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(To be filled by candidate)

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Roll No. : PTTP220360

Registration Number : ..... Date of Examination : 22/01/23

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.

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

.....

SUBJECT/PAPER
GENERAL STUDIES

Invigilator's Sign. : .....

[To be filled by the STUDENT]

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

[To be filled by the EXAMINER]

Evaluator's response

(For filling by Examiners only)

Evaluator Code :

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

Signature

MACRO COMMENTS

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3. Write legibly and neatly. Do not write in bad/illegible handwritings.
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5. If you wish to cancel any work, draw your pen through it or write "Cancelled" across it, otherwise it may be evaluated.
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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.

Since Harappan civilisation to present times, the quest to discover economic trade routes helped in exchange of ideas, people & their culture

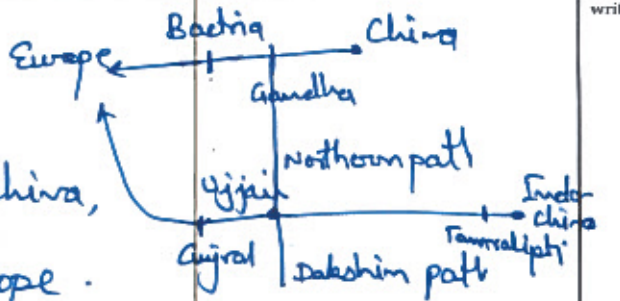


Important ancient trade route and their cultural significance :

i) Harappan (IVC) - Mesopotamia route →
- Lothal served as important dockyard
- Various seals and metal art form are found in both region sharing culture
- Sharing of sculpture making art, playcard, dices among others.

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ii) **Silk route**



- Trade route between China, India and Europe.
- Gandhara Art form
- British culture arrived in India through Cape of Good Hope when Vascodigama arrived in 1498

iii) **Vijayanagar links with Europe and Middle East**

- Trade of horses, dates, wines promoted a elitism culture
- sharing of text culture by Abdul Razzaq, Nicolo Conti, Bernier, Tavernier (Diamond Merchant)

iv) **Indo-China trade route**:

Chola rulers established good cultural link (Hindu temples) in Suvarnagiri with an earlier quest of Economic trade.

Trade routes are carriers of belief, practice, tradition along with establishing living bridges i.e. Diaspora.

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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। (150 शब्दों में उत्तर दीजिए) 10 अंक

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. (Answer in 150 words) 10 marks.

On 8th August 1942, Quit India movement started from Gwalia Tank, Mumbai with Gandhiji's call of "Do or Die". It was a huge mass movement in absence of famous leader, hosted, managed by women and people cutting across classes.

Quit India movement's class cutting features:

i) Students, capitalist, workers, rural, urban all participated in it.

Eg Students and professor of Bombay university marked the huge participation

ii) Formation of parallel government showing local leadership

Eg
- Balia → Chittu pandey
- Satara → Nana Patil
- Tamluk → Satish Sangant

Candidates must not write on this margin

iii) People leading themselves in absence of major leader who all got arrested on 9th August 1942.

iv) Common grivances against the Cripps Mission proposals and forced participation in World war II

v) Key role played by Biju Patnaik (Airforce pilot) in delivering messages, Jaiprakash Narain (socialist), Ram Manohar Lohia in guiding masses.

Key roles of Women:

i) Underground activities by women in making protest strong.

Eg Sucheta Kriplani, Aruna Asaf Ali

ii) Undergroup radio communication by Usha Mehta.

iii) Various women groups like Indian Women Congress (Sucheta Kriplani), Indian Women Association played forefront role.

Quit India movement just 5 years before our independence displayed the binding energy of Indians.

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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

India in its second five year plans and even to some extent just after independence focussed on developing technology, heavy industries, research to treads on path of development through technology.

Scientific development in post-independent India:

i) Established of Bhabha Atomic research Centre in 1948 for generatiy nuclear technology
   - eg → Homi Jahangir Bhabha's 3 stage nuclear program
   - Nuclear reactor **Apsara**

ii) Space research by Dr. Vikram Sarabhai and establishig ISRO in 1969.
   - eg → Aryabhatta and Bhaskar satellites displayed India's potential in space sector.

iii) Famous noble research laurettes - like Hargobind Khurana (DNA), S. Chandrashekhar.

Candidates must not write on this margin

iv) Establishment of IIT's and IISC for scientific innovation

v) Establishing thermal plants in Bhilai, Durgapur and Rourkela with help of other nations.

vi) River valley projects like DVC (Damodar) were based on scientific water use.

Eg → Bhakra Dam (Temple of Modern India)

vii) India conducted nuclear tests in 1974 and 1998 for the security of nation

Criticisms → In 1950s and 1960s India was suffering from food crisis and India was a closed economy which restricted the sharing of technology and faced opposition from various nation after conducting nuclear test.

It was very pertinent for India to strive for technology just after independence. Today India is among those few competitors in space, nuclear technology.

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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

According to NITI Aayog, 60% population of India is facing severe to extreme water crisis (by 2030 water demand will be two times of supply). 13% area is flood prone and 34% area is drough prone. In such scenario interlinking river could be a potential solution to both disaster.

