concerns
- Not covered all the areas
- does not give all round analysis
- Interpretation challenges

However, Seismic Waves have played a key role in Earthquake Zoning, Vulcanism forecasting etc.

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

India is currently putting through a phase of demographic dividend which will continue to remain till 2040s.

**Population growth as a asset :-**

1. fulfill demand of labours (skilled, semi-skilled, Highly skilled or unskilled) for various industries.
2. low expenditure on care of population of elderly is less.
3. Can provide precious foreign exchange reserve in the form of remittances by working abroad.
4. Provide huge market for other countries result into better investment, better people to people connect and better relations.
5. Growth of service sector in India be it IT, tourism, hospitality etc

Candidates must not write on this margin

**Population growth as a liability :-**

(1) Migration of people due to huge unemployment from states of UP, Bihar to other parts resulting into clashes.

(2) High social sector spending leading to huge fiscal deficit for governments.

(3) Increasing rate of crime and poor law and order situation

(4) Difficult to cater to needs of 140 cr people Ex Health Crisis during COVID-19

(5) Huge poverty, Hunger, poor socio-economic indicators.

Measures taken by government
- PM-Kaushal Vikas Yojana
- MGNREGS
- Make in India
- NEP, 2020
- Ayushman Bharat Scheme
- PM-Jan Dhan Yojana

Rise of Industry-academia collaboration
private sector in providing employment

Population is an dividend but has to invest in capacity building like skills, Education etc.

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 is a combination of multi-ethnic, multi religious, multi-lingual, multi-cultural diversity and it is this diversity which makes India unique.

**Major factors that have contributed to the cultural unity of India are :-**

(1) **Religious unity**

Scriptures like Ramayana & Mahabharata have been taught in various languages & dialects but essence is same.

(2) **Festivals**

Makar Sankranti is celebrated as Pongal in South, Magh Bihu, in NE, Lohri in Punjab contributing to unity.

(3) **Cuisines**

Dal bati takes shape of Litti Chokha in Bihar.

(4) **Tourism** → Internal tourism of

Candidates must not write on this margin

people from one place to another also helps in cultural Unity.

(5) Ideologies
↳ Can be political, social, or other

(6) Ancient civilisational values like Vasudhaiva kutumbkam

(7) Geographical factors also promotes Unity. like Rivers like Ganga, Yamuna, Narmada and Mountains.

(8) Caste Identities also promotes social Cohesion

However there are various threats also that are being obstacles in our diversity

(1) Regionalism
↳ Recent incidents in Tamil Nadu against people of Bihar

(2) Communalism
Recent Muh violence

(3) Ethnic clashes - Manipur violence

Hence, Indians should embrace their cultural diversity and should promote the feeling of tolerance among themselves to become "Ek Bharat Shreshth Bharat"

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 association of people characterised by endogamy, traditional common occupation, social status and common practices and beliefs.

**Dichotomy in public and private life acts as major barrier because:-**

(1) Promoting values of equality & oneness in public and discrimination & inferior in private by many peoples

(2) Summing up in the name of religion for political gain & attrocities against lower castes after elections.

(3) Interdining in public places like restaurants but Separate dining in private functions like Marriages.

(4) Liberal values like Inter-caste marriages promotion but majority

Candidates must not write on this margin

of Indian Marriages are endogamous. within own caste.

(5) Political equality enshrined in constitution but in reality SC/STs are not in decision making position.

(6) Judiciary talks about inclusivity but even not a single judge is from SC/ST at present in Supreme Court.

However, various steps are being taken to reduce casteism :-

(1) Political empowerment
↳ Reservation of seats in Lok Sabha & State legislative assemblies

(2) Social empowerment
↳ Reservation in educational institutions & administration.

(3) Rise in Intercaste Marriages

(4) Social harmony due to promotion of education

(5) Sanskritization, Westernization & Modernisation reducing caste barriers.

Hence, India should be based on the foundation value of Social & Communal harmony to make it as "Ram Rajya"

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 had four wars with Pakistan in 1948, 1965, 1971 & 1998 and with china in 1962 post independence.

