

NEXT IAS

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(To be filled by candidate)

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Roll No. :

Registration Number : Date of Examination :

Exam Centre : Old Rajinder Nagar Bhopal Online

Test - 5

Code : TC075

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

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1. भारत को विदेशों से जोड़ने वाले प्राचीन व्यापारिक मार्गों ने संस्कृति के आदान-प्रदान और प्रसार में किस प्रकार योगदान दिया?
(150 शब्दों में उत्तर दीजिए) 10 अंक
- How did the ancient trade routes connecting India to foreign countries contribute to the exchange and dissemination of culture?
(Answer in 150 words) 10 marks.

India is said to be the first country to get globalized. Trade routes connecting India to the rest of the world have had a profound impact on exchange and dissemination of culture: Chronologically.

1. EVC - Mesopotamia trade ties:

→ spread of cotton.
→ export of seeds, bangles, etc
(eg:) from Uttar

2. Mahajanpada period - and ties to Europe:

→ ideas of vedas, Buddhism, Jainism.
→ ideas of democracy.
→ these inspired ancient Greeks.

→ "India exported democracy to the world"

3. Greek Philosophy henceforth inspired India:

(eg:) Bindusara asked Greek ambassador for a sophist.

4. Astronomy:

Karyi Samhita: "The Greeks may be barbarians, but they have given the world astronomy, and

for that they must be revered like Gods"

5. Dharmas - Dharmas reforms
→ Spread of Buddhism in central Asia,
China, Sri Lanka
 6. Silk route - Kushana period.
→ "Gandhar sharat sambandh"
→ Gandhara school of art
↓
Greek, Roman and
central Asian elements
 7. Megasthenes (ambassador to Sauvages)
changed his name to Tobagratas.
Similarly, Megasthenes to Milinda.
} shows exchange of culture
 8. Development of Indo-Hellenic culture.
(eg) Gedeh, Amratal, etc.
Buddhist chanting is UNESCO Intangible
Heritage.
 9. universities along trade routes -
Nalanda, Taxila - spread of ideas.
 10. Uolas; presence in Iran, Cambodia, Indonesia, etc.
↓
construction of temples, etc.
- Thus, over time, all kingdoms have played a role,
reflection of which is India's deep civilizational ties

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2. भारत छोड़ो आंदोलन वर्ग विभाजन से परे एक जन आंदोलन था, लेकिन यह महिला नेतृत्व ही था जिसने स्पष्ट छाप छोड़ी। विश्लेषण कीजिए।
 The Quit India movement was a people's movement cutting across the class divides but it was the women's leadership that left a clear mark. Analyse.
 (150 शब्दों में उत्तर दीजिए) 10 अंक
 (Answer in 150 words) 10 marks.

The Quit India Movement was launched in 1942, with the call "Do or Die" - to free India completely from colonial rule.

Cutting across class divides

1. Participation of women.
2.

Rural urban participation
 +
 Rural - urban linkages

 - (ie) crackdown in urban areas led to movement shifting to semi-urban areas, supported by rural areas.
 - (eg) Solapur - led by YB Chavan, etc.
3. Participation of workers + participation of industrialists and to an

Participation of women, and their leadership

1. Kasturba Gandhi
 - moral leadership after arrest of Gandhiji
 - led protests, etc

2. Kamala Devi Chattopadhyay:

→ convinced Gandhiji about the need to
make women equal partners in
the national struggle

3. Sarojini Naidu:

→ political ideas

→ poems and books written from jail

4. Sucheta Kripalani:

worked towards Hindu-Muslim unity and
ensuring participation of Muslims

5. Amna Baf Ali: Hoisted flag at Kowalia tank

6. Usha Mehta: underground radio

7. Sunehri Narayjee: helped coordinate activities
of industrialists

8. Rajkumari Amrit Kaur: demand for
universal suffrage

9. Kanaklata Barua and Matangini Hazra:
(age 17) (age 73)

Brouadi Mamma, honorable president

recently recognized her contribution.

They were shot down for holding national flag

They showed immense courage - did not let go
of flag even after getting shot -

they themselves fell down, but didn't
let the flag fall.

3. स्वतंत्रता के पश्चात् के भारत की पहचान विज्ञान और प्रौद्योगिकी के क्षेत्र में इसकी उल्लेखनीय प्रगति रही है। इस काल में हुए वैज्ञानिक विकास ने भारत को किस हद तक आधुनिकता के पथ पर अग्रसर किया?

(150 शब्दों में उत्तर दीजिए) 10 अंक

'The hallmark of post-Independent India has been its remarkable strides in science and technology'. To what extent did scientific development during this period put India on the path of modernity?

(Answer in 150 words) 10 marks

Scientific development has, to a significant extent put India on the path of modernity, across all frontiers of science.

(I) Space tech → contribution of brilliant scientists such as Vikram Sarabhai, etc.

→ role in remote sensing, communication, defence, etc.

(II) nuclear tech:

→ nuclear deterrence key pillar of modern warfare

→ other applications: healthcare, etc. electricity.

→ Hemmi Bhabha, etc.

(III) Agriculture:

→ HYV (high yielding varieties): Swaminathan, etc.

→ Janaki Ammal: hybrid sugarcane variety,

↓
yield $(2x +)$

→ currier: animal husbandry, Amul, etc.

(IV) : Statistics :

- Mahalanobis, etc
- scientific foundation for planned growth
- "Mahalanobis norm" - statistical tool
↓
used in Machine Learning

(V) : Industrial research :

- Shankar Swarup Bhatnagar, etc
- fertilizer indigenisation, alloys, iron and steel, etc

(VI) : Biological and medical research :

- (Eg) Hargobind Khurana, etc
- protein synthesis; mRNA vaccines, etc
↓
led to quick development of 4
vaccines during COVID-19

(VII) : Environment :

- bird survey designed by Salim Ali -
used globally, etc.

(VIII) : Defence Research :

- Ahmanirbhartha: Dr Kalam
missile development
- warethy: 5th gen fighter jets, etc

Thus, across all sectors, tech has helped in growth

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4. अन्य क्षेत्रों में जल संकट की समस्या को हल करने के लिए नदियों को आपस में जोड़ने की व्यवहार्यता पर चर्चा कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
Discuss the feasibility of Interlinking rivers to resolve the issue of water stress in other regions.
(Answer in 150 words) 10 marks

Feasibility of rivers will help solve several of India's interconnected issues. Hence, budget-2022 announced interlinking for

Southern rivers: Krishna - Godavari, Krishna - Pennar, Pennar - Kaveri. (East coast)

Advantages:

- Flood and drought control
 ↓
 16% area prone to floody
 ↓
 68% agri area prone to drought
- Irrigation ~ currently only 52% area irrigated
- inland navigation → reduced logistics cost
 ↓
 better competitiveness
- Tourism, hyans electricity, etc

Yet, there are various challenges

- prohibitatively high cost ~ 1500 billion \$
 ~ 1.5 billion \$
 ~ 40% GDP
- interconnecting rivers of north to south would

involve a transfer of 130 BCM of water

↓
no precedent of such a large
interlinking anywhere globally

3. requirement of 4000 - 5000 dams

↓
requires significant forest land to be
submerged

↓
ecological destruction

4. Issues of rehabilitation of displaced population

5. elevation issue;

northern plains ~ 300m above sea level
peninsula ~ 900 m above sea level

↓
need 100 GW of electricity to pump

water

↓
wastage of electricity

6. inter-state; cross-border river disputes

Thus, (in view of challenges,
way forward

1. decentralization of water governance

2. interlinking projects on small scale
(eg) Kosi - Mechi, etc

3. fixed water supply, circular economy, water + cities,
(etc)

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5.

