

NEXT IAS

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(To be filled by candidate)

451

Code : TC071

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Registration Number : Date of Examination : 16/02/23

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Bhopal ☐

Online ☒

MTS IGP Batch 2023

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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. :

(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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2. Write your registration number and other particulars, in the space provided on the cover of QCA Booklet.
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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.
6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

- 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

India has been the land of rich and diverse philosophical thoughts since millennia, and indeed all regions have contributed to this rich tapestry.

Northern India

- * Both Buddhism and Jainism originated here more than 2000 years ago. They arose in response to Brahminical hegemony, and taught values like non-violence, peace, love, non-attachment and more.
- * The Ajivika sect, which believed in fatalism, also originated here.
- * The Vedic philosophy, and prevalence of epics like Mahabharata and Ramayana, also had northern India as their epicentre.

Southern India

- * 7th century Bhakti movement originated here, which redefined the approach to religion and worked towards a more egalitarian society. Prominent saints were Ramanuja, Tukaram, Eknath etc.

- * Basvanna's Lingayat sect originated in present-Karnataka in 12th century. They were Shiv-worshippers, and denounced idol worship and caste-based discrimination.
- * Schools of philosophy like Samkhya by Kapila also originated here.

~~Thus, Indian philosophy is~~

Thus, intellectual activity prevailed in all regions of India and even today, it is not limited by geography.

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Q.2

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

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

The colonial rule (1757-1947) of ~200 years was a complex phase for Indian society, including giving rise to social change and reform.

* It began with 19th century Renaissance in Bengal, led by middle-class western educated personalities like Raja Ram Mohan Roy and Ishwar Vidyasagar. They fought against ills like sati and child marriage, without denouncing their roots. This was in response to cultural subjugation by the British.

* Arya Samaj by Dayanand Saraswati, and others like Prarthana Samaj were more revivalist in nature, going back to the authority of the Vedas.

* Colonial rule and education introduced modern concepts like rationalism, self-determination and humanism. This led to a rise of political consciousness, culminating in the formation of INC in 1885.

* Other regions too saw social reform, like Jyotiba Phule in Maharashtra, Narayan Guru in Kerala and Periyar in Tamil Nadu. Questions of dalit upliftment, women empowerment and spread of education were taken up all over India by enlightened individuals.

The impulse for social change has always been present in Indian society, from Bhakti and Sufi movements in medieval times to modern colonial challenge.

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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

Factors Responsible

- * The huge cost of WWI on Russia was a major factor. Loss of lives, inflation, shortage of food were borne by the common public, while the monarchy was insulated.
- * The doctrine of communism popularised by Marx in 19th century had captured the collective imagination of workers and peasants of Czarist Russia, led by able leaders like Lenin.
- * Political parties based on communist ideology existed, which gave a platform to express ~~this~~ ^{by middle & lower class} anger in an institutional manner.

Consequences

- * Russia retreated from WWI, and let go of all colonies under it.
- * USSR was formed encapsulating various nationalities, and ^{single party} communism was the mode of governance.
- * USSR undertook massive industrialisation and socio-economic upliftment of its population.
- * The dynamics of WWI and WW2 both were affected significantly.
- * Eventually, Cold war emerged in 20th century as a battle of ideologies b/w capitalism and communism.

Effects on India

- * 1920s saw the emergence of communism and socialism in the freedom struggle, which helped widen the social base (eg: Congress Socialist Party formed in 1934).
- * Leaders like Jawahar Nehru, SC Bose, MN Roy were significantly affected and this led to a new zeal in them.
- * The ~~goal~~ goal of freedom struggle was expanded beyond political freedom to include social justice.

Thus, Russian Revolution was a watershed event in many ways.

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

Solar insolation of earth is a crucial factor in determining earth's climate, biodiversity distribution, ocean circulation and more.