**Causes of War :-**

→ India – china

- Nehru's frft approach towards china based on Panchsheel
- China's vested interests
- Tibet issue and ~~refugee~~ shelter to Dalai Lama in 1959
- India's weak preparation for War in terms of military resources
- Poor advisors to PM

→ India – Pakistan

- 1948 → Pakistan infiltration in J&K by ~~terrorists~~ army soldiers in the disguise of tribals.

Candidates must not write on this margin

1965 → Pakistan vested interest to occupy Indian territories seeing weak leadership in India

1971 → Atrocities by West Army of Pakistan in East pakistan led to Bangladesh liberation War

1998 → Pakistan occupying peak points in kargil area even after Ceasefire agreement

And the general cause among these four war is → Political instability in Pakistan
→ Influence of Deep State
→ Decline of democratic Values

## Impact of Wars on our bilateral relationship

① India - Pak

→ Poor people to people connect and low cultural connect
→ Trade relations are at minimal
→ Proxy Wars by Pakistan in the form of state-sponsored terrorism.

Candidates must not write on this margin

→ Trust deficit between the people of both countries seen as enemy.

→ Unstable geopolitical situation

② India-china

→ Idea of "Hindi-chini Bhai Bhai" was discarded

→ Poor people to people connect

→ give rise to other disputes such as border disputes in West himalayas

→ Poor Collaboration for resolving of disputes

→ India moving closer to china

Steps have been taken to improve relations

→ China is India's largest trading partner

→ Institutional frameworks like Corrective agreements

→ Regional platforms like SAARC, SCO, BRICS, RCEP to discuss issues

India has always been a peace loving country and is against war but National security, Sovereignty and territorial Integrity cannot be compromised.

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 fought in 1757 and Battle of Buxar was fought in 1764 that led to the consolidation of British rule in India.

## Analysis of Battle of Plassey

(1) It was led by Robert clive against Siraj-ud-Daula

(2) It was the first full blown battle between Britishers and Bengal rulers.

(3) This led to the acquiring economic rights by the Britishers

(4) It also exposed the divisions within the kingdoms

(5) Britishers started to intervene in Day to Day administration.

Candidates must not write on this margin

(6) started dictating terms of trade for artisans

(7) laid the foundation for further annexation

## Analysis of Battle of Buxar

(1) It was led by Hector Munro against Mir Qasim (Nawab of Bengal) + Shuja ud dawla (Awadh Nawab) + Shah Alam II (Mughal emperor)

(2) It strengthened the British army and their further aspirations

(3) British got Diwani Rights of Bengal, Bihar & Orissa in Treaty of Allahabad with Shah Alam II.

(4) They got administrative rights by Treaty of Bengal

Candidates must not write on this margin

with Nizam-ud-Dawla.

(5) British got both administrative and Diwani rights with no responsibility.

(6) Administration was carried out by Deputy-Subedar which was appointed by British.

Hence, both battles were important in their own way. However, we can say that it was the Battle of Buxar which led the real foundation of British rule in India.

These battles were the watershed movement which led to the British rule for the upcoming 200 years.

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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

Sanskrit is a civilisational language of India and has been the cultural language since ancient times and now recognised as one of the classical languages.

Sanskrit literature as a high watermark

In general:-

(1) Vedas like Rigveda, Yajurveda, Samaveda, Atharveda were in Sanskrit language.

(2) Kavyas like Abhijan Sakuntalam by Kalidas (Shakespeare of the East)