कोयला आधारित विद्युत संयंत्रों से नवीकरणीय ऊर्जा उत्पादन की ओर गमन का संरचनात्मक परिवर्तन कोयला समृद्ध राज्यों में मानव विकास को कैसे प्रभावित करेगा?
 (150 शब्दों में उत्तर दीजिए) 10 अंक
 How will the structural shift from coal-based power plants to renewable energy generation impact human development in coal-bearing states?
 (Answer in 150 words) 10 marks

There is significant dependence on coal producing regions on coal, for their economy. Hence, structural shift from coal to renewable will have significant impact on human dev of coal producing states.

Cons:

(A)

employment:

1. coal industry employs 36 lakh ~~36 cr~~ workers.
2. However, in states such as Jharkhand, contribution of coal to work force is 8% of Indian work force.
3. even higher in certain districts.
4. loss of employment will adversely impact education, health, etc.

(B)

finances:

1. Coal India annually pays ₹ 50000 cr to District Mineral Foundations (DMF).

2. Start from that ≈ 20000 cr to Union govt as taxes
3. further amount to state govt as taxes
4. (ie) $\approx 3\%$ of Govt revenue - from coal
5. Govt expenditure on health, education is less than that
6. Thus, major challenges for financing human development schemes

- (iii) CSR spending by coal India - on hospitals, etc.
- (iv) pensioned workforce.

(v):

1. No resource curse - (ie) renewable energy more decentralized
 ↓
 benefits to larger number of people
2. no resource curse \Rightarrow less incentive for mafia, etc
 ↓
 better law and order
3. less pollution
 ↓
 better health outcomes, etc.

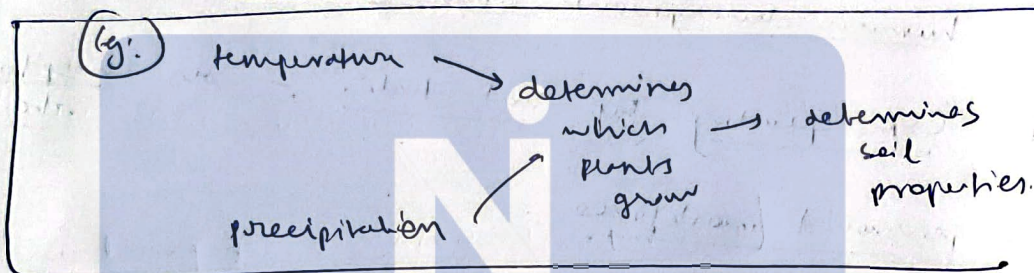
Thus: structural shift away from coal will lead to short term challenges, long term benefits

Way forward: utilize DMF money to future-proof coal districts.

6. तापमान और वर्षण किस सीमा तक मृदा के गुणधर्मों को निर्धारित करने वाले सबसे महत्वपूर्ण कारक हैं?
 (150 शब्दों में उत्तर दीजिए) 10 अंक
 To what extent temperature and precipitation are the most important factors that determine soil properties?
 (Answer in 150 words) 10 marks

Temperature and precipitation are the 2
most important factors that determine
soil property

Both work together to impact soil,



Hence, their impact is discussed together:

1. determine vegetation, which in turn
determines fertility of soil
 (ie, nutrient composition)

2. determine soil moisture levels

4. (ie) precipitation → increases
 temperature → decreases

3. determine soil microbiome

(ie) which micro-organisms thrive

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4. Determine organic and inorganic composition

(Eg:) rains \rightarrow acidic oxides dissolve and go away

\downarrow
 Fe, Iron and Aluminium oxides left.

(Eg:) $\sim 30^\circ$ temperature \rightarrow soil texture suitable for

Iron and Aluminium oxides

5. determine physical properties:

(PH), Organic Carbon, electrical conductivity

6. determine level of soil erosion.

(Eg:) high erosion in tropical rainforests due to high temp, rainfall.

7. determine rate of weathering

\downarrow
 determine rate of layering

and is on _____

However, there are other factors too - slope,

parent material, etc

Soil is one of our biggest storehouses of greenhouse

gas, and studying it is essential to combat climate change

7. अरब सागर में प्रचंड और तीव्र चक्रवात एक नियमित घटना क्यों बनते जा रहे हैं? उदाहरणों सहित सिद्ध कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक
 Why are severe and intense cyclones becoming a regular phenomenon in the Arabian Sea? Substantiate with examples. (Answer in 150 words) 10 marks

In the last 5 years, for the first time in last 3 decades, number of cyclones in Arabian Sea has been greater than number of cyclones in Bay of Bengal.

There are various reasons for this

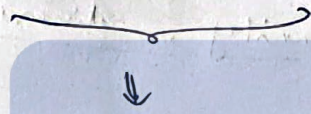
1. High Sea Surface Temperature of Arabian Sea, due to global warming increased 1.2°C from pre-industrial levels.
2. Stronger development of cyclones possible in Arabian Sea, due to higher depth of high temperature water.

(eg) normally it takes 7 days for cyclone to develop in Bay of Bengal.
 BUT 10 days in Arabian Sea developed in just 2 days.

3. Cyclones blowing into Arabian sea from Bay of Bengal due to Easterlies

(eg.) Okchi cyclone
(Chhachh berrala)

4. La Nina + Positive Indian Ocean Dipole



further amplified effect in last few years.

(eg.) Nicarga, etc.

5. Mixing Marine Heat waves in Arabian sea

way forward:

1. focus on National cyclone disaster Mitigation Program

on western coast.

2. Odisha model → cyclone shelters
→ early warning systems.

8. भारत में सांस्कृतिक विविधता के संदर्भ में, क्या हम शेष भारत की तुलना में दक्षिणी राज्यों को विशिष्ट सांस्कृतिक इकाइयों मान सकते हैं? अपने दृष्टिकोण को औचित्य को सिद्ध कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक
In the context of cultural diversity in India, can we consider Southern states as distinct cultural units in comparison to the rest of India? Substantiate your view. (Answer in 150 words) 10 marks.

NO, the cultural diversity of India is unique,
there is cultural diversity at each and every location, within the umbrella of one cultural unit → unity
this leads to unity in diversity.

This is evidenced by:

- diversity in culture in each and every city/town in south India, just as it is there in East/West/ north
- multilingual societies, multi regional societies, multi religious societies, etc co-existing, as in other places.
- some underlying cultural themes and foundation,
(eg) importance of family, personal idea of God

4. Blend of spirituality and nationalism
as in Maith
5. Blend of tradition and modernity
6. Gender, caste divisions
7. important role of temple as an institution / other religious places of worship.

8. Culture of respect to elders

9. culture of tolerance, assimilation, syncretism

(Eg:) towards forest dwelling communities

10. Similar themes in dance, paintings, music, etc

(Eg:) dance: themes from epics Ramayana and Mahabharata

→ themes of Nihru Shakti in Kuchipudi and Sattriya

11. Similar themes in sculptures,

(Eg) time and space, of 1000 of years apart,

exact same sculptures have been found such as Vareha, Saptamatruka, etc

Thus, the foundational culture in India is represented by unity in diversity.

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9. गरीबी और जनसंख्या वृद्धि एक दुष्चक्र में फँसी हुई है, जहाँ गरीबी व्यक्तियों की इरा चक्र से मुक्त होने की क्षमता को सीमित करती है, जबकि जनसंख्या वृद्धि संसाधनों पर दबाव डालती है। विवेचन कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Poverty and population growth are locked in a vicious cycle, where poverty restricts individuals' ability to break free from the cycle, while population growth strains resources. Discuss.

(Answer in 150 words) 10 marks.

Developing countries are said to be stuck in middle income trap, growing old before they grow rich, and before eradication of all poverty.

Poverty impact on population growth

1. poverty → poor health → high IMR, MMR
 ↓
 so that there is chance of survival of few ← greater number of kids born
2. poverty → less awareness of family planning → faster population growth
3. poverty → regressive social practices → son-preference
 ↓
 skewed sex ratio
4. poverty → regional, religious inequalities → differing rate of population growth of different communities

5. poverty → poor edu → less awareness of benefits of small family
 ↓
 population growth.

