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(To be filled by candidate)

Code : TC047

Name of Candidate : Nahi Sharma

Roll No. : USPN23B10118

Registration Number : ..... Date of Examination : 18/06/2023

Exam Centre : Old Rajinder Nagar ☑ Bhopal ☐ Online ☐

MTS - Sectional Length Test (Plus)-1 : 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. : .....

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Evaluator Code :

Q.No	Pg No.	Maximum Marks	Marks	Total
1	5			
2	7			
3	9			
4	11			
5	13			
6	15			
7	17			
8	19			
9	21			
10	23			
11	25			
12	28			
13	31			
14	34			
15	37			
16	40			
17	43			
18	46			
19	49			
20	52			
Grand Total				

Signature

MACRO COMMENTS

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1. Read the Instructions on the cover page and strictly follow them.
2. Write your registration number and other particulars, in the space provided on the cover of QCA Booklet.
3. Write legibly and neatly. Do not write in bad/illegible handwritings.
4. For rough notes or calculation, the last two blank pages of this booklet should be used. The rough notes should be crossed through afterwards.
5. If you wish to cancel any work, draw your pen through it or write "Cancelled" across it, otherwise it may be evaluated.
6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

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Q.1 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

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Q.2 स्वतंत्रता 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

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Q.3 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

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Q.4 पृथ्वी की आंतरिक संरचना की हमारी समझ में भूकंपीय अनुसंधान किस हद तक योगदान करता है? इसके महत्त्व का विस्तार से विश्लेषण कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

To what extent does seismic investigation contribute to our understanding of the Earth's interior structure? Analyze its significance in detail. (Answer in 150 words) 10 Marks

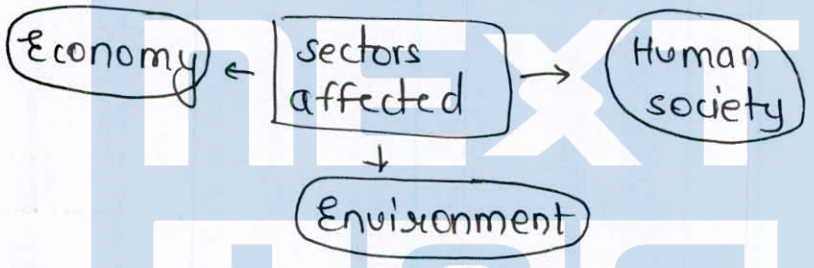
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Q.5 जलवायु परिवर्तन के कारण हिमनदों के पिघलने का पारिस्थितिकी तंत्र और मानव समाज पर गंभीर प्रभाव पड़ता है। हिमनदों के पिघलने के कारण पर्यावरण पर पड़ने वाले प्रभावों और इस मुद्दे के समाधान के लिए किए जा सकने वाले उपायों पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

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

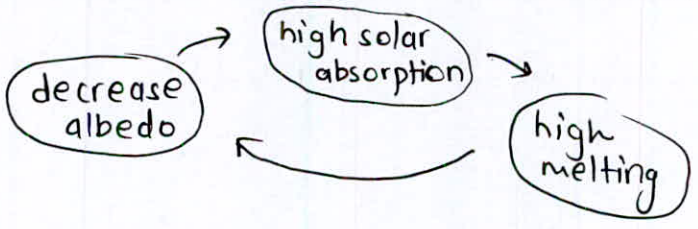
Climate change and particulary, global warming contributes to glacier melting and as per American Geological Society, the rate of glacier melting in recent times has increased



Effects of glacier melting on environment :-

★ Negative effects :-

(1) Decreasing albedo :- It will create a positive feedback and then increase the melting rate



(2) Release of carbon :- The uncovered dead and partially decayed organic matter will be exposed contributing to CO_2 and methane emission

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③ **Increasing sea levels** :-

- ↓ Floods & Tsunamis
- ↓ biological composition may change.
- ↳ sinking of islands
- ↳ decreasing salinity
- ↳ increase in no. of pandemics

④ Positive effects :-

(a) Increase in volume of water in rivers will help in irrigation and drought control.

Today, melting of glaciers at an increased rate possess a challenge before world community that can be addressed through.

① **International Paternerships**

(a) To lower to temperature increase. (Ex): Paris Agreement

(b) Under 2 coilation (sub national)

② **LIFE** : "LIFE" programme should be adopted at global level.

③ **Carbon markets** :- They will lower CO_2 emissions which will reduce the rate of glacier melting.

Environmental changes are irreversible in nature, thus a comphrehensive and collective action at global level is needed to tackle glacier melting.

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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



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Q.7 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

The world over, there is an advocation of shift from coal based power plants to renewable energy power plant to check the temperature rise below 2°C and address other environmental issue.

However, this structural shift has a bearing ~~of~~ on human development in following ways:

① **Unfavourable Effects**:-

(a) Structural employment :- Technology used in coal based and renewable based power plants are different.