(3) Meghadutam, Raghuvamsa were also written in Sanskrit

(4) Scientific

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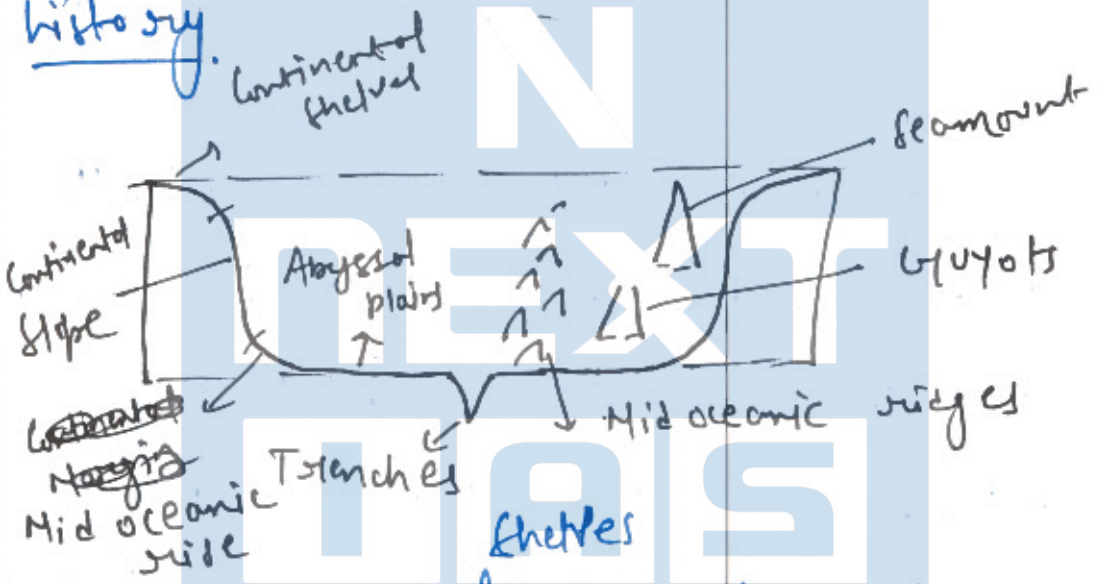
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Q.14 महासागरीय नितल का विन्यास उन भूगर्भीय प्रक्रियाओं के बारे में आवश्यक जानकारी प्रदान करता है जिन्होंने पृथ्वी की सतह को आकार दिया है। महासागरीय नितल की प्रमुख विशेषताओं और समुद्र विज्ञान के अध्ययन में उनके महत्त्व की चर्चा कीजिए। (250 शब्दों में 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 floor configuration is necessary to understand as it provides crucial details about earth's geological history.




(1) Continental shelves is the area gently sloping towards the sea. Sediments, Minerals are deposited on it by the rivers

(2) Continental slope :- Connecting Steeply sloping in the sea

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also have Canyons.

③ Mid oceanic ridge :- Connects Continents with the sea floor.

④ Abyssal plains :- These are large deep sea plains. They provide details about mineral configuration.

⑤ Mid Oceanic ridges :- Large mountain ranges that are present in oceans. They are formed by divergence of plates. Hence they provide details about plate tectonics and Vulcanism.

⑥ Trenches :- These are deepest layers of ocean formed by Convergence of plate boundaries. It also provide details about plate tectonics and further Oceanic Configuration.

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(7) Seamounts :- These are pointed Volcanic mountains submerged under oceanic floor. Provide details about Vulcanism and mineral analysis

(8) Guyots :- flat topped seamounts due to gradual subsidence. Provide details about geological changes

(9) Hydrothermal Vents :- Hot geyser occuring from sea floor. Provide source of energy and also process such as chemosynthesis

(10) Atolls :- Submerged island Corals of Coral reefs formed around an trench.

Hence, Various oceanic floor features are important for Earth's evolution studies and to estimate future potentials and disasters.

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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 elements are group of 15 elements known as Lanthanides plus Yttrium & Scandium.




Distribution

→ China has highest reserves around 44 Million tonnes

→ Brazil & Vietnam are at second

→ India has 5th largest reserve however extraction is not much due to presence of lighter metals and of low quality.

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## Uses of Rare Earth Metals

(1) There are various uses due to their unique electromagnetic, luminiscent properties. Such as :-

→ Neodymium :- used for making heavy magnets for renewable energy devices

→ Lanthanum :- used in telescope lenses due to optical properties

→ Cerium :- used for Catalytic converters

→ Praseodymium :- large parts in aircrafts

→ Gadolinium :- X-Ray & MRI Machines

→ Yttrium, Europium :- Television & computers screens

## Environmental impact of their extraction

(1) Release of greenhouse gases such as $CO_2$, $NO_x$, $SO_2$ giving rise to global warming.