Population growth leading to poverty:

1. high TFR → higher strain on resources
 ↓
 poverty ← low resource per capita

2. High population growth → conflicts for 'resource capture'
 ↓
 poverty ← inequality / law and order issues.

3. High TFR → less focus on health and edu of children
 ↓
vicious cycle continues

Thus: there is a vicious cycle, one reinforcing the other

Counter view:

1. Demographic dividend provides opportunity for growth,
2. if Bare necessities are addressed.

Way forward:

Addressing Bare necessities of all (water, sanitation, electricity, housing) -
 to reap demographic dividend.

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10.

शिक्षा के अंतर्राष्ट्रीयकरण में भारत के पास एक समृद्ध विरासत है। इस संदर्भ में शिक्षा के अंतर्राष्ट्रीयकरण पर हाल ही में दिया जा रहा बल समाज को कैसे प्रभावित करेगा और सांस्कृतिक आदान-प्रदान को कौन से बढ़ावा देगा? (150 शब्दों में उत्तर दीजिए) 10 अंक

India has a rich heritage in the internationalization of education. In this context how will the recent push for the 'internationalization of education' impact society and foster cultural exchange? (Answer in 150 words) 10 marks.

Internationalization of education in India dates to the spread of democracy itself, spread of ideas of Vedas, Buddhism, etc across the world.

was formalized via -

(i)

Taxila:

→ an ancient silk route

→ Buddhist literature: "all subjects are taught at Taxila"

→ students such as Charaka, Chandragupta Maurya, etc.

(ii)

Nalanda, Vikramaditya, etc

→ formal university network

→ 60+ subjects

→ Chinese, Tibetan scholars such as Hiuen Tsang

Recent internationalization push

1. Indian univer cities abroad

2. foreign universities in India

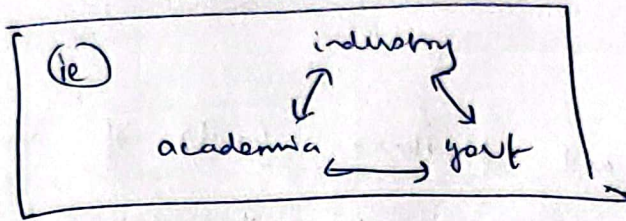
(9)

11T marks

cultural impact, and impact on society:

1. more research and innovation culture

2. culture of greater collaboration



3. greater participation of universities in local and social problems

↓

Hub and spoke model.

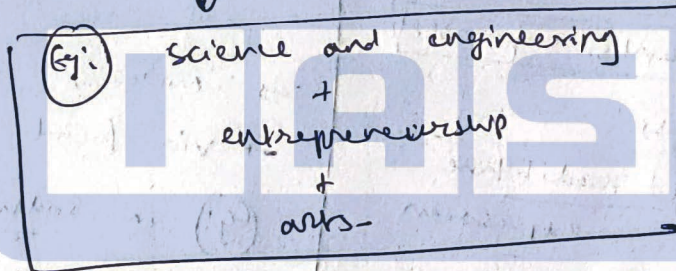
- (Eg.) via Uttarakhand Abhiyan.
- (Eg.) MSME - university linkages, as in USA

4. Spread of Indian culture.

(Eg.) Juga, etc

5. Multidisciplinary education

↓



6. more well rounded and skilled youth

7. adoption of best practices from abroad

Thus: it will have a positive impact on society, and lead to greater focus

on societal problems and innovation

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11. यद्यपि गांधार और मथुरा कला के बीच कई अंतर थे, तथापि इन दोनों ने अमरावती कला शैली (अमरावती स्कूल ऑफ आर्ट) को पर्याप्त रूप से प्रभावित किया। सविस्तर वर्णन कीजिए।
 (250 शब्दों में उत्तर दीजिए) 15 अंक
 'Although there were many differences between the Gandhara and Mathura art, they considerably influenced the Amravati school of art.' Elaborate.
 (Answer in 250 words) 15 Marks

Gandhara and Mathura schools of art emerged in the ~~1st~~ 1st BCE to 2nd CE, as schools of sculpture making.

Differences

Gandhara	Mathura
<p>1. <u>Anatomy!</u></p> <ul style="list-style-type: none"> → more muscular → more accurate 	<ul style="list-style-type: none"> → less.
<p>2. <u>Sentiments expressed</u></p> <ul style="list-style-type: none"> → less → mild meditative expression 	<ul style="list-style-type: none"> → more → via facial expressions (eg!) in Bodhisattvas
<p>3. <u>Focus on external beauty</u></p> <p>(eg!) <u>inspired by sculptures of Greek gods.</u></p>	<p><u>focus on internal beauty</u></p> <p>via <u>smile, sentiments, etc.</u></p>
<p>4. <u>significant foreign influence</u></p> <p><u>Greek, Roman, Central Asian</u></p>	<p><u>minimal foreign influence</u></p>

5. 2 layered :
 layer 1: stone
 layer 2: plaster/stucco
 ↓
 to give better detailing.

usually single layered.

6. Material used :
grey sandstone
blue-green mica schist

Whit-spotted red sandstone
 +
bronze

7. drapery :
femen inspired -
"boga" like

only left chest draped.
 (usually)

8. Primarily only
Buddhist art

Buddhist & Hindu + secular art.

(eg) Hindu gods with ayudhas

(eg) secular images such as King Kanishka.

9. usually based on narrative art from Jatakas

usually independent sculptures

10. Halo: minimal halo

wide halo.

thus: there were many differences.

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Yet, they both influenced Amravati art as
(used white marble)

Gandhara influence:

1. More detailed sculpting
2. "finching" to give fine detailing
3. accurate anatomy.
4. narrative art
(eg) from Jataka tales.
5. minimal halo

Mathura influence:

1. Religious + secular images
2. focus on internal beauty
3. wide smile, facial expressions
4. use of ayudhas, etc.

Thus: Amravati art was influenced by both,

and went on to impact Sarnath (Chaul) in

the future.

The legacy continues to this day -

the sculpture of Nataraj by 34 generation
old family for 420 has influences of Amravati Art.

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6. Impact on women:

- adverse impact on women, due to their inability to take part in industrial workforce (due to male dominated society)
- this led to significant stress for women in urban areas

7. it led to "ruralization of elderly".

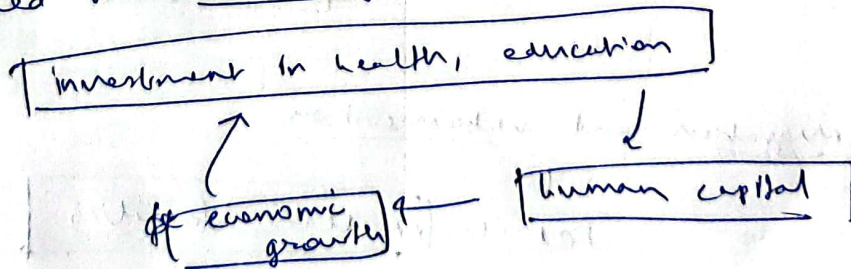
Economic Impact:

1. Greater liberty, agency

- now, people were earning and spending on their own.
- workers who worked in factories were usually former peasants (landless), at the mercy of feudal system.

2. This had profound impact on Economic transformation

3. This led to creation of virtuous cycle.



4. it led to creation of infra, transport, etc

5. lifted people out of poverty.

6. it led to forced deindustrialization and deurbanization of British colonies

Cultural impact -

1. demand for entertainment and leisure
2. rise of modern cinema.
3. rise of theatres
4. rise of restaurants, amusement parks
5. rise of radio, music etc.

The IF in Britain was based on a policy of protectionism, against its colonies,

especially India

↓
This IF in India particularly had the worst economic and socio-cultural impact on India,

In fact, it became the driving force for Britain to cement India as a colony.