Feasibility of river interlinking :

i) It helps in increasing the area under irrigation (approx. 35000 million ha more irrigated land)

ii) Generation of cleaner hydro energy
Eg → Dhaudhan dam under Ken-Betwa project.

iii) Better drinking water facilities in drough regio
Eg → Bundelkhad, Malwa region.

iv) Ken-Betwa link project is expected to increase ground water level by preventig excess water to flow in ocean.

Candidates must not write on this margin

(v) Better coordination between states (cobasin) helps in better watershed development.

Eg → Krishna-Godavari coordination between Maharastra and Karnatka can solve problem of Marathwada.

(vi) Better employment generation, attraction of industries with sustainable water use.

Challenges of river interlinking

i) In almost all river excess water remains only during monsoon.

ii) Diverting water disturb the natural e-flow of river which may eventually dry them.

Eg → Aral sea contraction (Amu darya, Syr darya river)

iii) Disturb the biodiversity, mangroves.

iv) less water flow in ocean causes soil coastal erosion, erratic monsoon.

v) huge cost of pumping.

Cobasin state should cooperate on line of success of Ken-Betwa link. People should focus more on water conservation and sustainable use.

Candidates must not write on this margin

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

Currently India has 416 GW of total installed energy capacity. (may 2023). Coal based thermal plant contributes 49% and renewable sources accounts for 41% of total energy generation

[Solar → 67 GW, Wind → 42 GW]

Positive impact of energy source shift to renewable:

i) Renewable energy was called as "Pure, Sure and secure" source of energy by PM Narendra Modi

ii) Reduces the air and water pollution caused by thermal power plant.

Facts → India is world's 3rd largest GHG emitter
→ Thermal plant are largest sulphur generators

iii) It helps in preventing water stress in coal bearing states.

Eg → By 2030, 70% of thermal plants go out of water.
→ Thermal plant are largest industrial water using entities.

Candidates must not write on this margin

iv) Better wasteland use can be made by establishing renewable (solar and wind plants)

v) Prevents evacuation and displacement of people from coal-bearing state.

vi) India coal has high ash content with very low calorific value.
eg → Gondwana coal.

vii) Prevent the deaths caused by silicosis in coal mines.

Negative impacts:

i) Coal-bearing states like Jharkhand already called a resource curse state due to poor utilisation

ii) Loss of jobs for coal mine workers.

iii) Promotes illegal extraction of coal by local mafias in absence of government extraction

iv) Stops the royalty to state which is used for human and social development.

Our Panchamrita targets aims to achieve 50% share of renewable energy with 500 GW non-fossil energy.

Renewable energy helps in achieving SDG 3 (Good health), SDG 8 (Decent economic sustainable growth).

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6. तापमान और वर्षण किस सीमा तक मृदा के गुणधर्मों को निर्धारित करने वाले सबसे महत्त्वपूर्ण 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

The quality of soil depends on its properties like structure, texture, colour, water-bearing capacity. Crops are selected on basis of these properties which is suitable to particular agro-climatic regions.

Role of temperature and precipitation in soil properties

i) High temperature and precipitation breaks the soil in very fine structure.

ii) Black soil in Gujrat and Maharastra has self-ploughy properties due to regional temperature and precipitaion.

iii) Red soil has its colour due to attachment of hygroscopic water with it.

iv) Indo-gangetic plain has alluvial soil which is loamy due to inundation by ganges water.

Candidates must not write on this margin

v) Excess water-logging makes the soil alkaline.

vi) Low temperature in the hilly region make the soil less developed and not very suitable for agriculture.

Other factors also contributes equally:

i) Parent rocks is the most important factor deciding properties

eg → Black soil is made of basaltic lava

ii) Air and water erosion displace the soil, break it down and settle it in in plains.

iii) Structural features like platy are decided by horizon and overburden pressure.

Temperature and precipitation remains in constant action after disintegration from parent rock in altering and modifying soil properties.

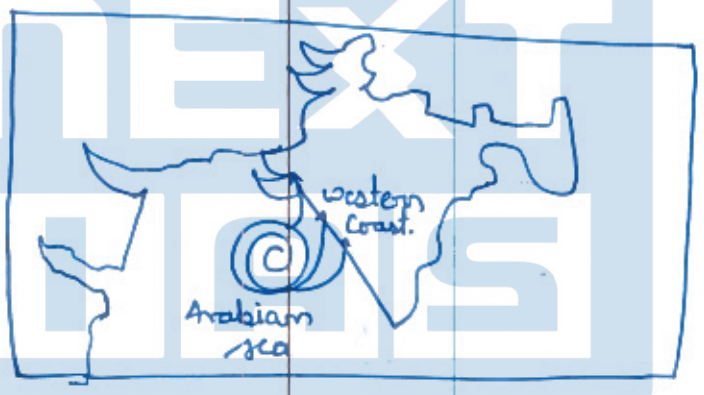
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7. अरब सागर में प्रचंड और तीव्र चक्रवात एक नियमित घटना क्यों बनते जा रहे हैं? उदाहरणों सहित सिद्ध कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

Why are severe and intense cyclones becoming a regular phenomenon in the Arabian Sea? Substantiate with examples.
(Answer in 150 words) 10 marks

According to "Globing Warming and India" report. since 1950-2018, sea surface temperature over Indian ocean region has increased by 1°C.

