

# NEXT IAS

NEXT IAS (Head Office) : 27-B, Pusa Road, Metro Pillar no. 118, Near Karol Bagh Metro, New Delhi-110060

Bhopal Centre: Plot No. 46, ZONE-2, M.P. Nagar, Bhopal-462011

Ph: 8081300200, 8827664612 | E-mail: mts@nextias.com | Web: www.nextias.com

(To be filled by candidate)

Code : TC071

Name of Candidate : Rush Mohan

Roll No. : .....

Registration Number : ..... Date of Examination : .....

Exam Centre : Old Rajinder Nagar  Bhopal  Online

3 h 20 min

## 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. : .....

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

In 2013, as India hosts G20, the whole world is witness to India's philosophical thought -

[VASU DHAIVA KUTUMBHANI] (G20 theme)

(from Maha Upanishad)

In this context:

Philosophical thought from North:

1. [Upanishadic philosophy] is primarily from the north:

→ [Satyameva Jayate] from Mundaka Upanishad -

"Truth alone triumphs"

→ [Theory of Karma] from Brihadaranyaka Upanishad

→ [4 stages of life], and [4 goals of life]  
(dharma, artha, kama, moksha) -  
from Taittiriya Upanishad.

2. Asokan political and societal philosophy -  
of [Dhamma]

3. Buddhism → philosophy of the [middle path]  
→ of how to break from cycle of  
suffering, etc

4. Jainism → of the intrinsic value of all life  
→ of inspired philosophers such as carik.

5. Charvaka's Lokayatavada - materialism  
↓  
drives modern day consumption

6. Ajivika's Niyativada - "fatalists"

7. Sufi philosophy - Ulam "tasawwuf"

8. Ethical Governance philosophy - of Chanakya, Narada Smriti etc

Philosophical thought from the south:

1. Philosophy from Sangam literature  
aram and puram (love and war).

2. Alvars and Nayanars:  
→ foundation of Bhakti movement in India  
→ equality, liberty in society

3. Basavanna's Virshiva:  
→ ideas of free debate, discussion  
(eg) Anubhava Mantapa

4. Ramanuja's Vishisht-advaitavada:  
→ "qualified monism"  
→ synergy of God and humans

5. Democratic philosophy - local governance -  
Uttaramerur inscriptions

Finally there are philosophical thoughts which are  
from all over India: → Vedanta (4 mutts of Adi Shankaracharya)  
→ Nirguna and Sadguna bhakti  
→ Oneness of man with nature, etc

Q.2

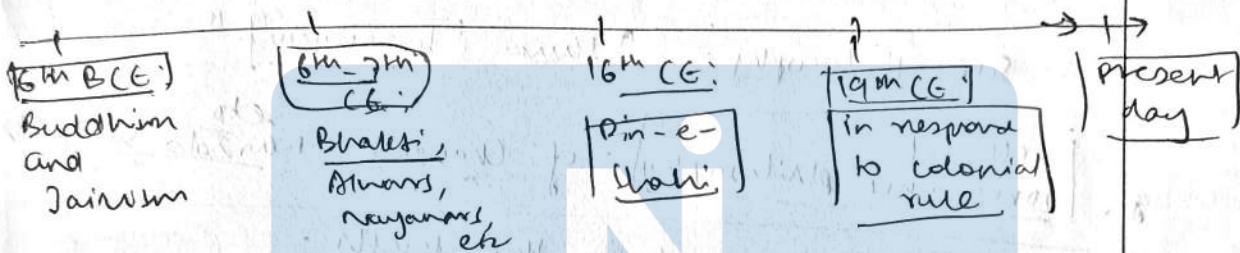
सामाजिक परिवर्तन और सुधार के लिए भारतीय समाज का आवेग औपनिवेशिक शासन के प्रति इसके विरोध की एक प्रतिक्रिया थी। परीक्षण कीजिए।

(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

Social change and reform in India is a process that keeps occurring



in the 19<sup>th</sup> CE, the change and reform was primarily in opposition to colonial rule.

1. for the first time, invaders / foreigners who came to India had a sense of superiority to far, all those who came to India looked up to Indian society, and adopted it

↓  
This led to impetus for change.

2. Colonial interference in Indian society was not appreciated:

(eg:) interference with respect to issues such as succession (doctrine of lapse); widow remarriage, etc.

3. Indians realized that responsibility of reform is that of society itself:

(eg:) Tilak's opposition to Age of Consent Bill

(eg:) Gandhi's approach of improvement of Harijans

4. Revival of consciousness of past

→ in opposition to colonial rule

→ movements such as Prva Samaj's, Tanaka's, etc.

5. National approach to social reform

(eg:) Raja Ram Mohan Roy

↓  
approach based on reason, science, and vedic knowledge

6. Social reform as means to end economic oppression

(eg:) Naoroji's analysis on Drain, Poverty, etc

7. Realisation of the fact that British interference in Indian society is not to India's gain, only to theirs

(eg:) British attempts at anglicisation - to increase markets for their produce

Thus, India's renaissance of 19<sup>th</sup> century was in

reaction to the colonial rule, though society-driven

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

The Russian Revolution took place in 1917 in the middle of World War I, and led to huge impact globally.

Factors for revolution:

- (I): Agricultural distress:
1. Poor subsistence farming
  2. Peasants having limited rights, vs landholders
- (II): Workers distress:
1. Poor working conditions - Post Industrial Revolution
  2. High inflation - due to World War I
- (III): Socio-political reasons → Marxist ideology  
→ lack of civil rights in monarchy
- (IV): Leadership - of leaders such as Lenin, etc

Consequences of revolution:

- (I): 1. Stopped Russian participation in World War I.
2. led to rise of "Communist nation"
  3. Totalitarian authoritarian rule - under Stalin  
↓  
abuse of human rights, etc

4. "ideological war" - in the world.



ultimately led to cold war.