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13. उन्नीसवीं सदी में पिछड़े पारंपरिक तत्वों और औपनिवेशिक संस्कृति के आधिपत्य के खिलाफ सामाजिक सुधार और वैचारिक संघर्ष ने एक विशिष्ट सांस्कृतिक पहचान और राष्ट्रीय चेतना के उदय को कैसे प्रभावित किया? (250 शब्दों में उत्तर दीजिए) 15 अंक

How did the social reform and ideological struggle against the backward traditional elements and hegemony of colonial culture in the nineteenth century influence the emergence of a distinct cultural identity and national consciousness? (Answer in 250 words) 15 marks.



How social reform, struggle against traditional elements led to emergence of this identity

Reform / Struggle against traditional elements	Emergence of this identity
1. • Laja Ram Mohan Roy's efforts via Brahmo Samaj	→ realization that regressive practices are not sanctioned by vedes.

	<p>→ festival of <u>Vedic literature</u></p>
<p>2. <u>Rajawand Saraswati</u> and <u>Prja Samaj</u></p>	<p>→ ideas of <u>Swadeshi</u> and <u>Krishnaam</u></p> <p>→ <u>modern education</u> in consonance with <u>traditional values</u></p> <p>(eg.) DAV schools.</p>
<p>3. <u>Ishwar Chandra Vidya Sagar</u>, <u>Savitribai Phule</u></p>	<p>→ empowerment of <u>women</u></p> <p>→ ideas of <u>equality</u></p>
<p>4. <u>Jyotiba Phule</u> and <u>anti-caste movements</u></p>	<p>→ <u>reform</u> in <u>society</u></p>
<p>5. <u>Tilak</u>: protests against British interference in Indian culture</p>	<p>→ <u>reform</u> by <u>society itself</u></p> <p>→ <u>indigenisation</u> of <u>socio-reform</u>.</p>
<p>6. <u>Sriam Vivekanandi</u> - <u>Neo-vedanta</u></p>	<p>→ ideas of:</p> <p>"service to society is service to God"</p> <p>→ <u>self-respect</u>.</p>
<p>7. <u>Tager</u></p>	<p><u>Humanism</u>, <u>democracy</u></p>

NEXT IAS

How struggle against hegemony of colonial culture led to this identity

Struggle against hegemony of colonial culture

Emergence of this identity

1. Imposition of foreign education

Rise of Indian education

(eg:) Bengal National College, Kashi Vidya peeth, etc.

2. Imposition of foreign clothes

kurdi, chachha, etc.

3. Economic exploitation

Economic critique

(eg:) Dadabhai's "poverty and unbritish rule in India"

4. Common and exploitative laws

(eg:) IPC, etc.

attempts at drafting our law, constitution

(eg:) Swaraj Bill 1895

↓
culture of democracy

5. divide and rule policy

unity ⁱⁿ diversity

6. forced conversions

Revival of tribal culture

7. advertisements of liquor

icketing by women

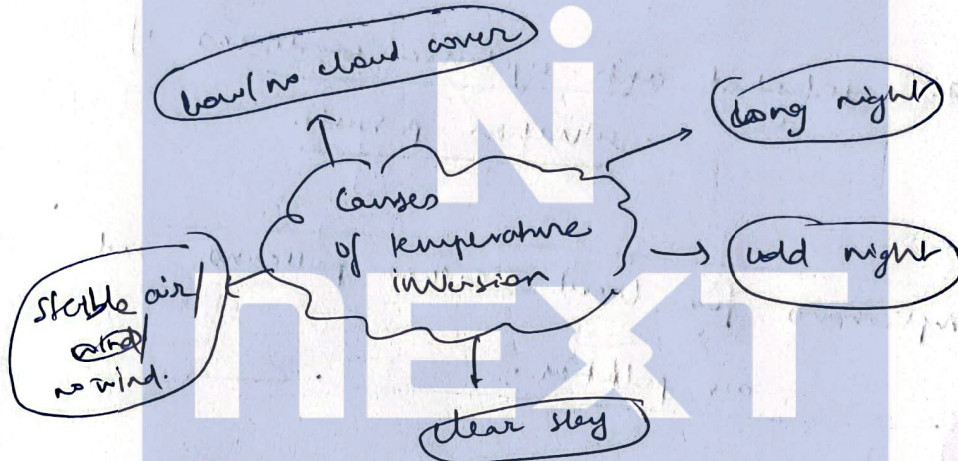
thru: This national identity is still relevant for new India

14.

तापमान व्युत्क्रमण वायुमंडलीय दशाओं को कैसे प्रभावित करता है और स्थानीय मौसम प्रतिरूप और वायु प्रदूषण स्तरों के लिए इसके क्या निहितार्थ हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

How does temperature inversion affect atmospheric conditions and what are its implications for local weather patterns and air pollution levels? (Answer in 250 words) 15 Marks

Temperature inversion is the phenomenon when temperature of the atmosphere closer to surface is colder than that away from the surface, (ie) contrary to ordinary lapse rate.



impact of temperature inversion on atmospheric conditions

1. fog in lower atmosphere
2. sudden heavy rain if temperature decreases suddenly
3. dew on ground, plants, etc
4. in himalayan areas, the dew drops freeze
 ↓
leading to crop loss

NEXT IAS

Candidates write on this

5. "dome effect"

↓
no heat/cold dispersion

6. high "conductive cooling"

+
low "radiative heating"

↓
of lower atmosphere.

7.1 potential anti-cyclonic conditions if situation persists.

implications for local weather patterns and air pollution:

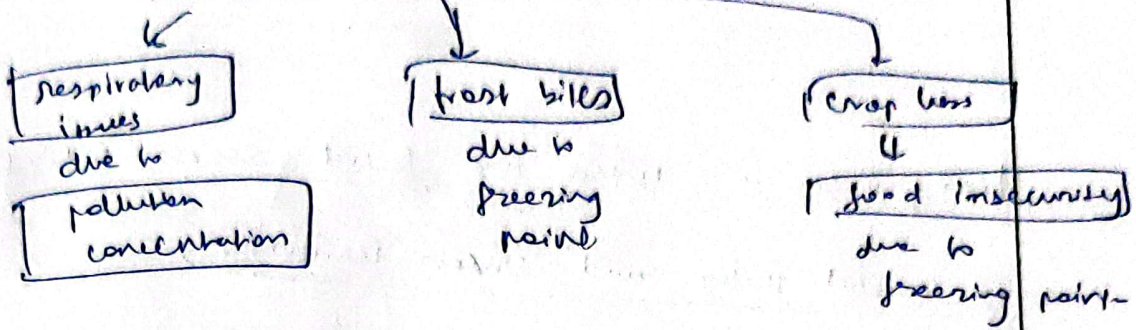
1. High pressure formation.
↓
outflow of air from area of temperature inversion
→ no incoming wind

2. accumulation of pollutants
↓
formation of smog

3. photochemical smog formation - if there is presence of industrial volatile organic compounds

4. low visibility - especially mountains

5. health impact



6. "föhn effect"

↓
no cold dissipation / heat dissipation

Ans:

These effects are most pronounced in

mountain valleys and subtropical cities
such as BeW.