Factors for Uneven Temperature

- * Earth's rotation and revolution is a major factor. For eg, December is summer in southern hemisphere.
- * Earth's tilt on its own axis keeps the poles in permanent sunlight or darkness for 6 months at a time.
- * The physiography of a region, eg mountains vs plains also dictate temperature distribution. Factor like altitude, forest or ice cover, type of soil. Ice has lower albedo, thus reflecting heat.
- * Ocean currents, eg: warm Gulf Stream for east coast of USA.
- * AMOC (Atlantic Meridional Ocean Current) also works like a global heat conveyor belt.

- * Atmospheric circulation also redistribute heat (eg: Western disturbances, jet streams, polar vortex in poles)
- * Global wind system (eg: trade winds b/w the tropics).
- * Normal lapse rate of temperature in the atmosphere (except thermal inversion).

Many complex mechanisms redistribute heat on the earth, and climate change is disturbing it rapidly.

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

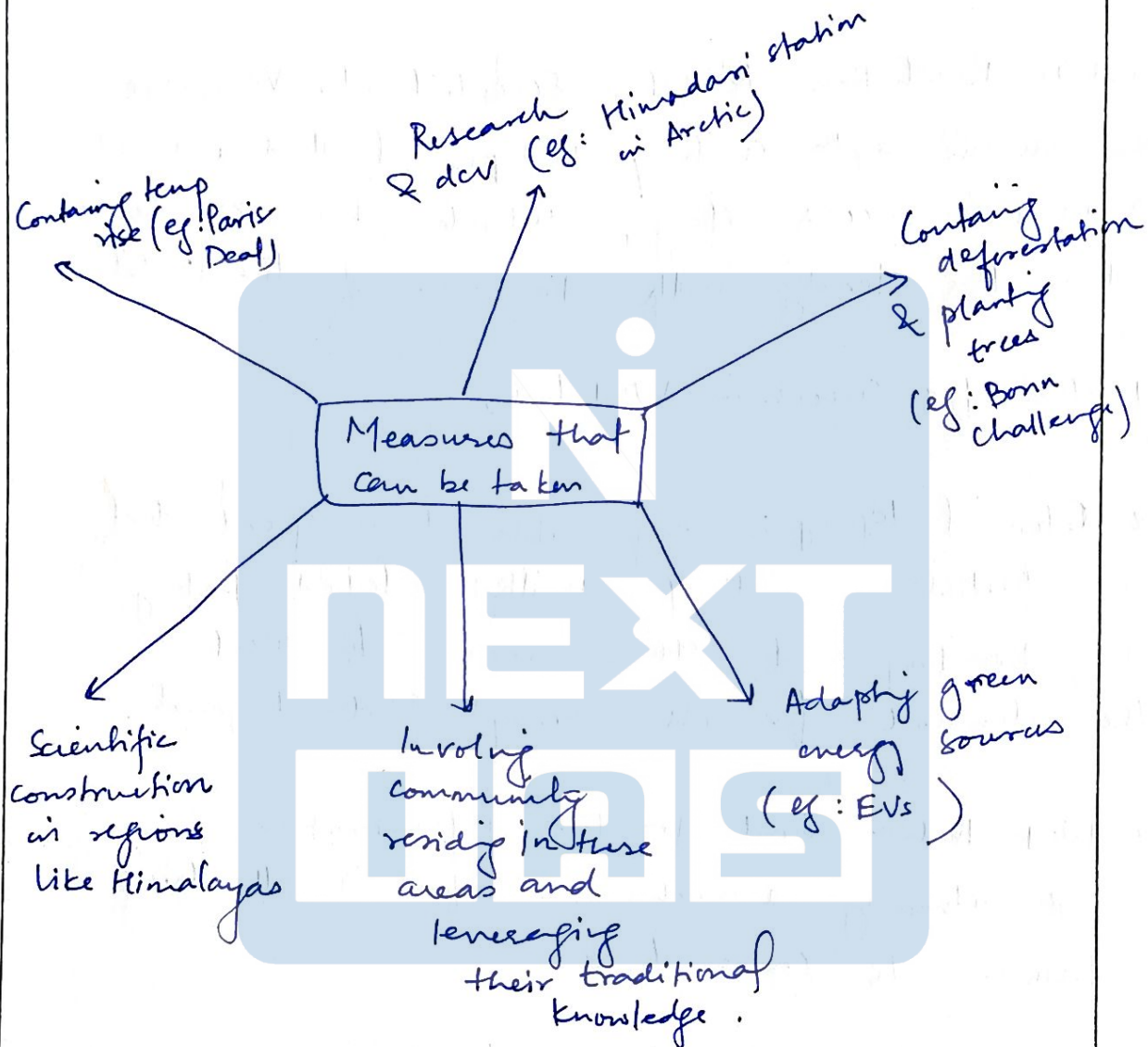
The melting of glaciers due to climate change has serious implications for the ecosystem and human society. Discuss the effects of melting glaciers on the environment and the measures that can be taken to address this issue.
(Answer in 150 words) 10 Marks