5. inspired many authoritarian regimes globally

(eg:) china

6. the genocides such as "Great purge" by

Stalin - deaths of thousands of ordinary citizens

Impact on Indian national movement

1. formation of Communist Party of India



in 1920

2. impetus to workers rights

(eg:) formation of trade unions.

3. impetus to peasant rights

(eg:) formation of kisan sabhas

4. limited inspiration to revolutionaries

^

(eg:) Bhagat Singh, etc

Thus, Russian revolution had profound impact across the world.

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

Global warming is leading to more extreme  
weather events, which are compounded by

uneven temperature distribution

↓  
This has led to renewed interest in  
understanding temperature distribution

factors :

1. Latitude :

Latitude affects insolation,

ie, amount of sunlight falling.

2. Earth's tilt :

(ie) during ~~sun~~ ~~Dec~~ March - Sept :

Northern hemisphere receives more  
sunlight, and vice versa

3. Uneven distribution of landmass,  
and water bodies :

→ water has higher specific heat capacity.

→ land thus heats up and cools down faster

→ Northern hemisphere has more land

↓  
more variations.



4. Ocean currents :

(Eg:) gulf stream is called - "blanket of Europe"

5. Trade winds :

difference in temperature between western  
and eastern margin of continents

6. Altitude :

as altitude increases  $\Rightarrow$  temperature decreases

( $\therefore$  "normal lapse rate" or  
"adiabatic lapse rate")

7. Vegetation cover :

$\rightarrow$  reduces volatility, by absorbing heat

$\rightarrow$  hence more extremes in arid / desert regions

8. Natural disasters :

(Eg:) vulnerability to heat / cold waves

9. Human factors :

$\rightarrow$  urban heat island effect

$\rightarrow$  anthropogenic global warming

$\rightarrow$  "concretization" leading to uneven distribution

Thus, it is important to properly understand

impact of all these factors, to build capacity

against climate change

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

IPCC AR 6 report was released in 2021, which projected increase in floods, landslides, etc due to glacier melting.

More recently, in 2023, ICIMOD report was released - which deep dived into effect of melting glaciers on Himalayas.

Effects of melting glaciers on environment

1. Antarctica west ice sheet

↓  
Irreversible state of decline

↓  
If it melts completely :- 5-6m of sea level rise

↓  
coastal areas permanently destroyed

2. Similarly, Greenland → potential to raise sea level by ~7m

3. Melting of Antarctic (Greenland)

↓  
ocean circulation disturbed

(By?) Atlantic meridional oceanic circulation  
↓  
more El-Niño, etc

4. Marine ecosystems disturbed

5. Mountain glaciers melt:

↓  
mountain ecosystems disturbed.

(eg) habitats of snow leopard, etc

Impact on human society

1. Rivers flow affected

↓  
livelihood of millions of farmers affected

2. more floods upto 2070,

↓  
followed by more droughts

(IPCC report)

3. more disasters - landslides, glacial lake bursts, etc

4. High altitudal infra impacted

(eg) border roads, etc.

5. Isolation of [SIDS] - small island developing states

6. Climate refugees from coastal areas

(etc).

Measures to be taken:

1. Prevention → net zero  
 → build coastal walls. (eg) proposed wall in North Sea

2. Adaptation → of mountain infra,  
 → for farmers  
 → water storage and management infra.

3. Research and dev → into impact  
 → into prevention, mitigation.

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

Owing to the success of white revolution, India  
is now the largest producer of milk globally.

More success in west than in east.

Evidenced by: per capita production in Gujarat  
is 6x per capita production in Assam/Bihar  
(Economic Survey 2021).

Factors:

(i) Reasons of necessity:

1. Lack of fertile land in west -  
Gujarat / Rajasthan / Maharashtra.

2. Thus, farmers were more reliant on  
animal husbandry

(eg?) Gujarat - ~~cows~~ cattle + camels

Rajasthan - small ruminants  
(goat, sheep, etc.).

(ii) Supply side factors:

1. Availability of fodder for animals

(eg?) ~~millet / wheat / etc~~

(eg?) Pasture land / etc

+ waste / wild millets, etc //

2. Availability of credit

(due to well developed financial infra)

3. Development of supply chains:

Rural urban linkages

(due to cotton industry)

(first cotton mills in Ahmedabad, Mumbai)

↓  
same could be used for milk

⊕

(III) Demand side reason:

1. faster growth of urban areas

(Eg: Bombay / Mumbai)

↓  
demand for milk

(IV) Political reason:

1. Success of cooperatives:

"farmers as entrepreneurs"

2. Lack of political interference

limited politicization of cooperatives

(Eg: bipartisan support to organisation  
such as AMUL)

(V) Role of leadership - Verghese Kurien

↓

→ helped set up National Dairy Dev Board

→ innovation

→ productivity, etc.