NEXT IAS

Candidates write on this side

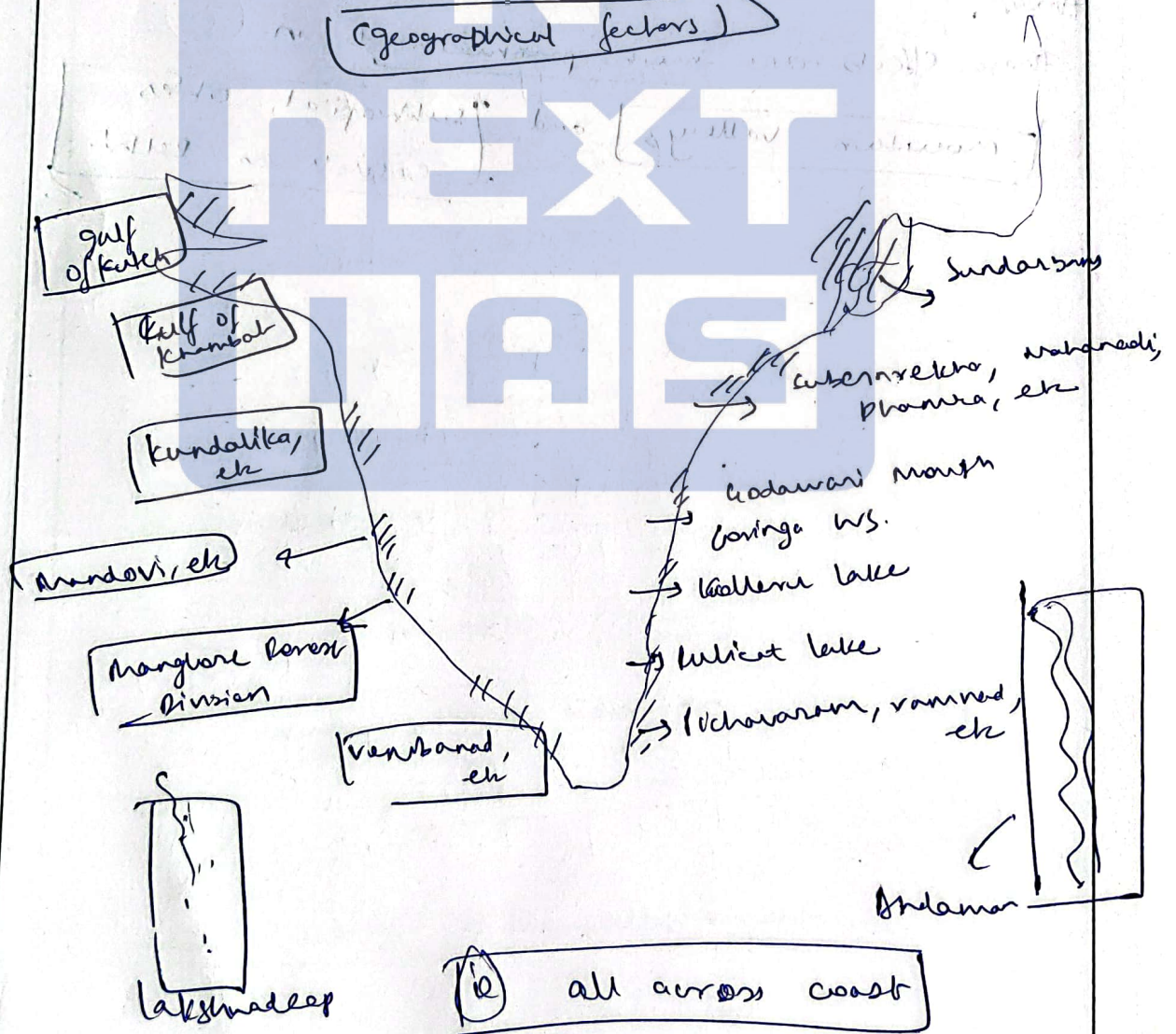
15. भारत में मैंग्रोव वनस्पति के लिए कौन से भौगोलिक कारक उत्तरदायी हैं? जलवायु परिवर्तन भारत में मैंग्रोव वनस्पति के लिए किस प्रकार खतरा उत्पन्न करता है? (250 शब्दों में उत्तर दीजिए) 15 अंक

What are the geographical factors responsible for mangrove vegetation in India? How does climate change pose a threat to mangrove vegetation in India? (Answer in 250 words) 15 Marks

Mangroves in India are found across India's
13 coastal states and Union territories,

along:

- inter tidal zones, estuaries, lagoon lakes,
- backwaters, mud flat, coastal lakes,
- river mouths and low lying coasts i.
- (Location factors)
- (Geographical factors)



factors for geographical distribution, with examples

1. river mouth (delta) (Eg.) Mahanadi, Subarnarekha, etc (Odisha)
2. estuaries (Eg.) Kandolika Revdanda, (Maharashtra) Nagolan, etc
3. river flats (Eg.) Baran of Kutch
4. low lying coasts (Eg.) Munroe Island, Kerala (sinking coast)
5. lagoon lake (Eg.) Vembarad
6. coastal lake (Eg.) Pulicat
7. backwaters (Eg.) Andaman
8. intertidal zones (Eg.) Lalchevadeep

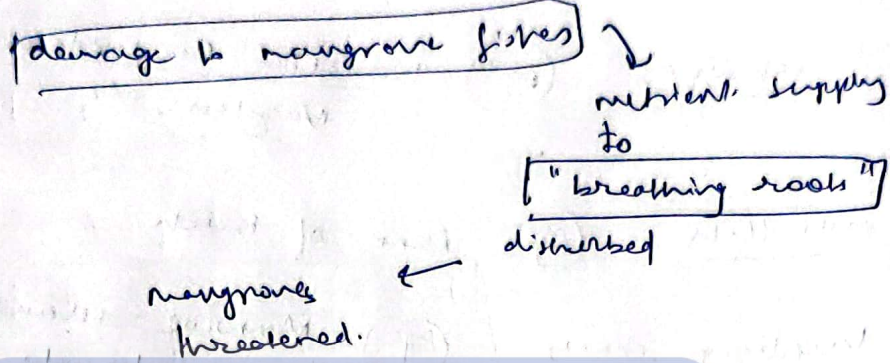
Climate change threats to mangroves

1. coastal erosion (Eg.) Munroe Island, Kerala.
2. deforestation of mangroves
3. coastal water intrusion
4. conditions unsustainable / inamical for viviparous reproduction (mangrove mode of reproduction)

NEXT IAS

5. Damage due to high temperatures

6. Disturb symbiotic mangrove ecosystems



7. via extreme events:

mangroves are first line of defence

(Es:) against cyclones like Amphan.

(Climate change will make extreme events more common)

Steps taken:

1. CRZ, GSZ norms.

2. NISHTI scheme

3. Mangrove Alliance for Climate at COP 27

Way forward:

1. comprehensive mangrove rehabilitation programs

2. involvement of local community

3

16.

चीनी उद्योग की अवस्थिति को प्रभावित करने वाले भौगोलिक और आर्थिक कारक कौन-कौन से हैं, और वे भारत और विश्व के विभिन्न भागों में इस उद्योग के विकास में किस प्रकार योगदान करते हैं?

(250 शब्दों में उत्तर दीजिए) 15 अंक

What are the geographical and economic factors that influence the location of the sugar industry, and how do they contribute to the growth of the industry in India and different parts of the world?

(Answer in 250 words) 15 Marks

Sugar is the 4th largest agricultural export item in India, and ethanol from sugar industry is key to decarbonization strategy.

Current sugar industry distribution

UP - 45%

MH - 25%

KN - 8%

Economic factors Geographical factors

1. "water loss" industry

↓
Cane loses water as it dries.

↓
more than 50% water lost.

↓
close to cane producing areas

2. max production in West Maharashtra

and West UP

↓
due to fertile soil (black (alluvial) respectively)

3. availability of water → for sugarcane crop
→ for sugar mill.

NEXT IAS

4. thus! area of soil moisture / dam / canal irrigation

5. temperature and precipitation

↓
[~ 25-30°]

↓
[~ 100 cm / irrigation]

Q. How they have contributed to growth

1. [Maharashtra, west UP - north Karnataka] - sugarcane growing regions

↓
access to raw materials.

2. fertile soil, access to water (dams / rains).

↓
sugarcane can be grown

(G:) Koyna dam in Maharashtra.

3. Internationally : Brazil : ideal climatic conditions for growth

↓
Sugar Industry

Economic factors

1. labour : for sugar mills
(cheap labour).