Earlier severe cyclone used to arise in Arabian sea once in 5-6 years but in present time 2-3 severe cylon are observed per year.



Reason for severe and intense cyclone over Arabian Sea

i) Rising temperature over Indian ocean and Indian subcontinent
eg 1950-2019 → 1°C temp. rise (sea)
0.7°C continental temp rise.

ii) Early onset of monsoon and merging of meteorological phenomenon
eg → Easterly jet stream & Somali jet stream.

Candidates must not write on this margin

iii) Reduced fresh water flow in the Arabian sea.

iv) El-Nino phenomenon due to intense heating and low pressure and Massacrene plateau.

v) Extension of cyclone for longer period and longer distance.

Eg → Cyclone Vayu
Cyclone Kyar.

vi) Regional heating due to urban heat.

viii) Cyclone Nisarga devasted the region of maharastra.

Reversing the climate change with reduced sea surface temperature could only be solution to cyclonic mitigation. Cyclone has more attached impacts like urban floods, landslide which destroys the infrastructure. SDG 17 calls for global contribution to tame the devil of global warming.

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8. भारत में सांस्कृतिक विविधता के संदर्भ में, क्या हम शेष भारत की तुलना में दक्षिणी राज्यों को विशिष्ट सांस्कृतिक इकाइयाँ मान सकते हैं? अपने दृष्टिकोण के 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.

India is a mosaic nation which incorporate diverse culture with distinct belief, pratice, tradition giving unique identies to different societies and regions.

Southern states as distinct cultural units:

i) Temple and religious culture:

→ Dravidian style temples like Tirupati, Brihadeshwar are different from northern Nagara style.

ii) Classical dances

→ Bharatnatyam, Kuchipudi, Mohiniattam, Kathakali are based on the classical literature and still preserve their asthetism in comparism to north.

iii) Festivals → Onam, Pongal, Yakshagana, Bathukamma, Brahmotsvam are distinct from northern festival of Holi, Diwali

Candidates must not write on this margin

iv) Dravidian language and races are unique from Indo-aryans of North.

v) Dressing features (Lungi), food habits (Sambhar, Idli) are based on local spices of southern state.

Glocalisation of southern culture:

i) People working in MNCs of hydrabad, Bangalore, Chennai are acting as carriers of culture between north and south India.

ii) Pilgrimm place like Tirupati (worship Venkateshwar Vishnu) sharing common god.

iii) Cultural society like SPICMACAY promote southern classical dance in entire India.

iv) Celebration Onam, Pongal among training of Bureucrats (LBSNAA) acts as sharing value.

Goverments effort for Three language formula will helps in more integration of culture.

Candidates must not write on this margin

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

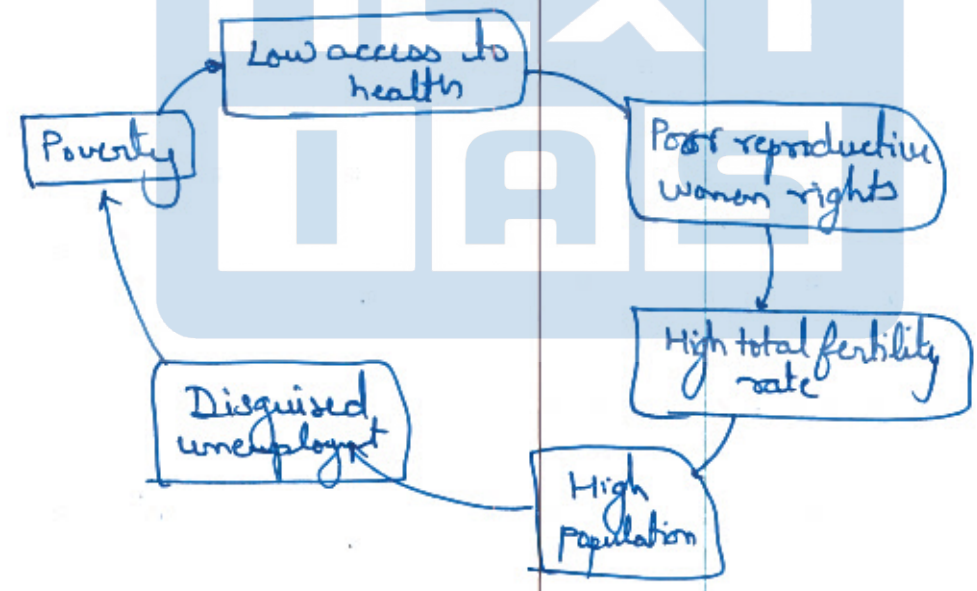
(150 शब्दों में उत्तर दीजिए) 10 अंक

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.

According to United Nation fund for Development, India with 142 billion population has become most populated nation. On other hand, according to multidimensional poverty Index of NITI Aayog, 25% population in multidimensionally poor in India.

Vicious cycle



Poverty restricting individual's ability :

i) Poor health due to low income

eg. · 56% women are anemic
· 32% Underweight, 19% Wasted child (Global Hunger Report)

Candidates must not write on this margin

ii) High drop out rate and low skills.