White revolution has played a key role in food security

Way forward → value added "solid milk products", for export

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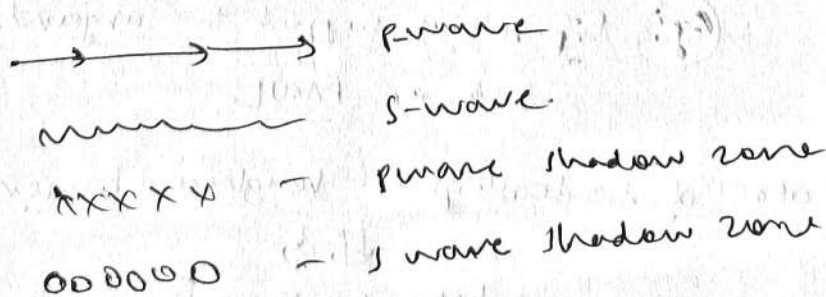
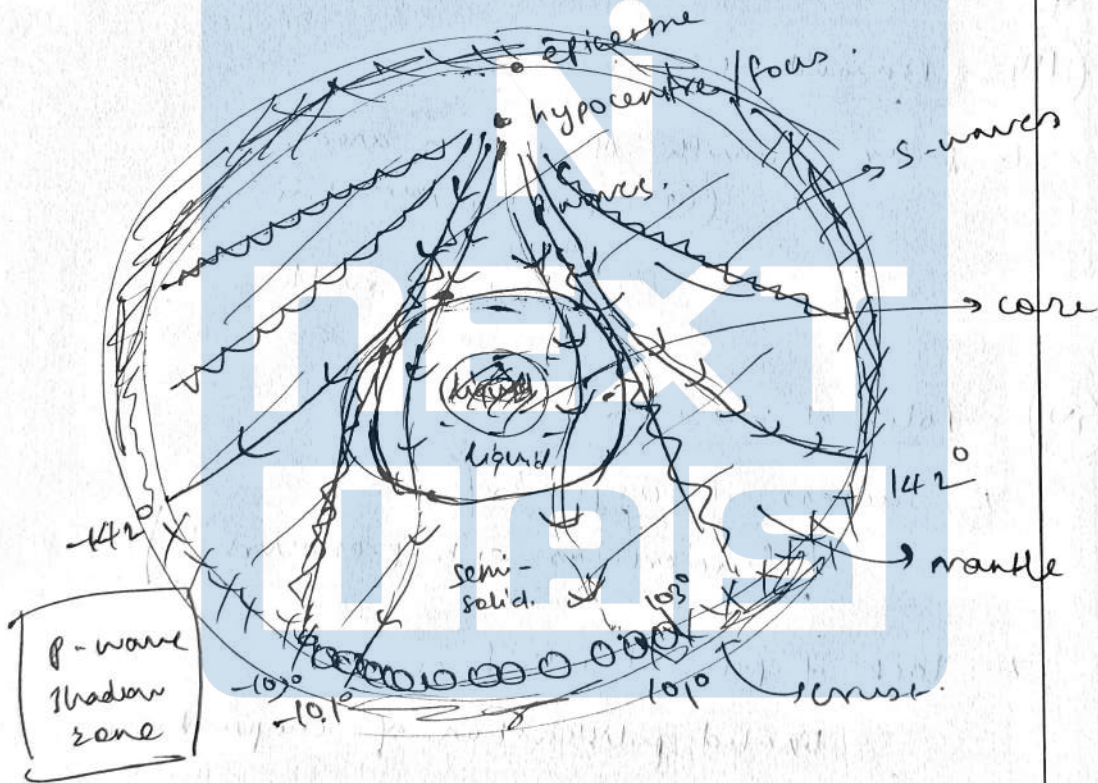
Q.7

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 waves have helped us significantly in understanding the earth's interior

Seismic waves (Body waves) → P-waves: 7-8 km/s; longitudinal  
 → S-waves: 4-5 km/s; transverse.



Contribution - to understanding interior.

from P-waves

1. inner core:

[solid and densest]

(∴ the denser the interior, faster the speed of wave)

(and the p-waves directly opposite reach the forest).

2. helps in determining relative densities

(due to extent of refraction)

↓

via (p-wave shadow zone)

(as p-waves can travel through solid, liquid, gas)

or [from s-waves]

1. interior is non-homogeneous

(as s-waves can travel only through solid.)

2. [mantle itself] is also non-homogeneous

(as refraction is away from the centre)

3. the core is liquid (outer core)

thus, seismic waves alone help in extensive understanding //

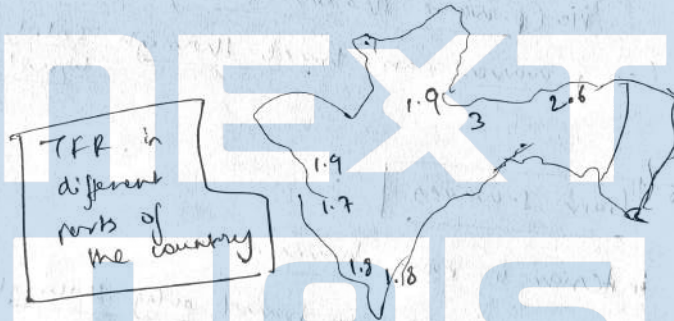
Q.8

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 on the cusp of reaching the  
plate of demographic dividend in the  
next 2 decades (2037-2040).

There is significant regional disparity in population  
growth, as evidenced by:



This makes demographic transition a  
double edged sword. Positive ..

- High TFR in UP, Bihar, Assam, etc.
- Economic survey 19 says that we must accept this, and the fact that it will lead to migration towards coastal states, and states such as Haryana.



2. This provides opportunity for equitable distribution of young labour force

↓  
potential for faster economic growth  
by keeping manufacturing  
more competitive

3. Potential for up-skilling and social development  
if we invest in social infrastructure

4. more innovation - due to new ideas  
(from migrants)

Negatives:

1. "ruralization of elderly"

2. Potential violence against migrants

(eg:) in Tamil Nadu against migrants  
from Bihar - in 2023

3. Demographic disaster, if we are not  
able to generate employment  
opportunities

4. Potential federalism issues:

(eg:) who will undertake social security  
burden of migrants

(seen during one nation one ration card)  
(seen during covid migrant crisis)

Way forward:

1. Invest in social infrastructure
2. Invest in genetic infra

⇒ reap  
demographic  
dividend

Q.9

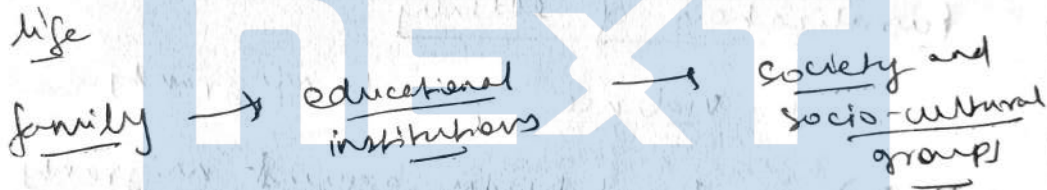
भारत में नृजातीय और सांस्कृतिक विविधता हमेशा से एकता के सूत्र में बँधी रही है। भारत की सांस्कृतिक एकता में योगदान करने वाले प्रमुख कारकों की चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

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 known as the land of "unity in diversity". India is the "most diverse" "large country" - according to UNESCO's diversity index of 2009

Factors for cultural unity:

1. Strong social institutions across all stages of life



2. Popularity of national symbols  
(eg: flag, national anthem, emblem, etc)

fundamental duty: Article 51 A (a)  
↓  
to cherish national symbols

3. shared celebration of festivals  
(eg: in urban areas - all community gets together to celebrate all festivals)

4. Single citizenship

Next IAS ID: PTTTP221086, TC071, 13-08-2023 04:49 PM

5. Pride in shared experiences, of the national struggle

↳ values of unity, non-violence, etc

6. culture of assimilation and tolerance

↓  
all communities, cultures are assimilated into Indian culture

↓  
allowing co-existence of all practices together

7. Shared economic experiences

(eg) monsoon → similar time of harvest

↓  
similar harvest festivals

8. culture of blending



Allows culture to continue via various synergies

↳ (eg) Power-yoga

↳ (eg) Dloo-hikis burgers

9. Role of religious institutions -

such as temples

(eg) Janit adheerum → continuing tradition of Sergol

↓  
cultural unity ← taken to Parliament

Thus, all factors help in cultural unity in diversity

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

Ans:  
 "Annihilation of caste" was a major objective of Dr Ambedkar, based on the foundations of justice, liberty, equality and fraternity of Indian Constitution.

Dichotomy between public and private life as barriers to annihilation of caste:

1. "Commensality restrictions"

↓  
 which prevents "social endogamy"

2. Restrictions on inter-caste marriage ("endogamy")

↓  
public-private life dichotomy

3. politicization of caste:

↳ in public: demand for equality

↳ in private: voter mobilisation on grounds of caste

4. casteism "casteization of modernity"

and "modernisation of caste"

(eg):

via caste-based social media grps.

caste-based whatsapp grps.



5. via occupations still linked to caste  
in reality

↓

(Eg.) on paper: Municipality tenders for  
safai karmacharis ⇒ open to all

in reality - mostly restricted to  
scheduled caste

manual scavenging leads to 46 deaths/yr

6. Reservation

↳ pvt vs public dichotomy

↓

(Eg.) public agitations

"reservation has led to perpetuation of caste  
instead of annihilation of caste"

- ex - Justice Maskandev Patil

7. Culture of "letting go of caste identity"  
in public life.

↓

but maintaining it in local life.

Thus, dichotomy in public and pvt life -  
in all domains - social, political, economic -  
was presented annihilation of caste #.

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 was forced into wars in 1947-48,

1962, 1965, 1971 and 2001 - with

Pakistan and China - post independence.

war

Causes

(A) 1947-48:

→ "infantry day war"  
→ immediately post independence.

→ Pakistan sending mercenaries

to Kashmir despite Raja

Hari Singh having decided

he would not join either

dominion

↓

This led to Hari Singh signing

Instrument of Accession with

India

↓

India intervened

(B) 1962 war:

→ war with China

→ intrusion by China into

Indian territory -

both Aksai Chin and

Arunachal

→ genocide of tibetians.

(III) 1965 :  
war with  
Pak

- intrusion in name of kutch
- Operation Gibraltar by Pak:  
sending troops to J&K
- Operation Grand Slam :  
large scale armed attack.

(IV) : 1971 war :  
(with Pak)  
(liberation of  
Bangladesh)

- Operation Search Light  
by Pak :  
genocide of ppl in  
Bangladesh
- declaration of war  
against India
- humanitarian and refugee  
crisis in Assam

(V) : 2001 war :  
(Kargil)

- intrusion in regions  
of Kargil, Dras,  
Taksar, etc (post)  
winter season
- violation of bilateral  
agreements

Impact on India - Pak relations :

1. Breakdown of trust

2. Unsettled - militarised borders

(eg) : LoC

3. Highest militarized point globally -

(Siochen)

4. Lack of connectivity between nations

5. (Lack of trade) between India, Pak :

(World Bank report): "A glass half full"

↓

South Asia also is least connected globally

6. Use of terrorism by Pakistan as matter of foreign policy

7. (Distressed existence) for people living along

border, especially in places such as

→ Ulgit Balistan in Pak.

→ Poonch, Rajouri, etc in India

Impact on India-China relations.

1. Border disputes : (McMahon line) vs (Johnson line)

2. Rising militarization of borders.

(eg:) → rapid chinese construction of infra

→ rapid chinese accumulation of troops

↓  
counter accumulation in India

3. Impacting other facets of relationship

(eg:) trade, people-to-people exchange, etc

4. (Renial of visas) to each other's citizens

As FAM Jaishankar has said, "Peace and stability" at borders is essential for relationship to move forward"



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 अंग्रेजों के लिए प्लासी की तुलना में बक्सर का युद्ध अधिक महत्वपूर्ण 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

It is said that "Buxar confirmed Plassey",

and that "lost Buxar - Bengal paved the

way for the British conquest of India"

- Bipin Chandra

Culmination of process of consolidation of  
British power over Bengal after Buxar

1. In battle of Buxar, East India Company defeated an alliance of Md Qasim (Nawab of Bengal), Sir Shuja-ud-Daula (Awadh) and Mughal emperor Shah Alam II.

2. It led to Treaty of Allahbad.  
↓  
helped in consolidation of Bengal

3. gave British - power without responsibility  
in Bengal.