2. Cooperatives : (mills are often cooperatives)
(enabling environment)

3. Infra and transport network , [PROXIMITY to market]

4. Quota Policy:→ Cane Reservation Area:Every mill has to purchase from
nearby sugarcane farmers.→ Minimum distance rule:2 sugar mills can't be close to each
other(as they have to purchase from different
farms)These govt rules in Sugarcane Control Order
under ECR largely determine mill locations.5. access to capital.6. new: distance to OMCs (oil marketing
companies) for ethanol blending.

Thus these factors have contributed to growth

1. Mumbai, Delhi - largest markets in India2. UP - cheap labour available3. Capital easily available (proximity to
Mumbai, Delhi).4. Mumbai - close refineries↓
easy blending (etc)Thus: 5. Araril: ₹-100, ₹-80, etc.

Thus, there are variety of factors which contribute.

NEXT IAS

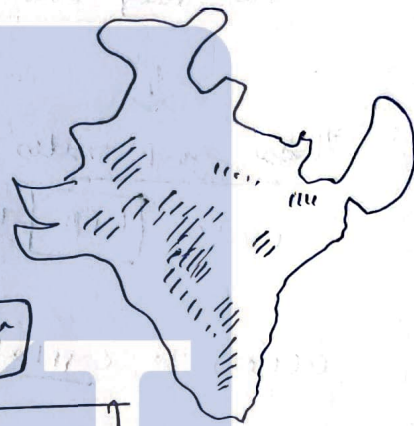
17. शुष्क और अर्ध-शुष्क क्षेत्रों में जल की कमी को दूर करने और कृषि उत्पादकता को अधिकतम करने के लिए, शुष्क-भूमि कृषि में उपयोग की जाने वाली मुख्य रणनीतियाँ क्या हैं? साथ ही, भारत में शुष्क-भूमि कृषि को बढ़ावा देने की आवश्यकता पर भी चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक
- What are the key strategies used in dryland farming to overcome water scarcity and maximize agricultural productivity in arid and semi-arid regions? Also, discuss the need to promote dryland farming in India. (Answer in 250 words) 15 Marks

Dry land farming is farming in semi-arid areas, areas which receive rainfall between 50 - 100 cm, with minimal / no irrigation.

irrigation

Areas of dryland farming in India

~ 30-40% cropped area in India



Crops grown in dryland farming in India

1. millets → jowar, bajra, ragi, etc
2. pulses → chickpea, moong, etc
3. oilseeds (if irrigation available)
4. cotton

Strategies used to overcome water scarcity

1. Preserving soil moisture - by mulching
2. (ii) ensuring some or the other soil cover at all times. (cover crops)

3. appropriate crop selection

(eg) millets.

4. rain water harvesting,

5. water banks and water use associations

(eg) Kellegon Siddhi, Hivore Saran, etc

Strategy to maximize yield.

1. Land management:

→ selection of appropriate area for sowing

→ crop rotation

(eg) legumes to restore soil fertility

→ tilage (zero tillage)

↓
to ensure soil moisture

2. fertilizer: less use

3. integrated pest management.

4. AGGRESSIVE WEED management.

↓
as weeds can prove to be disastrous,

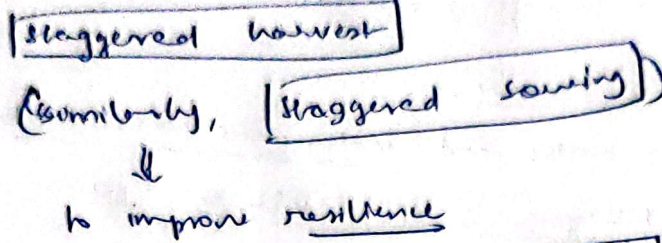
by bleeding away soil nutrients and
moisture.

5. cover crops :- to improve soil texture,
prevent soil erosion

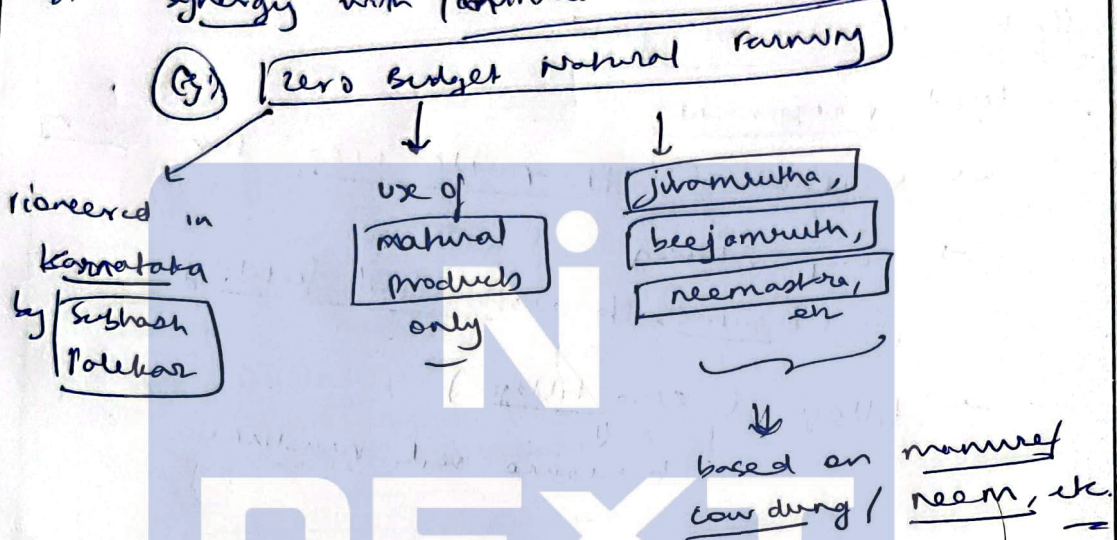
6. "Ban Meah Por Pedh" - bind soil better

(eg) Khejri - used in Rajasthan.

7. whole harvest :



8. synergy with Animal husbandry



Steps taken by govt :

1. National Innovations for Climate Resilient Agri (NICRA 2011)
2. Stratigya Krantikriti Krishi Padhati under Paramparagat Krishi Vikas Yojana
3. initiatives for millets ; krishi sanchayee, etc

Need to promote dryland farming

1. Climate Resilient Agri / Climate Smart Agri
2. revive / conserve "traditional landraces"
 (G) by Padma Shri Rohini Popere feed mother.
3. Food and nutritional security
4. doubling farmer incomes 1. irrigation, water deficit etc //

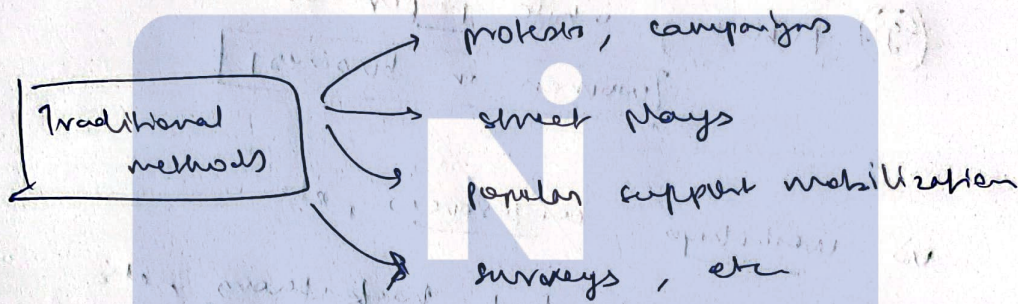
8. समकालीन महिला आंदोलन ने पारंपरिक पद्धतियों से परे विविध दृष्टिकोणों को कैसे सम्मिलित किया है? साथ ही, समकालीन महिला आंदोलन के अनूठे योगदान और चुनौतियों पर भी प्रकाश डालिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

How has the contemporary women's movement encompassed diverse approaches beyond traditional methods? Also, highlight the unique contribution and challenges of the contemporary women's movement.