(b) Underutilization of coal resources: It was earlier the source of income for many groups.

(c) High energy cost: Energy made from renewable energy costs high. It can increase poverty levels

Ex:- coal = ₹ 1/unit
solar = ₹ 4/unit

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(d) Non reliable source: Energy sources like sun, wind etc are not reliable due to fluctuations. It can leads to power cut offs in factories and schools impacting income and education.

(2) Favourable Effects :-

(a) Good Health: Health will improve due to less pollution, thus reducing out of pocket expenditure

'Healthy people contributes more to economy'

(b) New employment opportunities: Setting up of new plants will offer employment contributing to development of the society.

(c) Sustainable utilization of natural resources.

Thus, shift to renewable energy is needed but it should not be radical and spontaneous, rather be based upon value consensus and should be carried out into phases.

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Q.8 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

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Q.9 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

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Q.10 इंग्लैंड की औद्योगिक क्रांति ने न केवल आर्थिक परिदृश्य को बदल दिया बल्कि इसके दूरगामी सामाजिक और सांस्कृतिक प्रभाव भी पड़े। विवेचना कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

'England's Industrial Revolution not only transformed the economic landscape but also had far-reaching social and cultural impacts'. Discuss. (Answer in 150 words) 10 marks

Industrial Revolution in England is 18-19th century is a series of events which marked a shift from hand made goods to factory made goods.



- feudal to capitalist mode of production
- emergence of banking and finance institution.
- High profitability and expansion of Market in colonies
- Land lost its value.
- Capital/Money became central focus

change in mode of production → from home to factory

Social - cultural impacts of Industrial Revolution:-

(1) Rise of two classes
① Bourgeoise / capitalist class
② Working class

The new capitalisit class controlled the mode and forces of production and referred as have class. working class/have nots worked in the factory.

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(2) Rise of urban centres :- Many urban centres were establised but they were the places of darkness, deviance, unhygienic & ignorance

(Ex): Manchester :- Repository of inhumaniety.

(3) The rate of women exploitation and child labour increased.

(4) Allienation :- workers were allienated from the product, process, society and self. ~~& they~~

(5) Workers emerged as a social class and they were indespensible.

(6) Social inequality prevailed in the society.

(7) It led to westernization of colonies.

(8) Social mobility increased as agricultural labourers were freed from feudal lords' cluth and they become working class in factories.

Thus, Industrial Revolution has both, functions and dysfunctions which were analysed by ~~com~~ contemporary thinkers and the solutions for anarchy was provided.

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Q.11 स्वतंत्रता पश्चात् 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

Initial years of India's independence is characterized by ~~highs~~ fluctuations in its relationship with two of its neighbours i.e., Pakistan and China.

India's Wars

Pakistan

1948 → tribal invasion
1965 → Quasi war.
1971 → Bangladesh liberation
1999 → Kargil war

and many voilations of cease fire

China

1962 = major war and multiple incursions by China.

Causes and impact of India - Pak war:

(+) Causes:-

(a) Historicity of partition and unformoat killing of masses created insecurity

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in Pakistan and hatred towards India.

(b) Instrument of Accession signed between king Hari Singh and India justifies the defence by Indian forces to tackle tribal invansion sponsered by Pakistan and formation of LOC.

(c) Indus water sharing issues led to tensions in 1965

(d) Pakistan's sight to capture mountain heights in ladakh and kashmir valley led to kargil war., 1999.

(e) Atrocities by Pakistani forces on Bangladeshis and refugee crisis in India.

These wars have shaped Ind-Pak relationship in following way:-

(a) Perpetual animosity due to lack of efforts on Pakistan's side.

(b) Currently no trade is going on between Ind-Pak

(c) Pakistan's perception of India acting as a dominant power

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But causes for Indo China wars are different :-

Causes: Chinese insursions in ladakh region led to India-China war of 1962 which affected Indian economy badly.

Relations with China :-

(a) China has become a 'frequent force infiltrator'
(b) Trade relations are still continuing.
(c) China's inclination towards ~~China~~ Pakistan creates a gap between India and China.
(d) China has occupied 78,000 sq km of ladak as Aksai chin.
(e) Zero sum game relation.

75 years after indepence, still India faces hositle neigbhours activities in Arunachal Pradesh and kashmir valley. China has adopted wolf warrior approach. But initiative like Samjhauta express, delegates meeting with China should be continued to ease the tensions and for mutualy development.

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Q.12 'आर्थिक रूप से सर्वाधिक सक्रिय गलियारे (कॉरिडोर) आज भारत में पूर्व हरित क्रांति क्षेत्रों के साथ अतिव्यापित करते हैं'। स्वतंत्रता पश्चात् के भारत के संदर्भ में हरित क्रांति ने भारत में किस प्रकार कृषि उत्पादकता में योगदान दिया है, लेकिन पीछे मुड़कर देखने पर लगता है कि इसने असमान विकास के भूगोल को जन्म दिया?