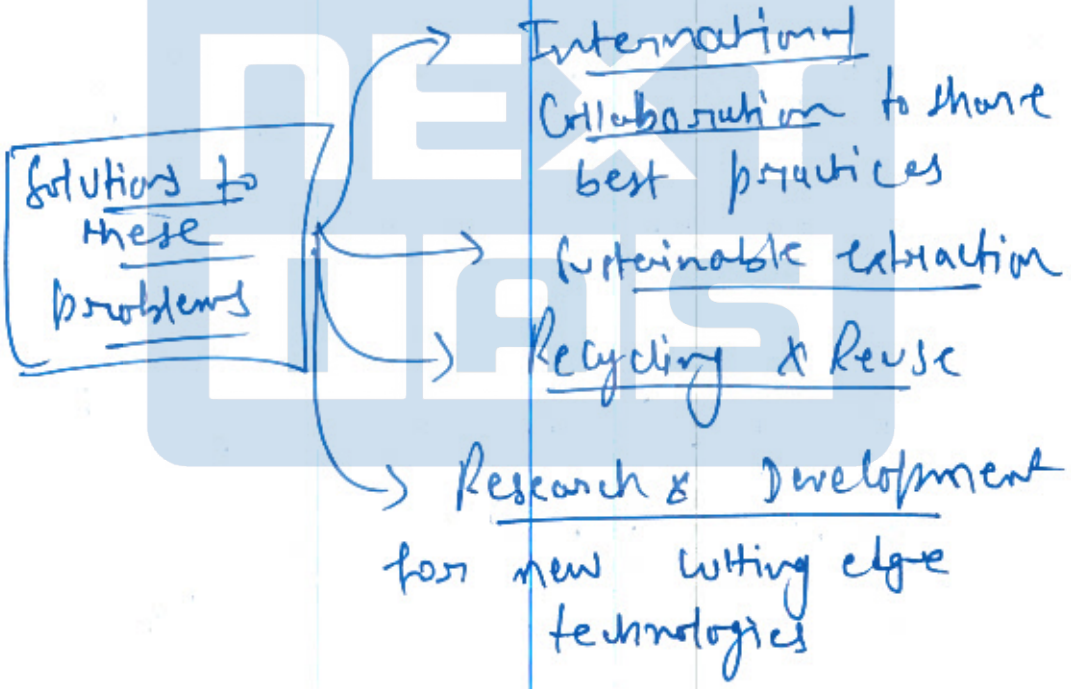
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(2) Ocean acidification due to increase in pH

(3) Soil and groundwater contamination due to seepage of heavy metals

(4) Excessive use of water for extraction

(5) Eutrophication due to released minerals in water bodies.




Rare Earth Metals are needed ~~much~~ more in the coming future due to Proliferation of Renewable energy hence steps should be taken for their sustainable extraction.

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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 forms an important aspect for livelihood of hilly peoples and contribute immensely to the GDP of hilly states.

**Factors contributing to this trend:**

(1) Beautiful scenic natural places attract peoples especially youth.
Like Valley of flowers, Cherrapunji, Mawsynram

(2) **Adventure tourism** in hilly areas
Ex Rating, cliff jumping in Rishikesh & Kullu Manali

(3) **Religious sites** are present in these areas Ex Char dham Yatra

(4) Cold & pleasant weather, snowfall attract people from hinterland.

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(5) Better connectivity & infrastructure like better roads, airport connectivity also lead to increasing tourism.

(6) foreign tourists also come to these places for spirituality & Meditation in Rishikesh.

**Potential Impacts of this phenomenon:-**

(1) Destruction of biodiversity and natural ecosystem

(2) Unplanned Urbanisation like hotels, shops for accomodating tourists give rise to disasters like Joshimath.