Yes, it was more important for British than Plassey

①: Treaty of Allahbad :

1. Awadh used as a buffer state.

2. British ~~got~~ used Treaty of Allahbad  
to begin forming opportunistic alliances  
with zamindars &

(eg) Zamindar of Benaras -

3. House arrest of Mughal emperor Shah Alam II

(II) : Symbolism of victory :

defeated Shah - Alam II - (the Mughals) -  
who were considered the rulers of India.

(III) : Economic benefits :

1. Revenue from Bengal helped British  
in subsequent wars

(eg)

used to fund

Anglo-Mysore  
Carnatic wars

↓  
decisive advantage against the  
French state of Mysore

2. opportunity to reduce trade deficit  
with India for East India Company

↓

by changing Bengal from a

seller's market to a buyers market

↓

GIC became "price setters"

↓

re-industrialisation and de-urbanisation

↓  
market for British goods

3. Commercialisation of agriculture

↓  
feasible cultivation of Indigo

(iv): Military advantage:

1. Bengal used to station troops

2. Troops from Bengal used as reinforcement in Anglo-Maratha war

(v): Experience of using states as Buffer states

1. ~~Based~~ Based on Treaty of Mabarad with Awadh

2. This ultimately led to Subsidiary Alliance

(vi): Stable political capital in Calcutta

↓  
used as capital till 1911

(vii): Stable location to start anglicisation:

(eg) via English education, etc

(viii)

Thus, while Battle of Plassey no doubt played

an important role, for example during

Carnatic wars, historians such as Bipan

Chandra ascribe much greater importance

to Battle of Buxar

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

Due to ~~the~~ <sup>its</sup> strong foundations, Sanskrit was identified a few years ago as the most suitable language for writing machine code.

Sanskrit literature has set a high watermark.

①: Sanskrit grammar:

1. Panini's ashtadhyayi
2. Patanjali's Muhabhasya

recognized as the OLDEST FORMAL GRAMMAR globally

②: Vedic Smriti literature: (mostly during Gupta period)

1. Upanishads - significance covered in [01]

2. Puranas: 5 parts:
  - Sarga
  - Pratisarga
  - Vamchakrasa.

→ "creation of world" etc.  
 → beginning of formal recording of history

③ Upanishi: Vedanga:

→ Shiksha: OLDEST text on PHONETICS

→ Nirukti: OLDEST dictionary //

4. Smritis :
- Manusmriti, (Mitakshara), etc.
  - use of literature for code of ethics, etc.

(iii) Buddhist Sanskrit literature

1. Divyavadana
  2.  Lalitavistara
  - etc
- ⇒ (Buddhist philosophy) + (Historical information)
- (eg): Life of Shunga rulers

(iv) Sanskrit poetry: (mostly Gupta period)

1. Kalidasa → called "Shakespeare of East"  
↳ wrote Kumarasambhava poetry, etc
2. Harisena → poetry during Gupta period
3. Post Gupta period  
↳ Sanskrit poetry - in Bhakti  
(eg): Jayadara like Kavindra

(v) Sanskrit drama: epics like Meghadoot

1. Kalidasa: drama like Malvika-Agnimitra, Abhigyan Shakuntala.
2. Vishakhadatta: Mudra-Rasashastra (ascend of Chandragupta Maurya), Devri Chandraguptam, etc.

(VI): Scientific Sanskrit Literature : (C Gupta period)

1. Medicine → Charaka + Charaka Samhita  
 ↘ Ashwini - Ashwini Samhita

2. Maths - Pythagoras theorem;  
Boolean algebra

3. Brihad Samhita - encyclopedia

4. Arjuna Samhita - Astronomy

5. Arjuna Samhita - number system, etc.

(VII): Administrative texts : (Gupta period)

1. Arthashastra → an ethical governance  
 ↘ an international policy, etc.

2. Nandika Smriti, Brihaspati Smriti  
 ↓  
codification of laws  
 ↓  
 for social contract

Thus, Sanskrit texts have been used for creative, innovative and philosophical expression throughout ancient India, and beyond.

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

Recently, it was said that, "we know more about outer space than we know about deep ocean". Deep ocean is a huge source of knowledge on the earth.

Feature of deep ocean floor

Significance in study of oceanography

(5) (1)

Mid-oceanic ridges (MOR)

evidence of divergence of continental crust (sea-floor spreading theory)

(1)

Higher temperature near MOR; and block mountains along MOR

evidence of composition of asthenosphere  
 (SiMa) → Silicon and Magnesium  
 (basaltic)

(1)

(PALEOMAGNETISM)  
 "tape recorders of earth's magnetic field"

→ give evidence of different cycles in earth's magnetic field.  
 → time period of change (≈ 76 000 years)

→ modern day significance:  
 currently the magnetic field of earth seems to be shifting - from Canada towards Liberia

(IV) : Trenches :  
 (beifs (knoff zones))  
 (Gg) Mariana trench

→ evidence of destruction of earth's crust  
 → plate tectonic theory (trenches are at plate boundaries)

(V) byssal plains -  
deposits and fossils  
 (Gg) red ooze

→ evidence of past mineral composition  
 → (Gg) red ooze  
 → evidence of first life  
 (Gg) found to be 2.8 billion years ago

(VI) : seamounts :

→ evidence of under-sea volcanoes

(VII) : guyots :

→ coral atoll formation

(VIII) : archipelagos

→ evidence of Mantle plumes or plate boundary



## NEXT IAS

(IV) continental shelf

maximum marine life  
found here,

↓  
help in understanding  
evolution

(X) continental slope :

under water canyons/gorges

open here

(eg) of the western coast  
of South America

↓  
process of their formation  
in Andes

(XI) : continental rise :

accumulation of deposits

↓  
erosional activity of  
the ocean

(over time)

↓  
coastal composition  
evidence

thus, the ocean and its landforms have  
deep secrets.