Melting of glaciers, from the poles to closer home in Himalays, indeed has grave consequences.

Effects on Environment

- * Global sea level rise is already occurring, and events like melting of Thwaites glacier in Antarctic can lead to abrupt changes. This would have consequences for coastal ecosystem and beyond.
- * Ice has low albedo, thus melting would set off a ^{feedback} positive mechanism.
- * Glaciers harbor rich ecosystems, and animals like polar bears ~~are~~ will struggle to survive. Complex ~~to~~ food web changes can be seen as a consequence.
- * Rivers which feed on glaciers can dry (eg: ganges)
- * Release of GHGs and other toxic elements contained in glaciers is possible.

* Events like Glacial Lake Outburst Floods and avalanches can be seen.



Glaciers are of utmost important, not just because of their fresh waters reserves, but for maintaining the delicate balance of various weather phenomenon as well.

Q.6

श्वेत क्रांति भारत के पश्चिमी भाग में सर्वाधिक सफल रही। श्वेत क्रांति की इस क्षेत्रीय सफलता के कारकों की विवेचना कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

The White Revolution was most successful in the Western part of India. Discuss the factors for this regional success of the White Revolution.
(Answer in 150 words) 10 Marks

White Revolution, led by scientist Dr Verghese Kurien in 20th century independent India is a major success story, which has made India the leading milk producer of the world.

Factors for Success in West India

- * Colonial legacy is responsible to a great deal, as Britishers set up milk related factory in Bombay and other areas to meet the demand for its army and beyond.
- * West India had greater infrastructure, and already a mechanism for small dairy farmers to come together.
- * West India didn't have food grains production as high as northern plains, hence both for income and nutrition, they relied on milk production more.
- * Govt support in the form of cooperatives (Amul) also played a role.

→ North India focused more on Green Revolution, while South India has intensive paddy cultivation as the mainstay of agricultural economy.

Gujarat's ~~Amul~~ Amul was a torchbearer in India's white revolution, but states like Karnataka (Nandi) and UP (Parag) ~~have~~ have also caught up.

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पृथ्वी की आंतरिक संरचना की हमारी समझ में भूकंपीय अनुसंधान किस हद तक योगदान करता है? इसके महत्व 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

Earth's interior holds key to understanding many ~~phenomena~~ phenomena, from earthquakes to volcanoes to the magnetic field.

Seismic Investigation & Interior Structure

- * Seismic investigation encapsulates studying earthquake waves (P- & S- waves). Their differential properties has helped us recreate a model of earth's interior (core, mantle & crust).
- * ~~Seismographs~~ Seismographs capture tectonic movements, and from these the tectonic plate structure has been understood in greater detail.

Significance

- * Holds key in understanding geophysical phenomena like earthquake, volcano, tsunami.

- * The seismic zoning of land (eg: India ~~has~~ into S zones) is aided by seismic investigation.
- * Peaks like Mt Everest are still rising because of seismic activity.
- * Regions like Pacific Ring of Fire are hotbeds of tectonic activity, and are also surrounded by densely populated regions.
- * Seismic investigation will also lead to greater understanding of ocean floor.

The indirect nature of seismic investigation is crucial in understanding what's beneath our feet.