(3) Deforestation & huge clearing of forests for infrastructure building

(4) Threat to Marine diversity

(5) Anthropogenic reasons for forest fires

(6) Huge Waste puts pressure in form of pollution

(7) Other than environmental it also

Candidates must not write on this margin

has impact on human lives, which have left during many instances.

**Measures that can be taken for sustainable tourism are:-**

(1) Planned Urbanisation after discussing with various stakeholders like, IITs, scientists and administrators.

(2) Disaster resilient Infrastructure

(3) Not allowing more tourists which exceed the carrying capacity

(4) Proper drainage system and sewage treatment plants

(5) Strict enforcement of laws

(6) Adherence to Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA).

(7) Awareness of local people & tourists.

Tourism has to be promoted as it is essential in many ways but has to make a balance with the local environment.

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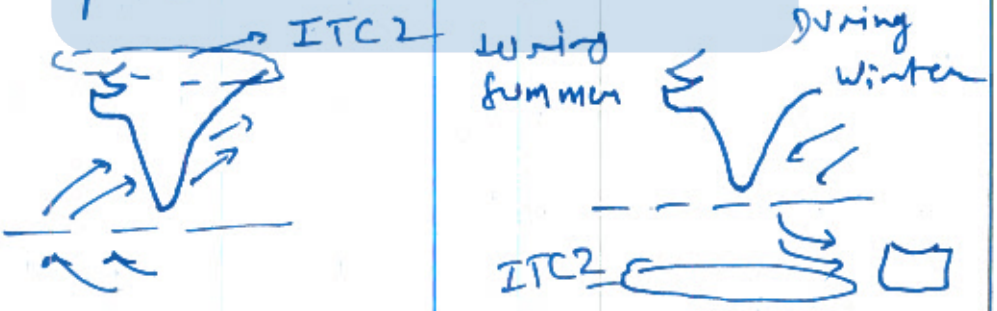
Q.17 भारतीय मानसून विभिन्न जलवायविक कारकों से प्रभावित एक जटिल परिघटना है। भारत में मानसूनी वर्षा की तीव्रता और वितरण के निर्धारण में महासागरीय और वायुमंडलीय कारकों की भूमिका का आलोचनात्मक परीक्षण कीजिए।
(250 शब्दों में उत्तर दीजिए) 15 अंक

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

Monsoon in its strictest sense means "seasonal reversal of winds" however, it is the complex interplay of various factors

Atmospheric factors responsible for intensity and distribution are:-

① Movement of Inter-Tropical Convergence Zone affects the development of low pressure cell and attract winds.




② Differential heating of land & water giving rise to land & sea breeze.

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③ Westerly jet streams and Sub-tropical easterly jet stream also play important role.

④ Atmospheric stability gives less intense rainfall whereas unstable atmosphere gives more rainfall.

⑤ Pollution which leads to more aerosols in the atmosphere results into more rainfall.

Oceanic factors responsible for intensity and distribution are:

① Madden Julian Oscillation which is eastward movement of clouds bring more rainfall during enhanced phase.

② Indian Ocean dipole (IOD) i.e, temperature variation between Western & Eastern Indian Ocean.

Positive IOD → More rainfall

Negative IOD → Less rainfall

Candidates must not write on this margin

(3) Mascarene high pressure leads to more rainfall




More snowfall on Tibetan plateau ⇓ less rainfall in India

(4) El Nino Southern Oscillation :- temperature variation between Western & Eastern pacific Ocean

El Nino ⟶ Very less rainfall in India

La Nina ⟶ Enhanced rainfall in India

(5) Warm Ocean currents such as somali stream adds to rainfall.

Other factors:

- Topography like Mountains of Western ghats gives rise to Orographic rainfall
- Distance from sea gives less rainfall to Rajasthan

Due to global warming, Monsoon has showing erratic patterns. Hence, we should take steps to prevent climate change as 52% of ag farmers in India are dependent on sustainable monsoon for Irrigation.

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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

Traditions are customs or beliefs that are passed on to from one generation to another.