Hence, Ministry of Earth Sciences has started

Deep Ocean Mission, and SamudraManthan,

to understand this, and benefit from

potential of Blue Economy

Q.15

दुर्लभ पृथ्वी तत्वों (दुर्लभ मृदा धातुएँ) की बढ़ती माँग के साथ, उनका वितरण वैश्विक अर्थव्यवस्था का एक महत्वपूर्ण पहलू बन गया है। वैश्विक स्तर पर दुर्लभ पृथ्वी तत्वों 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 metals are a group of 17 elements - Lanthanides and yttrium, etc - with unusual magnetic and conductive properties.

When alloyed with traditional minerals, these properties enable the manufacturing of modern technology - from electronics to communication devices.

Ever since China weaponized its production of rare earths against Japan in 2010 - their distribution has become critical to not only global economy, but global IP as well.

Distribution of rare earths :

In terms of reserves :

China ~ 45%

Australia ~ 18%

Brazil ~ 18%

Vietnam ~ 18%

Russia ~ 15%

India ~ ~~60%~~ 6%

In terms of production

China ~ 70%

USA ~ 14%

Australia ~ 6%

India ~ 1%

Uses of rare earths

Used in almost all modern industries,  
all hi-tech manufacturing.

(I) : electronics : → semiconductors  
→ lighting including LEDs  
→ display (TVs, phones, etc), etc

(II) : communication : → fiber optics  
→ telecom infra, etc

(III) : Magnetic systems → MRI, medical imaging  
→ audio systems, etc

(IV) : emerging technology (for green transition) :  
→ in Battery systems  
→ fuel cells, etc.

- (V) as catalysts for reactions.
- (VI) to play role of key re-agent in heavy industries such as iron and steel.
- (VII) : defence, nuclear technology, etc

Environmental impact of their extraction

Rare earths are actually not rare - it is just that their concentration in minerals is extremely low, leading to:

1. Huge amount of waste generated in extraction
2. Acidification of nearby land
3. Contamination of underground water
4. often found with thorium  
↓  
leads to radioactive waste  
↓  
Cancers, etc
5. Toxicity post processing

Considering that rare earths are not rare, and India has 6% reserves but 1% production, India

must invest in R&D into low cost, clean extraction

- 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

Recent Joshimath disaster has brought national focus to unsustainable tourism in the Himalayas.

Factors contributing to rising tourism:

(1) Supply side:

1. State govt promoting tourism to boost local economies.

(Eg): "base of tourism" initiatives in Uttarakhand and Himachal

2. Better infrastructure, such as all weather roads

(Eg): Mal tunnel, (Kohlang tunnel)

↓  
connecting Manali to Sissu

↓  
(earlier Sissu was not accessible due to road shutdown various parts of the year)

3. Improving hospitality - via rejuvenation of travel booking sites, travel agents, etc

(Eg): Airbnb

Q1: Demand side:

1. Rising disposable incomes.
2. Rising middle class
3. Rising population of cities such as Delhi  
↓  
more tourists want to travel.

Factors for limited ecological capacity

1. Himalayas are young mountains
2. Unstable slopes → prone to landslides  
if too much construction, etc
3. Building codes not followed
4. Land use pattern changing without Environmental  
Impact Assessment
5. Illegal sand mining by criminals.

Q2. Potential environmental impacts:

1. Increasing landslides. (Eg): Pilgrims killed (TODAY)  
(due to land slide)
2. Land subsidence  
(Eg): Toshinatti.
3. Ecosystems disturbed permanently  
Himalayas is a Biodiversity Hotspot, with  
several natural parks.  
(Eg): damage to Valley of flowers National Park
4. Floods → due to illegal mining  
→ construction on flood plains.

5. Water scarcity in rain shadow zones of  
Himalayas

(Eg.) Ladakh  
(as tourists consume more water)

6. Earthquakes - due to changing land use  
pattern  
(Himalayas are in zone V)

④ Measures for sustainable tourism

1. NTI Prayog - report recommendations

"Sustainable tourism in Himalayas"

2. Complete ban on illegal mining



Highest punishment for perpetrators

3. Bottom-up management of ecosystem

→ Local bodies empowered to levy fines

→ Local bodies empowered to ensure  
land use is as prescribed

4. Audit of all buildings - periodically

5. Land use zoning

6. Early warning systems for disasters

④ PM's 10 point agenda on Disaster Risk Reduction

→ Involvement of women

→ Disaster resilient infra, etc.

Learn the CDRI (Coalition of Disaster Resilient Infra)

must share global best practices, for sustainable growth.

- 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

Below normal monsoon distribution has a disproportionate impact on Indian economy, consumption, food security, inflation, etc.; hence it is crucial to understand monsoon and the various climatic factors that impact it

Oceanic factors:

1. "South-west" monsoon winds:  
→ "seasonal reversal" of trade winds (shifting of ITCZ)  
→ due to differential rate of land and ocean cooling

2. El-nino / La-nina (ENSO)

- El-nino (every 3-7 years)  
leads to reversal of "Walker cell"  
↓  
leads to drought / below avg. rains.
- La-nina: strengthens "Walker cell"  
↓  
excess rain.

→ impact on intensity and distribution



3. El nino / la nina / "Modoki"

- warm water in central Pacific
- uncertainty in impact and distribution

4. Indian Ocean Dipole :

- temperature difference between western and eastern Indian ocean
- positive phase: higher rainfall
- negative phase: lower rainfall.