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

NFHS-5 has reveal India's TFR to be 2.0, beneath the replacement levels of 2.1. However, this is a crude figure demanding closer inspection.

- * The regional and inter-state disparity is huge, with Bihar having $TFR > 3$ while Kerala with ~ 1.5 . Thus, there is huge difference in the population-age pyramid of various states.
- * UP, Bihar have surplus labor, and problems like unemployment, while southern states and states like Haryana (prosperous) will soon deal with an aging population.
- * The inter-country migration is also reflective of this (eg: Bihar construction workers in Tamil Nadu & Kerala).
- * The needs of different regions are different, leading to a more nuanced approach to population policy. Access to contraceptives,

women empowerment in one set, and focus on care economy in the other.

* Population growth is also related to sensitive topics like ethnic composition (eg: north east) and the question of demilitarisation and Finance Commission's terms of reference.

Thus, while UP has brought in a population control policy, Sikkim provides incentives more children. While India as a whole has contained population, a regional perspective is still required.

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's mind-boggling diversity has been a time-tested reality, yet its success as a democratic state since past 76 years is a testament to its underlying unity.

Cultural Unity

- The religions of India don't exist in isolation, but exist cheek-by-jowl in almost all regions. Thus, a common culture has evolved with exposure to all ~~of~~ religions etc.
- Mahabharata, Ramayana, Jataka tales are threads of literature unity.
- Festivals like Holi, Diwali, Eid, Christmas have a ~~pan~~ pan-India appeal.
- Though linguistic diversity is huge, people from different regions are able to communicate using an eclectic mix of regional languages with Hindi & English.

- * Historical factors like colonial struggle also contribute to cultural unity.
- * Cuisine and dress, though have regional specialisation, also have common threads (eg: kurtā, chilli in food).
- * Common constitution has led to an administrative unification (eg: election).

Thus, unity in diversity is a lived ethos in India since time immemorial.

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

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

Caste has been a major form of social stratification in India, with changing forms and functions. Its annihilation was a part of freedom struggle as well.

Dichotomy in Public & Private

- ✦ With the adoption of constitution, caste-based identity has been abolished. However, there is more to it than meets the eye.
- ✦ In public life, caste is increasingly losing its relevance, esp in urban areas. Restaurants, public transportation, apartment-complexes, and in govt transactions, ~~caste~~ hold of caste has loosened.
- ✦ However, even in public life, caste based reservation in education, employment and legislature has kept the caste consciousness alive.

- * Caste identity has remained particular sticky in marriage. Arranged marriage remains the norm, and caste identity dictates the eligible pool even today (>90%).
- * In prt sphere, discrimination against maids & drivers are now disguised under "hygiene".
- * The reality in rural & urban areas is also vastly different.
- * The cases registered under SC ST Prevention of Atrocities Act reflect the caste based reality of Indian society.

Thus, the term many has changed, and receded to prt space, but even the public p space is not devoid of caste. (eg: elections)

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

Since 1947, India has fought 4 major wars with Pakistan (1948, 1965, 1971, 1999) along with many border skirmishes. With China, apart from the 1962 conflict, recent ~~2020~~ 2017 and 2020 ~~for~~ encounters have also brought many ~~reasons~~ ^{issues} back in the mainstream.

Indo-Pak Relation

* Causes

- The unresolved issue of Kashmir is a major ~~for~~ factor.
- Pak's support to state sponsored terrorism and its policy of "bleeding India with a loop cut"
- The horrid memories of partition and the ensuing civil war.
- Distribution of natural resources like rivers with they share

* Impact

- India has suffered many terrorist attacks (eg: 2008 Mumbai)
- Despite strong people to people ties, trade and tourism is non-existent.

- ~~Has~~ Huge mobilisation of army along borders by both countries.
- Both have become nuclear powers.
- Wars have been a significant drain for both countries.

India-China relationship

* Causes of war

- The McMahon line, agreed upon by Tibet & British India has been rejected by China. They claim significant portions of India as their territory (eg: Arunachal).
- Trust deficit between the 2 countries.
- China's policy of containing India as a superpower, and trying to relegate it as an 'Asian power'.