Eg India ⇒ < 5% skilled population
Japan ⇒ 80%, South Korea → 91%

iii) Triple burden of Malnutrition
i.e. Undernutrition, Hidden Hunger, Obesity

iv) Disguised unemployment and high inflation

Population strains resources:

i) Less number of skilling institute Comparison to total population

ii) Dilapidated primary health centre and lack of tertiary care.

iii) Structural unemployment due to less knowledge of technology.

iv) Overburdened judiciary, police infrastructure increase crime in society.

Skilling the demographic dividend to use the sword of population in reaping the benefit of economy is the only solution.

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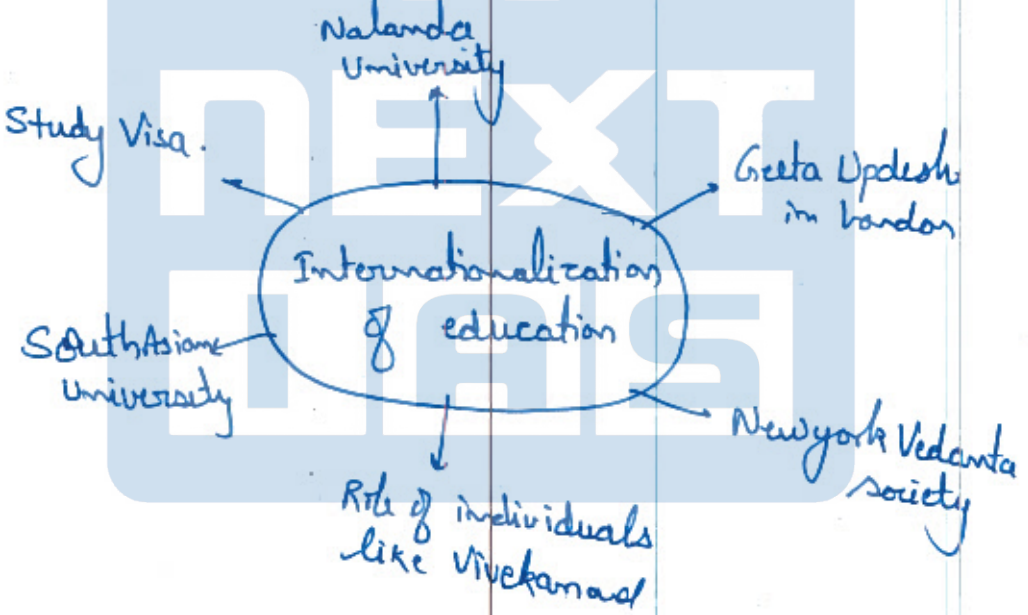
10. शिक्षा के अंतर्राष्ट्रीयकरण में भारत के पास एक समृद्ध विरासत है। इस संदर्भ में 'शिक्षा के अंतर्राष्ट्रीयकरण' पर हाल ही में दिया जा रहा बल समाज को कैसे प्रभावित करेगा और सांस्कृतिक आदान–प्रदान को कैसे बढ़ावा देगा?

(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.

Since ancient time, India has shared its spiritual, medicinal, technical knowledge system in growth of entire world. on line of "Vasudhev kutumbkum"



Cultural exchange through recent push of internationalising education:

i) Study visa and scholarship to foreign students under ICCR scheme.

Candidates must not write on this margin

Eg- Students of Nepal, Bhutan, Afghanistan studying in India strengthen cultural links.

ii) Awareness about the religious tradition of other nation ensure better brotherhood among the diverse religion with India.

iii) Collective living of students of different origin promotes societal harmony and true essence of education.
"Ekam Sad Vipra Bahuda Vadanti"

iv) Internationalisation of Indian knowledge of Yoga, Ayurveda, food culture (benefit of Tulsi, Haldi) serve the global cause.

It is the need of hour for making global Education sustainable to protect over Earth from climate change, civil wars, social stifes. Recently government has permitted opening foreign universities in India and branch of IIT in UAE.

Candidates must not write on this margin

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।' सविस्तार 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

The art of sculpture making received major thrust in time of Kushana rules in forms of Gandhara and Mathura school of art form. Later under Satvahana and Ikshvaku it spread into Amravati region of South India.

Key differential features of Gandhara and Mathura school.

Gandhara	Mathura
i) It has Roman and bactrian influences	i) It is purely indigenous in nature.
ii) It was practiced in the North west frontier region of Indian subcontinent.	ii) It was concentrated in Indo-Yamuna-Gagtic plains around Mathura

Candidates must not write on this margin

iii) Buddha is shown in spiritual essence with half eye closed	iii) Delighted mood of Buddha with open eyes.
iv) Buddha shown in Dharmachakra, Bhoomisparsha mudra	iv) majorly in Abhey mudra
v) Hairs are curly, wavy with bun on top with heavy moustache	v) Hairs are well combed and face is shaved
vi) Majorly images of Buddha are there	vii) Image of Buddha, Jain tirthankar, Yakshi, Krishan-Balram, and rulers like Kanishka were made
viii) Material used was grey-schist stone.	viii) Red sandstone was used.