Traditions in our society impede change as:-

(1) Religious Sanctions
Indians are highly religious and tend to follow tradition in the name of religion. Ex → Not allowing women in Sabrimala

(2) Socialization
An individual have been socialized initially by family and values are deeply ingrained in the mind.

(3) Social Control
By caste associations or village panchayats which promote conservative traditions

(4) Political mobility based on traditional values

Candidates must not write on this margin

(5) Traditions are normally based on patriarchal values so that leads to gender inequality and impede changes.

(6) Relationship like marriages are based on tradition results into lack of synthesis of culture.

Legislative enactments against old customary practices:-

(1) Article 17: Prohibits untouchability also Protection of Civil Rights Act, 1955 leads to reduction. However, still 30-35% of Hindus practice untouchability.

(2) Article 21 give Right to life & personal liberty resulting into increase of interfaith & intercaste marriages. However, majority share is of endogamous Marriages

(3) PCPNDT, Act Criminalised sex-selective abortion and determination

Candidates must not write on this margin

of Sex before birth. Still, illegal abortion cases are rampant

④ Prohibition of child marriage act, 2006 to reduce instances of child marriages. It has successful in coming down cases. But about [1/3 of all child marriages of world - still happen in India.

⑤ Article 21A (~~Right to free~~) and Right to Education Act provide free and Compulsory education to children between age of 6-14 years. Still SC/STs students faced discrimination in schools.

⑥ Decriminalisation of Sec. 377 of IPC in Navtej Singh Johar Case protecting rights of LGBTQ+ Community.

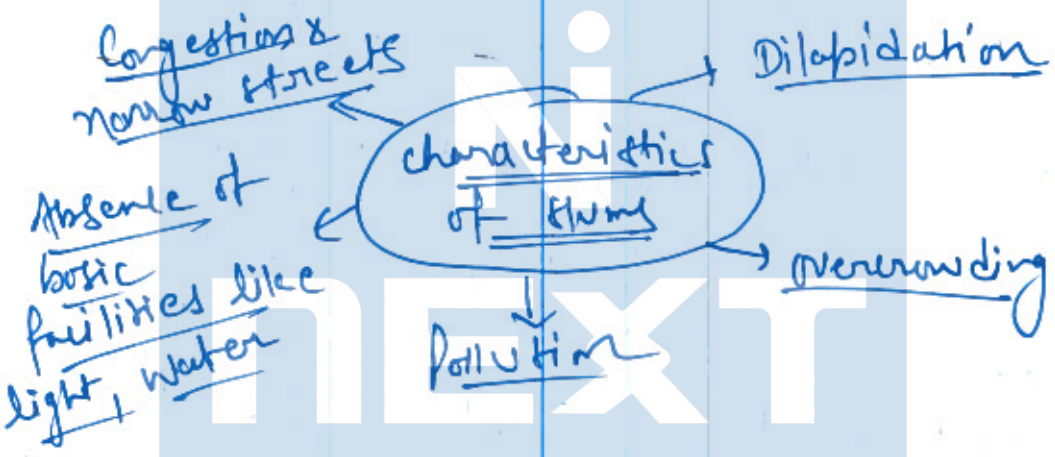
Legislations in their alone will not be able to reform the society. Awareness and gradual sensitization of the society has to go hand in hand.

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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