* Impact

- Calls for boycott of Chinese goods & investments (eg: banning of China based apps)
 - Apprehension in govt for investments from China (eg: approval of Home ministry mandated).
 - China aligning with Pakistan. CPEC through territory of India under Pakistan's control.
- Wars are symptomatic of underlying issues, and need to be resolved for

and need to be resolved for the ^{potential} bilateral
relations to be fully realised.



- 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

Battle of Plassey (1757) was fought b/w British EIC led by Robert Clive and Nawab of Bengal, Siraj-ud-Daulah. However, due to the alliance b/w Siraj's Commander, Mir Jafar & EIC, it was an easy victory for the British. ~~They~~ As part of the deal, they ~~helped~~ installed ~~Mir Jafar~~ Jafar as the new ruler of Bengal. In return, Jafar gave exclusive trade rights and tax concessions to EIC.

* However, soon British interference in day to day administration increased, which irked Mir Jafar. He allied with the Dutch to get rid of the British, but lost.

- * Soon, the British ambition grew, and it sought direct control of Bengal.
- * In the Battle of Buxar (1764), the British EIC defeated the combined armies of Nawabs of Awadh, Bengal, and Mughal King.
- * Thus, Battle of Buxar can be regarded as a greater win, as an army of Mughal was defeated, and the Mughal King signed the Treaty of Allahabad.
- * Under the treaty, British were paid war indemnity, and secured direct administration of certain regions.
- * The symbolic nature of the victory was also very important, as the great Mughals were defeated. This established the British as the de-facto supreme power of the Indian subcontinent.

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

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

Sanskrit literature has been flourishing in India since the Vedic ages, and its influence on languages of India and world are multi-faceted.

Sanskrit literature before Guptas

- Even before Kalidas, Sanskrit literature had taken roots. Panini's work on grammar, and Patanjali's work on yoga are some egs.
- Buddhist literature too had shifted to Sanskrit under the Kanishka (Mahayana Buddhism). Kanishka was a great patron of Sanskrit literature. Asvagosha, a renowned Sanskrit scholar, wrote Buddhacharita in Sanskrit.
- Vedic literature (Rig Veda, Upanishads) ^{were} also ~~were~~ written in Sanskrit.
- Rudradaman's inscription in Sanskrit, dated to ~1st C.E. signal the hold of Sanskrit.
- Pushyamitra Shunga, also patronised Sanskrit.

Sanskrit & Guptas

- * Gupta age (4th-6th centuries) saw the culmination of Sanskrit literature. Chandragupta II's navarhmas had many renowned Sanskrit scholars.
- * Kalidas was a great writer, penning dramas and poehies in Sanskrit (eg: Abhijanashakuntalam)
- * Aryabhatta's treatise on maths & astronomy were also written in Sanskrit (Aryabhattiya)
- * Amarghosh's ^(thesaurus) Astadhyayi, another navarhmas scholar, is a Sanskrit classic.
- * The popularity of Ramayana and Mahabharata grew as well.
- * The Guptas, in general, were great-patrons of art & literature. Kumaragupta established the famous Nalanda university in Bihar, which along with Buddhist studies, also furthered the cause of Sanskrit.

Thus, literature, architecture and art all flourished under the Guptas, rightly leading it to be called as "golden age" of civilisation.



- 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 महत्व 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

We know more about the moon's surface than the ocean floor, a testimony to its complexity. Yet concerted efforts are being taken to understand it, including India's Samudrayaan project, for it holds key information required for understanding earth as we know it.

Major Features of Ocean Floor

- * Seafloor spreading : This has led to understanding and proof of plate tectonics. The mid-ocean ridge has newer surface close to it, with age of rocks increasing as we move away from it. Thus, the concept of plate tectonics was corroborated.
- * Underwater volcanoes also explain the functioning of earth's interiors, and help

in understanding processes that shape the earth.