(Answer in 250 words) 15 marks.

Recent times have seen cont women's movements such as Me Too, with demand for equality, safety, and justice.



new diverse approaches beyond traditional methods

1. Use of technology

for awareness → for mobilization

(Ex:) social media

↓
Me Too movement was primarily social media led.

2. Seeking judicial recourse, for justice

(Ex:) gymnasts sexual harassment case, USA
(Gimnare Bites, etc)

3. Research based and comprehensive

(Eg): new research paper based on
AI- and Natural Language Processing
↓
that analyzes gender bias and
gender roles in Bollywood movies

4. Advocacy based :

(Eg): publishing white paper on
women in business

5. via workshops, conferences, etc

(Eg): women in tech hackathons, etc.

6. demand for equal pay
and representation in higher management
politics, etc

Unique contribution of contemporary women movements

1. more nuanced and comprehensive, (ie)
they offer problem as well as solution.

(Eg): publishing white papers

↓
led to increased female hiring in Indian IT
companies; Infosys, TCS, have hired 250%
females in last few years

2. less reachability, more nature.

↳ take legal action,
willing to wait to get justice

3. provide avenue for empowerment of women

(eg:) women's hachathons

↳ demand for equality

↳ opportunity for thousands of women to upskill

↳ This has led to tech companies directly hiring from these hachathons.

Challenges faced by contemporary women movements

1. legal system is slow

(eg:) took 3+ years for Nirbhaya case to close

2. lack of political representation

(eg:) ~14% Indian MPs are women

3. objectification of women in public places

3 4. dual burden of home and work

way forward

↳ involve women in urban planning
↳ faster justice (eg:) Andhra Disth Act

NEXT IAS

19.

क्या आपको लगता है कि आधुनिकीकरण की ताकतें, जिन्होंने भारतीय समाज में सामाजिक बुराइयों के उन्मूलन को उत्तेजित किया, ने हमारे सांस्कृतिक मूल्यों और लोकतंत्र को भी खतरे में डाल दिया है?

(250 शब्दों में उत्तर दीजिए) 15 अंक

Do you think that the forces of modernization that catalyzed the eradication of social evils in Indian society have also threatened our cultural values and ethos? (Answer in 150 words) 15 marks.

Globalization ~~has~~ and internal reform processes in our society have significantly catalyzed eradication of social evils, however, to some extent, have also threatened our cultural values.

eradication of social evils

(forces of modernization

social evils eradicated / progress made.

1. women empowerment

→ lack of agency to women

→ women GDP now higher
 (eg.) man male GDP at
all levels of education

→ combated child marriage,
dowry, etc

→ property rights to
women (significantly)

→ stricter action for
sexual violence

2. Technology

- democratization of info
- access of opportunities to marginalized communities

(Eg.) Technology, such as hearing aids, braille, etc is leading to gradual integration of disabled.

3. UPA reforms.

→ broke link between occupation and caste

→ single biggest caste reform event in India

→ led to social mobility

4. emerging attitudes towards marriage, gender, etc

→ right to choose partner

→ Transgender Protection Act 2019

⊗

However, forces of modernization weakening our cultural values

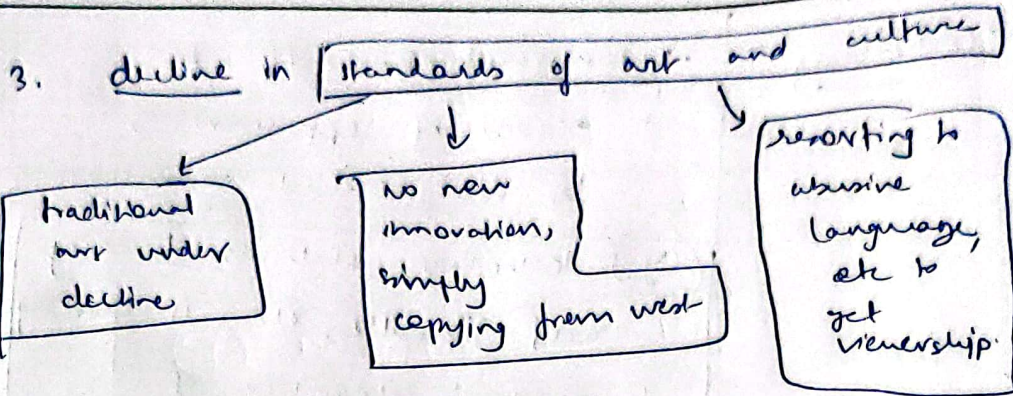
1. "Blind westernization"

↓
Misunderstanding that modernization is the same as westernization

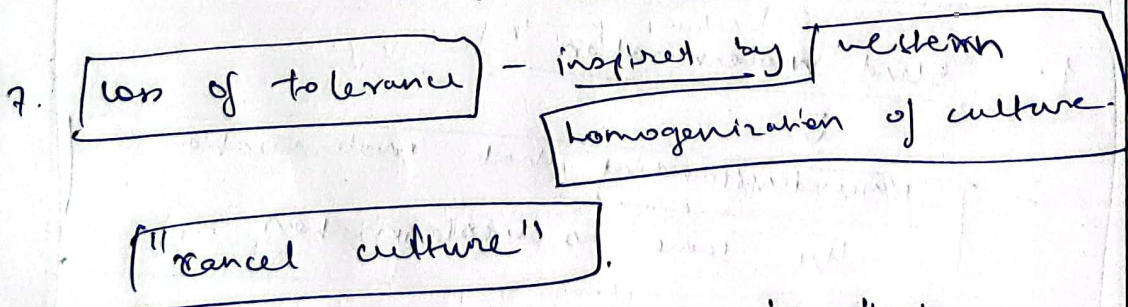
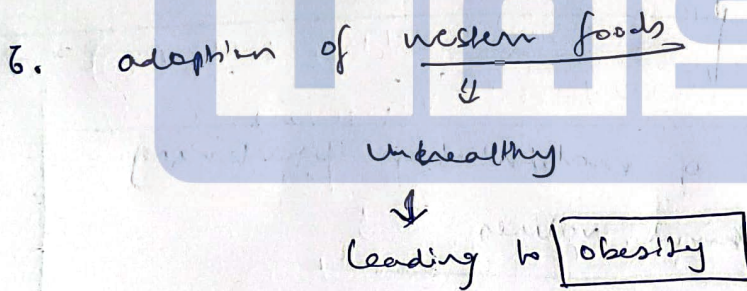
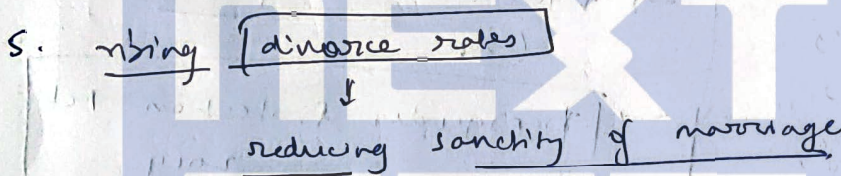
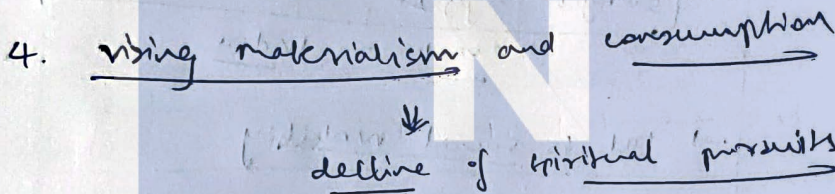
2. Adoption of evils of alcoholism, drug abuse, etc

NEXT IAS

Candidates must write on this side



(Eg:) children today, know about characters of Avengers movie, but not Amar Chitra Katha



Thus, we need to minimize the ill effects, modernize without westernizing, as the issues are due to westernization, not modernization

0.