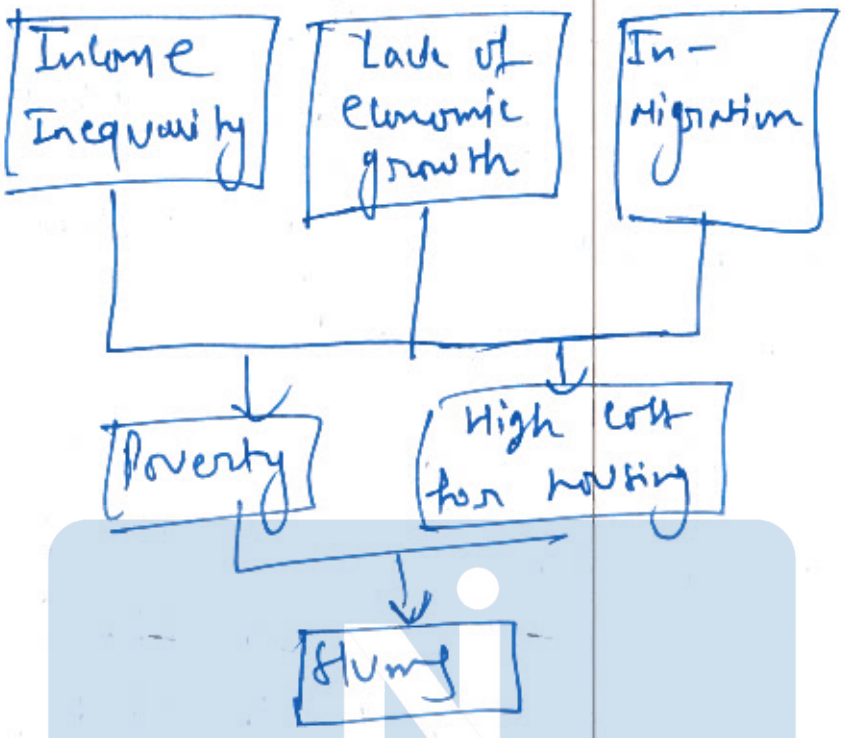
Slums are those Urban residential areas which are harmful to Safety, morale and health of persons living there.




**Reasons for proliferation of Slums:**

1. High population growth around 140 Billion as of 2023.
2. Increasing unemployment
3. High pricing of housing & rents
4. Poor Urbanisation
5. Westernization of Industrial development

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National Institute of Urban affairs also highlights three major reasons:-

1. Demographic dynamism of cities attracting more youth
2. Inlapacity of Urban areas to meet housing demand
3. Poor Urban land policies making it difficult for people to afford housing.

Solutions to resolve slum problems are:-

1. Promote employment in rural areas

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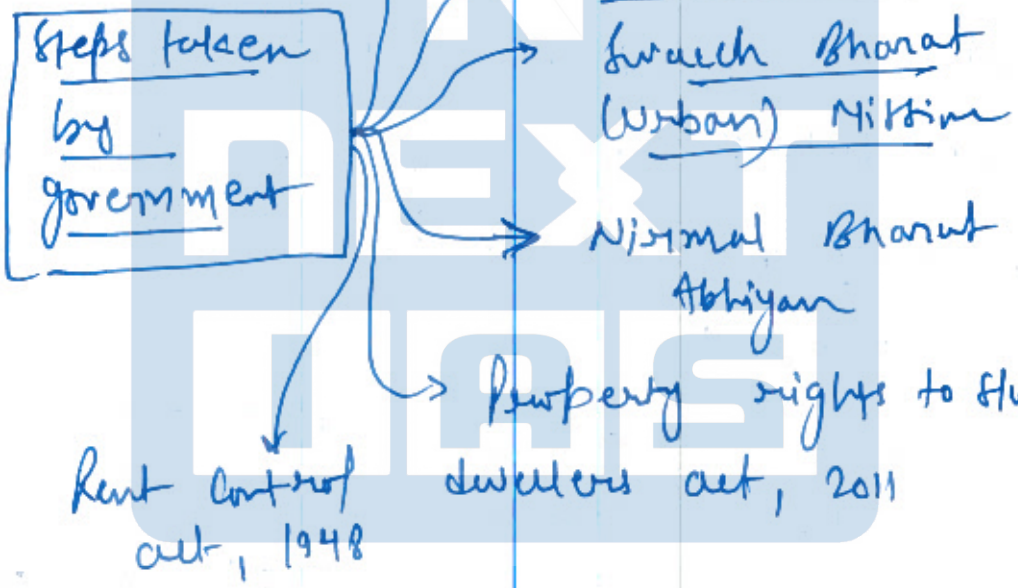
② Planned urbanisation

③ Affordable & accessible housing

④ Defreezing of land vested under government or PSUs

⑤ Inclusive growth

⑥ Urban governance decentralisation




Initiatives such as JAHA Mission of Odisha can be implemented at pan-India level to convert slums into sustainable dwelling habitats.