- * Existence of ocean trenches ^{again} lead to ~~sub~~ ^{our} understanding of plate dynamics. ~~Suby~~ ~~Suby~~ Subduction of oceanic plate (more dense) beneath the continental plate forms trenches.

- * Hydrothermal vents in the depth of ocean have very high temperature with almost-no sunlight. This has led to a unique ecosystem with niche wildlife. Not much is known about them yet.

Significance In Studying Oceanography

- * Ocean ^{floor} features and their comprehensive understanding is key in oceanography.

For eg. tsunamis has great destruction potential, and movement of ocean floor is ~~a~~ ~~to~~ the major factor in its origin.

- * Ocean floor has huge reserves of minerals like polymetallic nodules, manganese, chromium etc. They can't be mined sustainably without understanding the ocean floor.

→ Other geophysical phenomena, like earthquakes, volcanoes, coral reefs, island chains all need an extensive study of ocean floor coupled with earth's interior for comprehensive understanding.

→ Oceans ^{also} play a key role in climate regulation by acting as carbon sinks, hosting biodiversity, and redistributing heat via ocean currents.

Oceans are global common goods, and in the face of climate change, understanding and observing them is a collective responsibility of humankind.

- Q.15 दुर्लभ पृथ्वी तत्त्वों (दुर्लभ मृदा धातुएँ) की बढ़ती माँग के साथ, उनका वितरण वैश्विक अर्थव्यवस्था का एक महत्वपूर्ण पहलू बन गया है। वैश्विक स्तर पर दुर्लभ पृथ्वी तत्त्वों के वितरण, उनके उपयोग और उनके निष्कर्षण के पर्यावरणीय प्रभावों पर चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

With the growing demand for rare earth elements, their distribution has become a critical aspect of the global economy. Discuss the distribution of rare earth elements across the world, their uses, and the environmental impact of their extraction. (Answer in 250 words) 15 Marks

Rare earth elements (REE) are a group of 15+2 metallic elements grouped together in the periodic table (lanthanides). They are not "rare" per se, but their economically feasible extraction had been rare leading to the terminology. Their growing demand is fuelled by sectors like EVs (batteries), space, nuclear, defence, electronic components etc.

Distribution Across World

- * Their occurrence is regionally distributed, with countries like Australia, Central Asia (Kazakhstan), China, Russia, Africa (South Africa, Congo) holding key reserves.
- * India too has shown initial promise of reserves, but further exploration is needed to establish the true extent and mining feasibility.

- * Despite the distribution, the supply chain is controlled by China (80%). Ores are imported and mined in China, then processed and exported across the world.
- * Covid exposed this single point-of failure in global supply chains, and given the strategic nature of REEs, countries are now making conscious efforts to decouple from China for this dependency. (eg: Quad talks)

Uses of REEs

- * Batteries in electric vehicles
- + Use in building nuclear reactors
- * In Semiconductor chips, transistors, sensors, microcontrollers etc.
- * In space sector: rockets, satellites etc
- * In defense sector equipments

Envtl Impacts

* Like with mining all ores, extraction of REEs can lead to land degradation, deforestation, soil & water pollution, habitat destruction and more.

* Employment of " (Uighurs) " slave labour by China has also been raised by the global community.

The quest for REEs has led research into extra-terrestrial objects (eg: asteroids) and ocean floors highlighting the crucial role they are set to play in the 21st century.

India too has responded to this by launching schemes like PLI & partnering with like minded countries.

- 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

Incessant rains & landslides in Uttarakhand and Himachal Pradesh, floods in the cold-desert Ladakh are all symptomatic of the climate change taking place in the hilly regions of Himalayas.

Factors Responsible

* ~~to~~ Border-related infrastructure development. Roads, airstrips, bridges are being built keeping in view hostilities with China and Pakistan. Movement of heavy tanks & trucks etc need special infra as well.

* Religious tourism. The Char-Dham highway project in Uttarakhand. Amarnath yatra in Jammu. Unscientific cutting of slopes, wide highways are twin blows as they

increases accessibility while destabilising the region.