भारत में राज्यों के संदर्भ में क्षेत्रीय विषमता और क्षेत्रीयता की भावनाओं के बीच संबंधों का मूल्यांकन कीजिए। क्या क्षेत्रवाद राष्ट्रवाद के विचार का विरोधी है? (250 शब्दों में उत्तर दीजिए) 15 अंक

In the context of states in India evaluate the relationship between regional disparity and sentiments of regionalism. Is regionalism antagonistic to the idea of nationalism? (Answer in 150 words) 15 marks.

Regionalism is a concept of political geography,

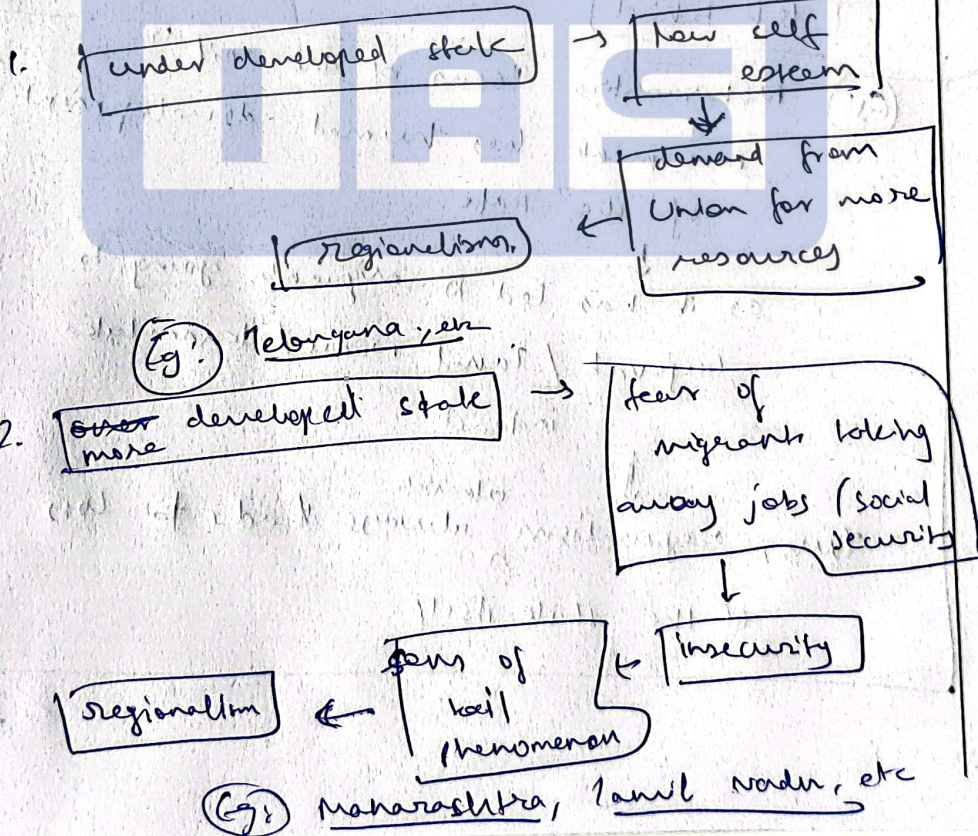
a provincial form of sub-nationalism.

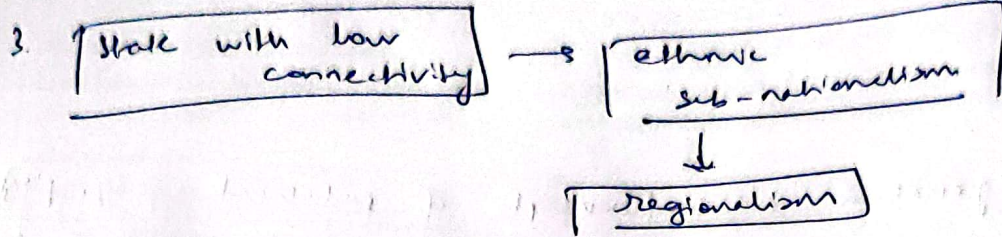
that seeks to politicize territorial predicaments,

regional issues to advance them.

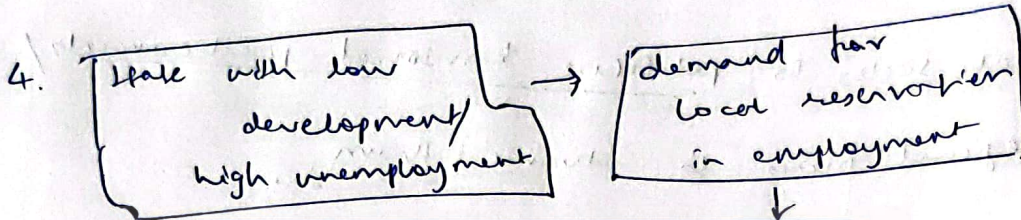
Regional disparity is disparity across states of economic / developmental parameters.

Sometimes, regional disparity leads to regionalism.



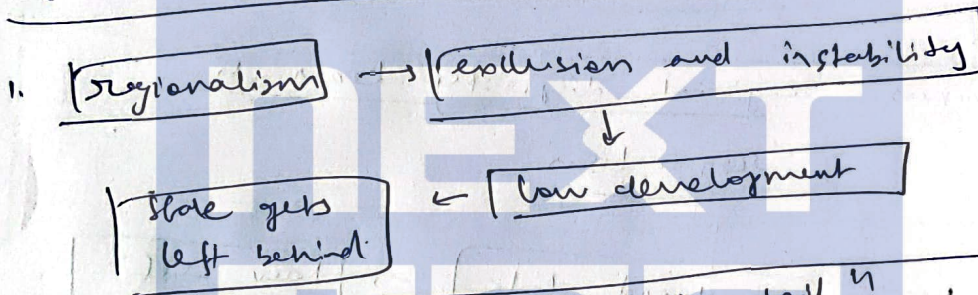


(eg:) North Eastern States, etc



(eg:) hill states

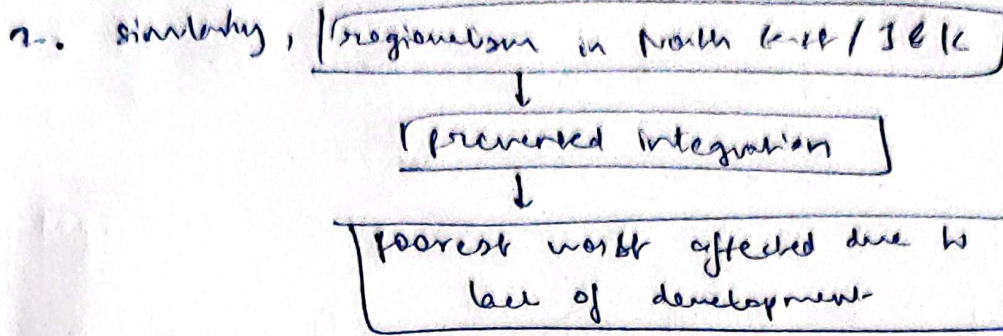
regionalism can also lead to regional disparity



(eg:) Maharashtra movement of the state "sons of the soil" has harmed development

as it has led to migrants going to Gujarat / Tamil Nadu / Karnataka instead

Thus, regionalism almost always leads to loss of the state itself.



no, regionalism is not antagonistic
to nationalism always

(+) In the positive sense, it can complement
and become a force multiplier for
nationalism,

In the negative sense though, it is simply
a way of abusing the most vulnerable
in societies

Positive:

1. competitive federalism.

(Gj) SDI index → social development

(Gj) APF → development of most
backward districts

2. To fight for legitimate rights

(Gj) water supply.

Negative:

1. ethnic (linguistic) exclusion

2. secessionism.

16th Amendment

These negative regionalism must be suppressed
immediately