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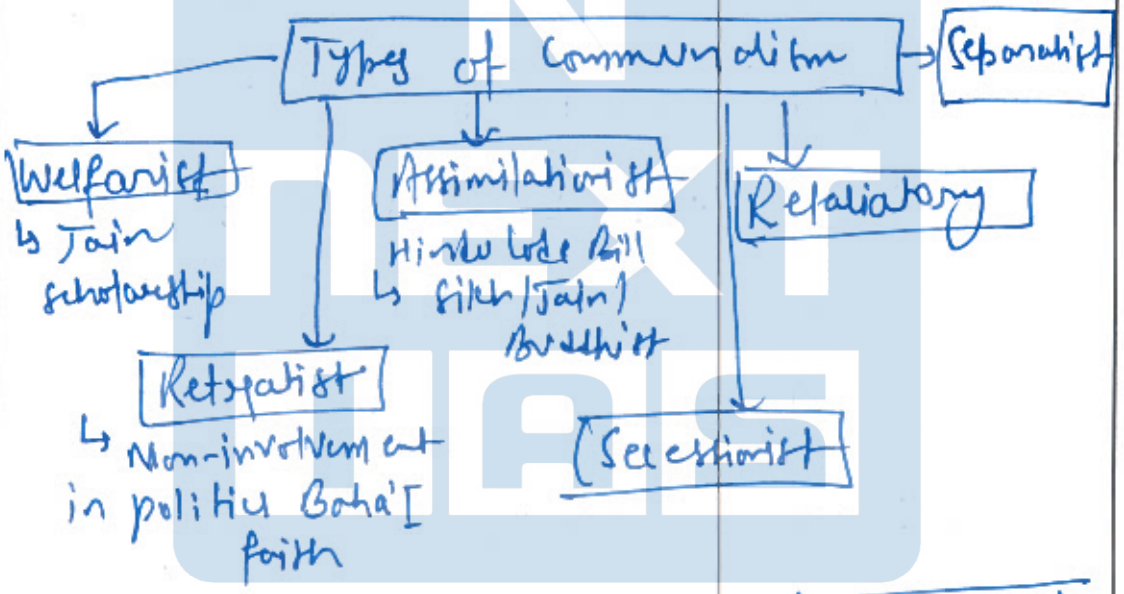
Q.20 साम्प्रदायिकता आर्थिक अभाव से बल प्राप्त करती है, और सामाजिक बहिष्कार के वातावरण में फलती–फूलती है, जिससे असंतोष और विभाजन के लिए उर्वर भूमि तैयार होती है। टिप्पणी कीजिए।

(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 an phenomenon in which society is divided on religious lines and it was affirmed that they have different secular interests.




Communalism gain strength from economic deprivation :-

① Ease to radicalize poor people's

② Propogation of discontentment by showing relative deprivation

Candidates must not write on this margin

(3) Indulging of persons in these fests in return of money

(4) Make issues like poverty, Unemployment for justifying their clothes

Communalism thrives in environment of social exclusion :-

(1) Based on orthodoxy & intolerance

(2) Complete elimination of other religion values & principles

(3) Interests are seen as hostile to each other

(4) Religious chauvinism

Communalism creating fertile ground for discontent and division :-

(1) By religious trade in politics

(2) Lack of cultural synthesis

(3) Adoption of extremist attacks

Candidates must not write on this margin

④ Propogates intense dislike of other religion

**Solutions to reduce instances of Communalism**

① Secular Education & value based education ⇒ values of liberty, equality, brotherhood should be propogated

② strict implementation of laws

③ Sensitization of police force

④ Check on social Media to prevent spread of fake news

⑤ Message of solidarity should be given by religious leaders

⑥ Celebration of festivals

⑦ Sachar Committee recommendation of Equal opportunities Commission for minorities

India is known for its civilizational Value of tolerance. Hence, one should use Gandhi's Talisman to embrace these values.

Candidates must not write on this margin

Space for Rough Work