Candidates must not write on this margin

Influence on Amravati school:

i) Common theme of Buddha's life. Although Amravati school is more narrative.

ii) Ayaka-Pillars / Drum slab has influence of mathura school.

iii) The stone used (white marble) was well polished similar to well polished red sandstone of mathura.

Gradual progress of Gandhara and mathura school kept differences in arts but both learned from each other and later on influenced Amravati school. Stark differences were majorly due to locally available stone and silk route influence on Gandhara school.

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12. 'इंग्लैंड की औद्योगिक क्रांति ने न केवल आर्थिक परिदृश्य को बदल दिया बल्कि इसके दूरगामी सामाजिक और सांस्कृतिक प्रभाव भी पड़े'। विवेचना कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

'England's Industrial Revolution not only transformed the economic landscape but also had far-reaching social and cultural impacts'. Discuss. (Answer in 250 words) 15 marks

England was epicentre of industrial revolution due to its economic, political and social organisation at that time. It is also considered as "Revolution within revolution" due to its heavy impact on every sphere of humans.

Economic landscape transformation :

i) Development of industries (Cotton) chain reaction) and flourishing of capitalism.

ii) New inventions like Steam Engine, Steamboat (Robert fulton)

iii) New infrastructure like macadamised road, better public places.

Candidates must not write on this margin

iv) Growth of Debt market which helped British to wage War in India and other colonies.

v) major exporter of finished goods.
Eg→ Cotton clothes, processed spices.

Social and cultural impacts :

i) Improved in lifestyle and access to better products, services which was earlier only for high class.

ii) Growth of new working class and their exploitation led to social phenomenon of communism and socialism.

iii) Culture of collective living in urban industrialised cities.

iv) Increased status of women as they were needed as labourers.

Candidates must not write on this margin

v) Exploitation of children to work in factories.

vi) Revolutionary leadership growth like Ned ludd

vii) Protestant reform movement against the restrictive religious churches.

viii) Promotion of education and innovation which had impacts in India also.
Eg- Raja RamMohan Ray praised British for press and modern education.

ix) Functional division of society and emergence of new middle class.

Industrial revolution was a breakthrough movement for entire world. It change entire landscape of not only Britain but also its colonies like India. India which earlier was net exporter now had become agricultural colony of manufacturing Britain.

Candidates must not write on this margin

13. उन्नीसवीं सदी में पिछड़े पारंपरिक तत्त्वों और औपनिवेशिक संस्कृति के आधिपत्य के खिलाफ सामाजिक सुधार और वैचारिक संघर्ष ने एक विशिष्ट सांस्कृतिक पहचान और राष्ट्रीय चेतना के उद्भव 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.

Nineteenth century marked the beginning of opposing the restrictive social norms against women, girl child, lower caste and against exploitative colonial policies.

Key social reform and ideological struggle:

i) Abolition of Sati system

Eg → Raja Rammohan Roy formed Brahma Samaj to eradicate this evil.

ii) Voice for Widows remarriage

Eg → Bahudivah book by Ishwar Chandra Vidyasagar

iii) Reform related to girl Child marriage

Eg → Child marriage Restraint act ;
Age of Consent Act 1891 (BM Malbari contribution)

Candidates must not write on this margin

(iv) Role of Jyotiba Phule and Savitri Phule Satya Sodhak Samaj and empowering Dalits by opening educational institutes.

(v) M.G. Ranade, N.G. Chandavarkar, Keshub Sen voiced against caste system.

Emergence of distinct cultural identity and national consciousness :

(i) Spiritual awakening of nation against hegemonic colonial rule.

eg → "Bharat Bhartiyo ke liye" (Swami Dayanad)

→ Ramkrishan Mission and Vedant society (Vivekanand)

(ii) National voice against the "Drain of wealth" Imp. leaders like D.B. Naoroji, RC Dutt played key role in it.

(iii) Paramahans Mandli, Prarthana Samaj generated sense of oneness and brotherhood

Candidates must not write on this margin

by mainstreaming people of lower caste.

(iv) Rise in stature of women through their education and participation in social life.

Eg → Poona school for girls. Indian Women University by DK Karve.

(v) Emergence of Women leaders like Pandita Ramabai, Kamini Roy, Kadambini Ganguly, Sarla devi Chaudhurani

(vi) Deccan revolt and Deccan education society paved way for identification of oppressive colonial economic policies.

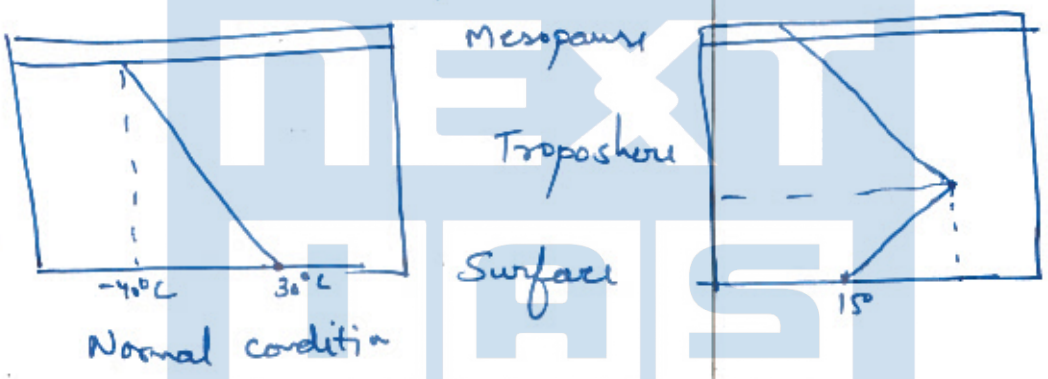
Social reform started by Raja Rammohan Roy were later carried on by Indian Congress under Gandhiji in form of Constructive program. These reforms provided new identity of inclusiveness and bootherhood.