- * Ecotourism, jungle safari etc
- * Rising income of people and vicinity to cities like Delhi & Chandigarh
- * Tourism as a govt- objective by states to increase revenue
- * Lack of Scientific temperment of projects.
(eg: Ravi Chopra committee's recommendation were flouted)
- * Construction of dams, irrigation infra (eg: Terhinath Subsidence)
- * Deforestation, urbanisation, industrialisation

Envtl Impacts

- * Melting of glaciers in Himalays.
- * Increased occurrence of disasters like landslides, cloudbursts, GLOFs, flash floods, soil erosion.
- * Habitat destruction leading to critical species being endangered (eg: Himalayan brown bear)
- * Soil erosion, land degradation.
- * Water pollution because of waste discharges, industrial effluents etc. Effect on marine ecosystem (eg: fish kills)

- * Can ~~can~~ eventually lead to drying up of rivers in the region.

Measures for Sustainable Tourism

- * Involving local community, for they are most affected. Also leveraging their traditional knowledge (eg: water management).
- * Scientific execution of large scale infra projects like highways, dams etc.
- * Regulation enforcement wrt construction of hotels, resorts etc.
- * Encouraging sustainable tourism practices among tourists by issuing FAQs, do's & don'ts etc (eg: respecting local culture).
- * Promoting planting of trees to bind soil & slope.

Tourism in these regions is a crucial contributor to economy, but needs to be balanced for a sustainable growth.

Q.17

भारतीय मानसून विभिन्न जलवायविक कारकों से प्रभावित एक जटिल परिघटना है। भारत में मानसूनी वर्षा की तीव्रता और वितरण के निष्पत्ति में महासागरीय और वायुमंडलीय कारकों की भूमिका का आलोचनात्मक परीक्षण कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

The Indian monsoon is a complex phenomenon influenced by various climatic factors. Critically examine the role of oceanic and atmospheric factors in determining the intensity and distribution of monsoon rainfall in India.

(Answer in 250 words) 15 Marks

Monsoon is the seasonal reversal of winds in the Indian subcontinent, bringing majority of rainfall b/w ~~Feb~~ June - Sept.

Oceanic Factors

differential
→ The heating of land & ocean in the summer months leads to development of low pressure over Indian subcontinent. The ITCZ (Inter Tropical Convergence Zone) lies over the land. Winds from the equator move to fill this gradient, and are deflected due to the Coriolis force.

* They pick up moisture when moving over oceans, and are forced to shed this by the Himalayas. Thus, the rain brought by monsoon is greatly facilitated by the ocean.

✶ Indian Ocean Dipole A cyclical phenomenon, where temperature differential develops b/w Bay of Bengal & Indian Ocean, strengthening the monsoon.

✶ El Nino & La Nina Abnormal heating & cooling of east-central Pacific, off the coast of Peru, leading to weakening & strengthening of monsoon (respectively). It is a complex global oceanic phenomenon.

✶ JMO : Jane Mullian Oscillation
Heat differential b/w waters of the east-coast of Africa also affect Indian monsoon.

Atmospheric Factors

✶ They are closely linked with oceanic factors as well.

✶ Movement of jet streams is a crucial factors. Due to summer heating, eastern jet stream blows in upper troposphere over the Indian subcontinent, bringing monsoon.

- * Reversal of monsoon in October (retreating monsoon) brings rain to Tamil Nadu & Andhra Pradesh.

Apart from oceanic & atmospheric factors, topography (western ghats : windward & leeward), altitude, distance from coast etc also play a key role in Indian monsoon.

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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

The relationship between traditions & social change is complex, and saying that they impede change can be a oversimplification. India has a tradition of debate, which facilitates change as well.

Traditions & Social Change

- * Traditions are adherence to rituals & actions which are passed down across generations. They ensure continuity, pass knowledge, and give a sense of identity.
- * Traditions can be both progressive & regressive. Sati, child marriage, untouchability vs respecting elders, yoga, ayurveda are all traditions.
- * However, the purpose of traditions is to transmit knowledge and maintain order and unity in society, and their ritualistic

adherence, without critical thinking can impede social change (eg: caste-based discrimination, feudal system).