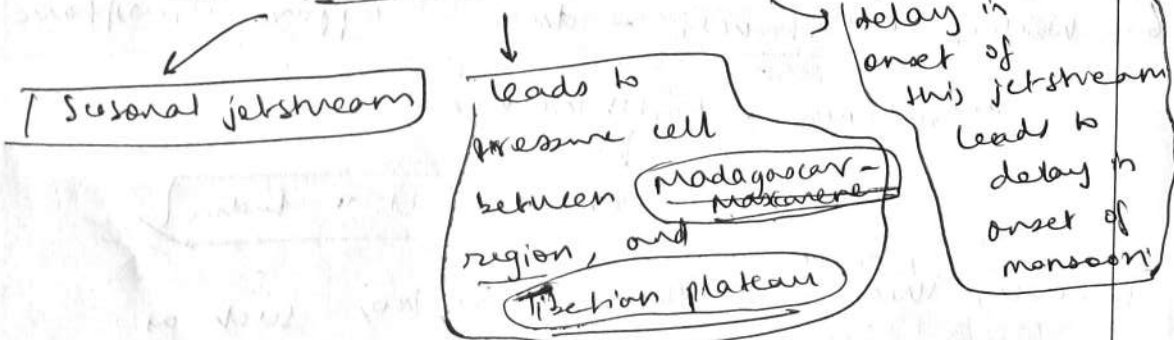
5. Ocean depressions :

- impact intensity of rain.
- low pressure region  
↓  
impacts surface south-west monsoon winds

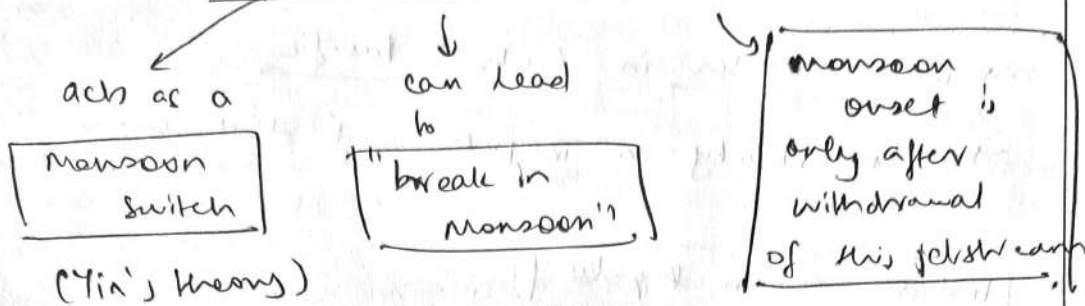
Atmospheric factors :

1. Jetstreams

- Role of Somali jetstream and eastern jetstream :



→ Role of ~~60°~~ subtropical westerly jetstream



2. Madden Julian oscillations:

→ periodic movement of dense clouds.

→ proximity of these clouds increases rainfall

3. Boreal intra-seasonal summer oscillations:

→ periodic movement of clouds over Bay of Bengal

4. North east branch of south-west monsoon  
(Bay of Bengal branch)

↓  
leads to early rainfall in North East

5. withdrawal of monsoon winds

↓  
leads to North east rainfall

(in land Odisha, Andhra, etc)

6. Western Disturbances - due to upper atmospheric disturbances in Mediterranean

↓  
winter rainfall in India

However, there are other factors too, such as orography, vegetation cover, etc. Understanding them

is critical to readiness for climate change.

Q.18 हमारे समाज में परंपराएँ परिवर्तन को क्यों बाधित करती हैं? प्राचीन रीति-रिवाजों 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 refer to practices continuing in society since a long period of time.

Traditions often impede change due to

1. Inertia; It is easier to keep doing what one has been taught / what one is used to

2. fear of unknown leading to resistance to change

→ often the feeling is "why change something that ain't broken? what if the change does not work?"

→ the uncertainty leads to resistance

3. lack of understanding about change;

(eg) rapid change being brought about by technology

4. fear of loss of control

→ loss of social control

(eg) patriarchal institutions

→ loss of political control

(eg) caste based politics

5. fear of becoming redundant after change :

(eg:) fear amongst traditional village associations of becoming redundant post formalization of Panchayati Raj

6. Religious organisations :

prevent change that impacts their standing.

7. Reverse incentives :

(eg:) resistance of quacks to formalisation of AYUSH medicine

However, in some cases, tradition is not against change.

(eg:) blend of tradition and modernity in Indian culture

↓  
represented by fusion of yoga with

other practices

↓  
dance  
yoga

↓  
power  
yoga

↓  
laughing  
yoga, etc

Extent to which social legislation may help

↳ Social legislation can help, but ultimately change has to be accepted by society.

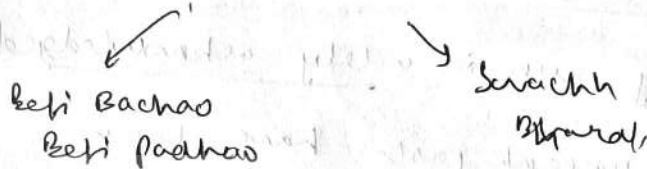
1. Can help in case of crimes against women

(eg:) sati abolition, dowry prohibition, etc

↓

As society has now accepted the inhuman nature of crimes against women

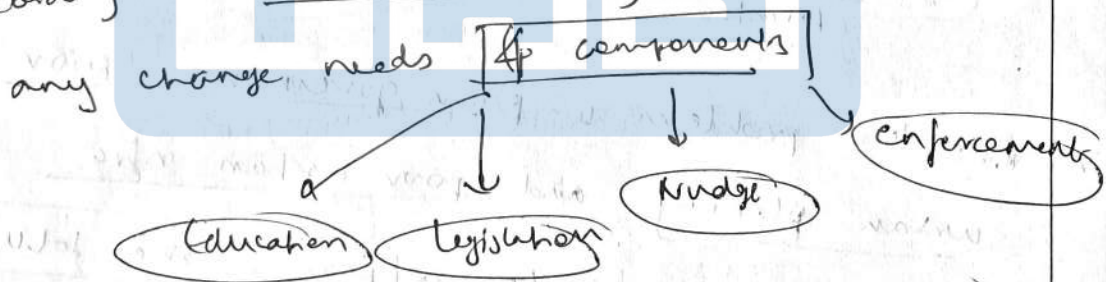
2. Can help with social change:



3. However, if it is radical change  
likely to break resistance

Thus, most important is behaviorial change

According to Nobel prize winning Richard Thaler:



Thus, legislation is only 1 component

Need the other 3 too

Case study: Surakh Bharat

- Education → Awareness
- Nudge → Public Shaming
- Enforcement → Fines
- legislation → All India POF + Policy

- Q.19 मलिन बस्तियाँ ऐसी 'समस्याएँ' नहीं हैं जिनका 'समाधान' किया जाना है - बल्कि, वास्तव में, ये बुनियादी ढाँचे के प्राक्धान और सामाजिक-आर्थिक मुद्दों को शामिल करने वाली अरांतुलित 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

The role of "slums" and "slum-dwellers" in making a city run is widely acknowledged, yet, cities in recent past have been apathetic to slums.

Slums are not "problems" that have to be "solved".

- Slum-dwellers provide crucial services to city
  - availability of produce across local markets (Eg: fish in Mumbai)
  - safai (coramcharis) (Eg: hutchmen etc)
  - security services

- The problem is poor governance, poor urban planning and poor urban infra.

In fact, slums can be a part of the solution, as Odisha's JAGA mission shows.

Slums are a result of lopsided and vested urban policies:

- Unplanned expansion of urban areas
- Lack of affordability of urban housing due

- to vested interests  
(local builders - politicians - mafia networks)
3. Poor public transportation:  
not following model of  
Transit-Oriented Development
4. Lack of provision of basic amenities in  
slums  
(eg: water supply, electricity, etc)
5. Failure to understand "seasonal migration"  
or "circular migration"  
↓  
no support systems for migrants in urban areas
6. Socio-economic failure -  
→ lack of support system for women.  
→ Acc to MP women and child development,  
sexual abuse/violence is higher in  
urban areas than in rural areas
7. Higher inflation, cost of living in urban areas
8. No support for social development  
(health  
education, etc)
- (eg:) ~ 9 lakh anganwadis, only ~ 1 lakh are  
in urban areas
9. Laws not followed: despite manual scavenging  
being banned, it still continues

10. Political reasons:

poor centre state / inter-state coordination

(not migrants)

~~Way forward:~~

Counter-view: In some situations, "slums" are problems:

○ In Dharavi, many slum dwellers have not used the redeveloped flats allocated to them

↓  
instead, sold them off, and

↓  
slum habitation continues

Way forward:

1. PM Awas Urban - slum redevelopment
2. Odisha's SAUB Mission:
  - regularisation of slums - by 30 sq ft title
  - possibility of them buying additional land at market rates
  - provision of essential services:
3. UN Habitat Livelihood Award
4. transit oriented development
5. empowerment of local bodies



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 the belief that the ~~interests~~  
"secular interests" of two different communities  
cannot be the same.

It is a false belief - used for perverse objectives -  
gains (by) used by Muslim League to gain  
political power via Partition.

Gains strength from economic deprivation.

↳ Poor access to resources, and development,  
and opportunities may be used to  
incite a feeling of communalism

This was done in late 1890s amongst  
Muslim community in undivided India,  
by British, for their divide and Rule  
agenda.

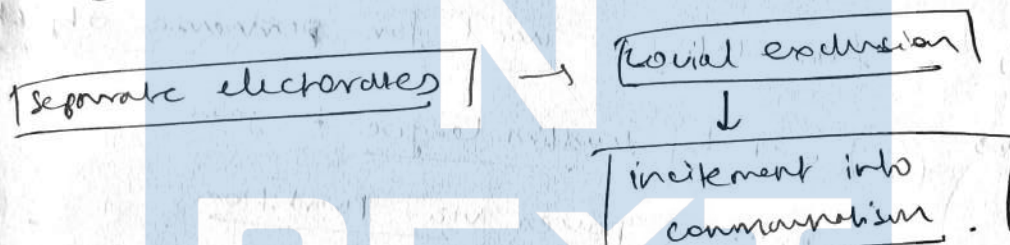
Thrives in environment of social exclusion

Environment of social exclusion is used to

brainwash a community into thinking

that secular interests are not aligned

Again this was done by British post  
separate electorates, to divide and rule.



Communalism creates fertile ground for  
discontent and division.

1. Leads to polarization in society
2. Creates a situation wherein "secular issues"  
are seen from the point of view of  
community.
3. Rationality is suppressed for creating  
discontent
4. Stereotypes are created, on the basis  
of community

5. Attempts made to separate "secular interests" - to keep up the fake propaganda

(eg) boycott of Constituent Assembly by Muslim League -

to ~~counter~~ <sup>keep up</sup> their false propaganda

that issue of independence - (secular issue); issue of rights - (secular issue);  
~~is~~ issue of basic development - (secular issues)

is different for Hindu and Muslim community

Way forward:

1. Awareness and education.

2. Preparing ~~people~~ people for false communal propaganda

3. Investment in trust, social capital, as a public good

- Economic Survey 2020

4. Sabla Saath, Sabla Vikas, Sabla Pragat

model of governance

5. Attempts made to separate "secular interests" - to keep up the fake propaganda

(Gy) boycott of constituent assembly by Muslim League -

to <sup>keep up</sup> ~~counter~~ their fake propaganda  
 that issue of independence - (secular issue); issue of rights - (secular issue);  
~~the~~ issue of basic development - (secular issues)  
 is different for Hindu and Muslim community

Way forward:

1. Awareness and education:
2. Preparing people for fake communal propaganda
3. Investment in trust, social capital, as a public good  
 - Economic Survey 2020

4. Secular Centre, Kerala Vikas, Kerala...