Candidates must not write on this margin

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

Under normal circumstances in Troposphere, temperature used to decrease with height upto mesopause. But under temperature inversion the lower layer has less temp. than the upper layer.



Reason for temperature inversion:

i) **Valley inversion** → when the cold air currents descends in the valley.

ii) **Interaction of Air masses** → when hot air mass comes below the cold air mass.

Candidates must not write on this margin

Temperature inversion affect on atmospheric condition

i) Disturb the upper air circulation.

ii) Increase in temperature at heights reverses the lower and higher pressure cells.

iii) Formation of occluded fronts at interaction of cold air mass over hot air mass.

Implication of local weather & air pollution

i) ⇨ Formation of smog hinders the visiblity.

ii) Greater suspended water particles near the surface increases humidity

iii) Extreme cold weather in the valley.

Candidates must not write on this margin

iv) Frost in lower atmospheric level destroy the crop.

The phenomenon of temperature inversion is becoming more common in recent due to global warming and climate change. It has negative impacts on climate, agriculture, transportation.

Candidates must not write on this margin

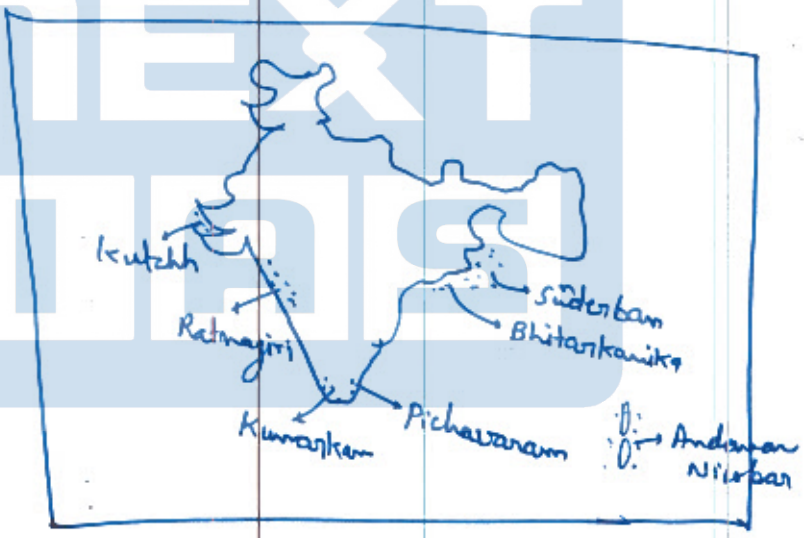
15. भारत में मैंग्रोव वनस्पति के लिए कौन से भौगोलिक कारक उत्तरदायी हैं? जलवायु परिवर्तन भारत में मैंग्रोव वनस्पति के लिए किस प्रकार खतरा उत्पन्न करता है? (250 शब्दों में उत्तर दीजिए) 15 अंक

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 are the salt-tolerant plants (halophytes) majorly grown in the coastal region adapted to oceanic saline water.

Currently India has 4992 km^2 of mangrove forest (ISFR 2021).

Mangrove distribution



Geological factors for mangrove growth

i) Long coastline of India (7511.6 Km)

ii) Optimum salinity of Bay of Bengal and Arabian sea.

Candidates must not write on this margin

iii) Indentured coastline of East India

Eg → Bhitarkanika gorge region.

iv) Suitable geographical location with ideal temperature condition in tropical region.

[Mangrove thrives in region of 300 cm. rainfall and temperature of 26-35°C]

Climate change as threat to Mangrove:

According to "Mangrove for Future", 35%. of World's and 50%. of India's mangrove has been already destroyed.

i) Rise in the acidic (CO_2 content) of the ocean.

ii) Overuse for food, fuel, Timber in wake of climate impact on local community.

Eg → Destruction of Pichavaram mangrove.

Candidates must not write on this margin

iii) Increase number and intensity of cyclones destroyes mangroves

iv) Polluted river water entering sea creates hypoxic condition impact biodiversity thriving in mangroves.

v) Breaking the symbiotic relationship.
~~Eg~~ → Destruction of coral reefs.
oil spills

vi) Clearance of mangrove for development projects like ports infrastructure.

Mangrove are the kidney of world which purify the water and shield against tsunami and cyclone along with supporting biodiversity. In Union Budget 2023, India government launched MISHTI initiative to protect Mangroves.

Candidates must not write on this margin

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

India is second largest producer of sugar in world after Brazil. Indian temperature and humidity condition are suitable for production of sugarcane.