Effectiveness of Social Legislation

- * Laws don't exist in vacuum, and societal norms dictate their effectiveness to a great deal.
- * Despite child marriage being outlawed, their prevalence in society continues (though decreasing). Here, more than social change, a development is required. Other cgs include dowry, domestic violence, rape, manual scavenging, discrimination against SC ST etc.
- * Social legislation like reservation & RTE have proven effective by providing avenues for mobilisation.
- * Even though ^{100%} may not be effective, social legislation reflect collective voice of society, and the morality

associated with it. Issues like same-sex marriage, abortion are a case-in-point.

Thus, depending on issue, social legislation can accelerate or lead social change, or may prove ineffective. Nonetheless, they reflect the collective conscience of society.



- 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 असंतुलित और स्वार्थपरक नगरीय नीतियों का एक परिणाम हैं। विश्लेषण कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Slums are not 'problems' that have to be 'solved' - but are indeed a result of lopsided and vested urban policies covering infrastructure provision and socio-economic issues. Analyse.

(Answer in 250 words) 15 Marks

Slums are dilapidated housing structures of urban areas characterised by high density, lack of public space, poor sanitation, poor house design & materials, lack of quality employments etc.

Cause of Slums

1 Nobody chooses to live willingly in a slum. They are the survival mechanism of the lower strata of society. Most of them are socially excluded & lack the means of securing housing in expensive cities.

2 Migration from rural to urban, and tier 2 to tier 1 cities also give rise to slums.

Slums serve as entry points for these migrants, who come in the informal

sector as maids, drivers, construction workers, security guards etc. Their income isn't enough to rent an apartment in mainstream society.

* Social discrimination & ghettoisation also lead to slum expansion.

* Urban policies are a major cause, as property and rental rates are unaffordable for slum dwellers. Solutions like constructing hostel and economical housing units by local bodies need to be implemented.

* Slums are also vote-bankers, and thus sometimes proper development and ~~the~~ regulation enforcement are not undertaken.

* Slums also provide social support, which can be lacking in an urban lifestyle.

* Encroachment is also a factor.

6 Way Forward

- * An Iron fist- approach is ~~not~~ not desirable, while also not encouraging slum formation.
- * Amenities like education and housing need to be solved in cities, making them inclusive.
- * General ~~apathy~~ apathy of city dwellers is also a cause. People should be encouraged to enquire into general well-being of their maids and security guards.

Schemes like PM Awas Yojana will help solve this problem, but more efforts are needed.

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

(250 शब्दों में उत्तर दीजिए) 15 अंक

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

(Answer in 250 words) 15 Marks

Communalism is an ideology when religion based identity is deemed superior over other identities of the self, along with "other" of other communities. Interests of various communities are seen as antagonistic, as a zero-sum game.

Economic Deprivation as Cause

* When economic indicators of different religious groups happens to align with religious identities, this correlation is misconstrued as causation. People blame their economic desperation to other, more prosperous religious groups, instead of looking for other plausible reasons like ~~eco~~inflation, economic recession etc.

For eg, Malabar revolt of 1920s, where landlords were of a certain community and peasants of another.

Social Exclusion as Cause

* When societies are divided along social identities, the "othering" becomes easier. There is a fear of the unknown, of their language, traditions, food and customs. This creates a fertile ground for mobilisation along religious ^{lines} (or other identities)

* Social exclusion also limits opportunities for economic growth (eg: calls of boycott of business of particular community).

* Ghettoisation further limits interaction, and people seek safety in their own community.

Other Factors

* Politicisation of religious identity for serving roles.

- * Formation of ^{religion} ~~religious~~ based organisations in the civil society (eg: VHP, AIML)
- * Historical factors (eg: British policy of divide & rule, 1947 partition).

Communalism rears its ugly head every now & then, but can be contained by ensuring inclusive growth, facilitating inter-faith dialogue, designing ^{mixed} housing establishments, enforcing laws and inculcating local community.