Geographical factors for sugar industry

i) Presence of loamy clay soil

ii) Temperature varying between 25-33°C

iii) Sugarcane is the crop of long duration mainly 1-5 years.

iv) Requirement of very high level of water facilities.

v) Plain topography is required.

Candidates must not write on this margin

Economic factors:

i) Sugar industries should be near to sugar farms for better recovery rate

ii) Better marketing and procurement.

eg: Sugar mill system of Uttar Pradesh
FRP by centre and state

iii) Availability of labour for coop and skilled labour for sugar industries

iv) Availability of capital, energy, water

eg: Sugar mill require large investment initially and continued electricity.

v) Better debt facility from government.

eg: long dues of farmers from sugar mill.

vi) Better research and crop quality

eg: CO0-238 (Coimbatore) has high recovery rate in short period.

Candidates must not write on this margin

Contribution to growth of industries

- India (Sugar from Sugarcane)
- Brazil
- Cuba, Europe (Sugar from Sugarcane and beet roots)

- Ancillary industries also flourishes
  - eg → Mandatorily packaging of sugar in Jute bags
- Sugar industries has key role in food processing industries and better exports
- Cuba (known as sugar bowl) has its economic dependence on Sugar industries.

Sugar industry require proper location, capital, labour, marketing support along with better price realisation to all stakeholders.

Candidates must not write on this margin

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

Dryland farming is the technique to grow crops in the water scarce arid and semi-arid region. Major crops grown in such areas are millets (pearl), mustard, gram among other.

- Curely only 52% agriculture area is irrigated and rest is prone to droughts.
- At same time only 5 states has more than 50% irrigation coverage.

[Haryana, Punjab, UP, Bihar, West Bengal]

Key irrigation strategies in dryland farming

i) Use of micro-irrigation facilities

Eg Sprinkler system in the Rajasthan desert region to grow mustard.

Candidates must not write on this margin

Use of drip irrigation in growing Kinnow plants.

ii) making large ponds to store rain water and later using it for irrigation.

iii) Creation of Bandhara in Maharastra

eg → Hiware Bazar, Ralegan Siddhi

iv) Choosing crops which require lesser amount of water.

eg → Growing Guar (gum) instead of rice/paddy.

v) Various water harvesting structure are being made for later on irrigation

eg → Kulhs, Zings (Ladakh), Naula (Uttarakhand), Zabo (Nagaland), Ahar Pynes (Bihar)

vi) Kakatiya Mission (Telangana) for the irrigation facility in dry regions.

Candidates must not write on this margin

Need of dryland Farming

i) Increasing water productivity
→ 80% of freshwater is used for irrigation
— 90% flood irrigation which has only 38% irrigation efficiency (Canals)

ii) To ensure "Har Khet ko Pani" through PM Krishi Sinchai Yojna [Per drop More Crop]

iii) To arrest declining water table especially north Indian state.

iv) Promotion of (millet) as a tool of nutritional security.

v) It will help in increasing farm productivity of 85% small & Marginal farmers of India.

Dryland farming along with conservation farming by protecting natural soil elements helps in boosting productivity and ensuring sustainable development.

Candidates must not write on this margin

18. 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.

Women's movement has grown tremendously in various phases starting from social reform movement in early 19th century to present time feminist movement asserting every human rights.

Traditional methods of women's movement

→ most of these movement led by male [objective reality versus subjective experiences]

→ Demanded for education, health of women.

→ Emancipation of lower caste women and their role in SHGs.

→ Against Child marriage.

Candidates must not write on this margin

Contemporary Women movement :

i) Autonomy in field of economics, politics and religion.

Eg → · Equal pay (no wage gap)
· Entry into religious premises → Sabarimala Case
· Demand for reservation in Parliament

ii) Sexual rights

Eg → Demand for criminalising Marital rap
Reproductive rights

iii) Self-respect and life choice

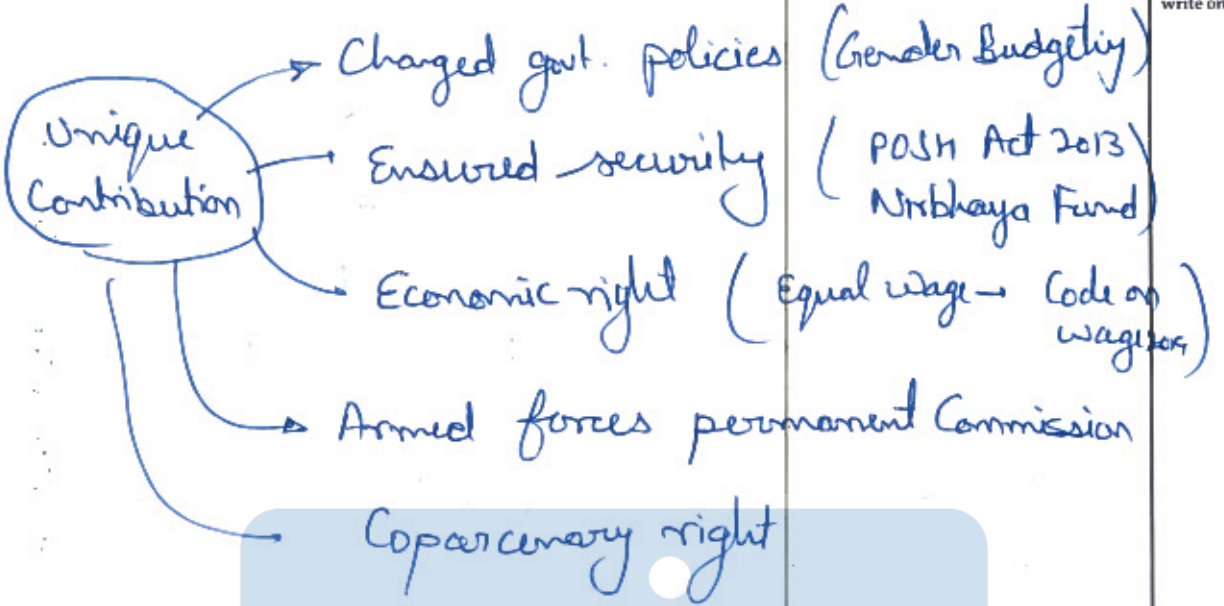
Eg → Shakti Vahini case {right to choose life partner}

iv) Involving ecological dimension

Eg → Eco-feminism of Vandana Shiva

v) Rising above the notion that wife is sexual property of husband.

Candidates must not write on this margin



Challenges

i) Criticism to destroy Essential religious practices Eg → Shani Shingnapur women's entry.

ii) Parliament women reservation Bill pending from years.

iii) lesser number of women on influential position like Cabinet ministes, Judiciary.

iv) Low fetmale labour force participation hinder economic autonomy.

Society will become inclusive when women will be provided equal rights since a bird can not fly on one wing.

Candidates must not write on this margin

19. क्या आपको लगता है कि आधुनिकीकरण की ताकतें, जिन्होंने भारतीय समाज में सामाजिक बुराइयों के उन्मूलन को उत्प्रेरित किया, ने हमारे सांस्कृतिक मूल्यों और लोकाचार 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.

Modernization is the process of upgrading the traditional values to sustain and compete with other contemporary societies having more progressive values.

Forces of modernization

- Globalization (interconnectedness and interaction)
- Better education and skills
- Intermingling and interborrowing due to increased urbanisation.

Eradication of social evils

- Sati system was eradicated as it was considered very regressive in modern society
- Confining girls to home without education
  - Now gross enrollment ratio in primary education in 96%.

Candidates must not write on this margin

→ Menstruation was considered as taboo but now better availability of sanitary napkin raises women health.

→ Earlier girl child was considered as curse as Paraya Dhan.

Modernization as threat to cultural values

i) Westoxication → excessive blind imitation of western values.

→ Relative deprivation in acquiring new gadget of high prices

ii) Walmartization → artificial consumer demands

- Threat to cultural attires and food habits.

iii) Commodification of religion

- Earlier ⇒ Bhakti / Devotion
- Now ⇒ cult led by godmen exploiting people.

Candidates must not write on this margin

(iv) Commercialisation of festival like Raksha-bandhan, Diwali (polluting crackers)

(v) Tearing the family bonds, rise in loneliness of old age people.

- Stops the inter-generational transfer of values.

modernization due to increased global interaction has changed the lifestyle of common masses where they get access to numerous products, services which earlier not available to them. But at same time, blind imitation kills the social fabric, values by destroyed version of festival, dance, social relation. There is need to ensure intergenerational culture transfer.

Candidates must not write on this margin

20. 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 the phenomenon in which the political loyality of people focus on a particular region in comparison to nation or state.

"It is the result of fear of future lived through the past".

Regional ~~sentiment~~ disparity vis-a-vis regionalism :

i) **Son of Soil Concept**

- To secure local jobs and resources for native

eg → Discrimination against migrants in Mumbai, Bengaluru

ii) **Ethnic regionalism**

- Clashes between Kuki and Meiti in Manipur is result of perceived apprehension & regional disparity (hill v/s valley)

Candidates must not write on this margin

iii) Unequal resource distribution

eg → Lesser infrastructure development in north East
→ Lower job opportunity

iv) Perceived threat to language & culture

eg → Bodoland, Gorakhaland.

v) Regional disparity in terms of water allocation

eg → Kaveri water dispute.

vi) Imposition of values

→ Self-respect movement against North India, Brahmins.
→ Hindi language in South India.

Is regionalism antagonist to Nationalism

Yes	Not everytime
• Secessionist movement like Khalistan, Nagaland disturb the sovereignty	• Positive regionalism helps in raising voice against unequal growth.

Candidates must not write on this margin

- Son of Soil and exodous of Kashmir Pandit destroys the brotherhood.
- Rise in conservationist tendencies

- Serves in securing one's culture and unique identity
- Diverse representation in legislature
- Prevents Balkanisation of India (Cross-cutting identities)

What we want is diversity and not the differences. Recent Manipur crisis disturbed the entire nations displaying negative form of regionalism. Government should address Grievances of all section and all region to make India, "Ek Bharat Shreshtha Bharat"

Candidates must not write on this margin

Space for Rough Work

NEXT IAS