(250 शब्दों में उत्तर दीजिए) 15 अंक

'The most economically active corridors today overlap with the former green revolution regions in India'. In the context of post-independent India how has Green Revolution in India contributed to agricultural productivity but in hindsight produced a geography of uneven development?

(Answer in 250 words) 15 Marks

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Q.13 प्रथम विश्व युद्ध की घटनाओं और उसके तत्काल बाद की घटनाओं ने अफ्रीका और एशिया में राष्ट्रवाद के पुनरुत्थान को किस तरह से बढ़ावा दिया? (250 शब्दों में उत्तर दीजिए) 15 अंक

In what ways did the events of World War I and its immediate aftermath foster the resurgence of nationalism in Africa and Asia? (Answer in 250 words) 15 Marks

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Q.14 महासागरीय नितल का विन्यास उन भूगर्भीय प्रक्रियाओं के बारे में आवश्यक जानकारी प्रदान करता है जिन्होंने पृथ्वी की सतह को आकार दिया है। महासागरीय नितल की प्रमुख विशेषताओं और समुद्र विज्ञान के अध्ययन में उनके महत्त्व की चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The configuration of the ocean floor provides essential information about the geological processes that have shaped the Earth's surface. Discuss the major features of the ocean floor and their significance in the study of oceanography. (Answer in 250 words) 15 Marks

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

The Indian monsoon is a complex phenomenon influenced by various climatic factors. Critically examine the role of oceanic and atmospheric factors in determining the intensity and distribution of monsoon rainfall in India. (Answer in 250 words) 15 Marks

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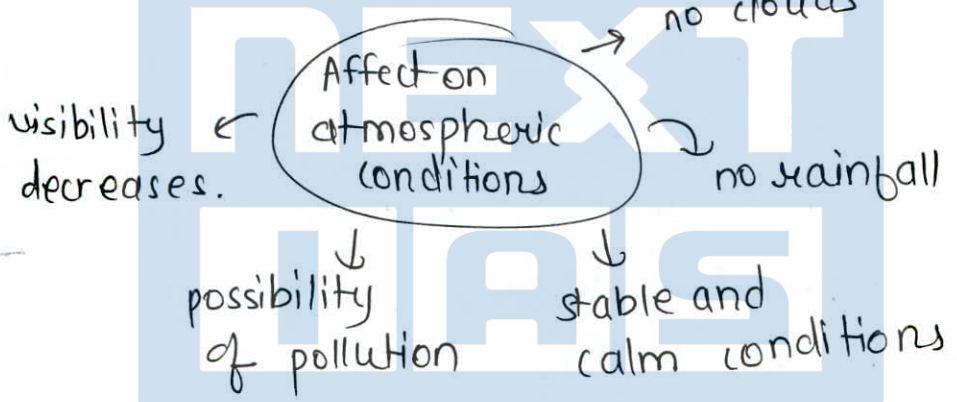


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Q.16 तापमान व्युत्क्रमण वायुमंडलीय दशाओं को कैसे प्रभावित करता है और स्थानीय मौसम प्रतिरूप और वायु प्रदूषण स्तरों के लिए इसके क्या निहितार्थ हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

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

Temperature inversion means presence of calm and cold air in lower layers of earth's atmosphere and warm air is placed above cold air characterized by negative lapse rate.



The possible implications for local weather pattern:-

① Cloudless sky : Generally, sky is clear during temperature inversion and no or very less rainfall occurs.

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② Calm and stable weather :- Generally, the wind movement during temperature inversion is not turbulent, thus no cyclones, no tornadoes etc

③ Formation of fog, dew, frost etc:

The water vapour suspended in the atmosphere changes into dew (above freezing point), fog and frost due to cold conditions and absence of clouds.

④ Cold weather : Cold weather, long cold nights, sun rises ~~occassionly~~ for short period and is absent for 10-15 days.

Ex:- Temperature inversion of northern plains in India.

★ Temperature inversion affects pollution :-

Due to calm and stable conditions, the pollutants get to stay at a place for long time due to absence of turbulent wind movement which

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increase the pollution levels and lowers the airquality index. It also leads to visibility issue.

(Ex): Airquality index of Delhi during temperature - inversion crosses 400 AQI

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Q.17 दुर्लभ पृथ्वी तत्त्वों (दुर्लभ मृदा धातुएँ) की बढ़ती माँग के साथ, उनका वितरण वैश्विक अर्थव्यवस्था का एक महत्त्वपूर्ण पहलू बन गया है। वैश्विक स्तर पर दुर्लभ पृथ्वी तत्त्वों के वितरण, उनके उपयोग और उनके निष्कर्षण के पर्यावरणीय प्रभावों पर चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

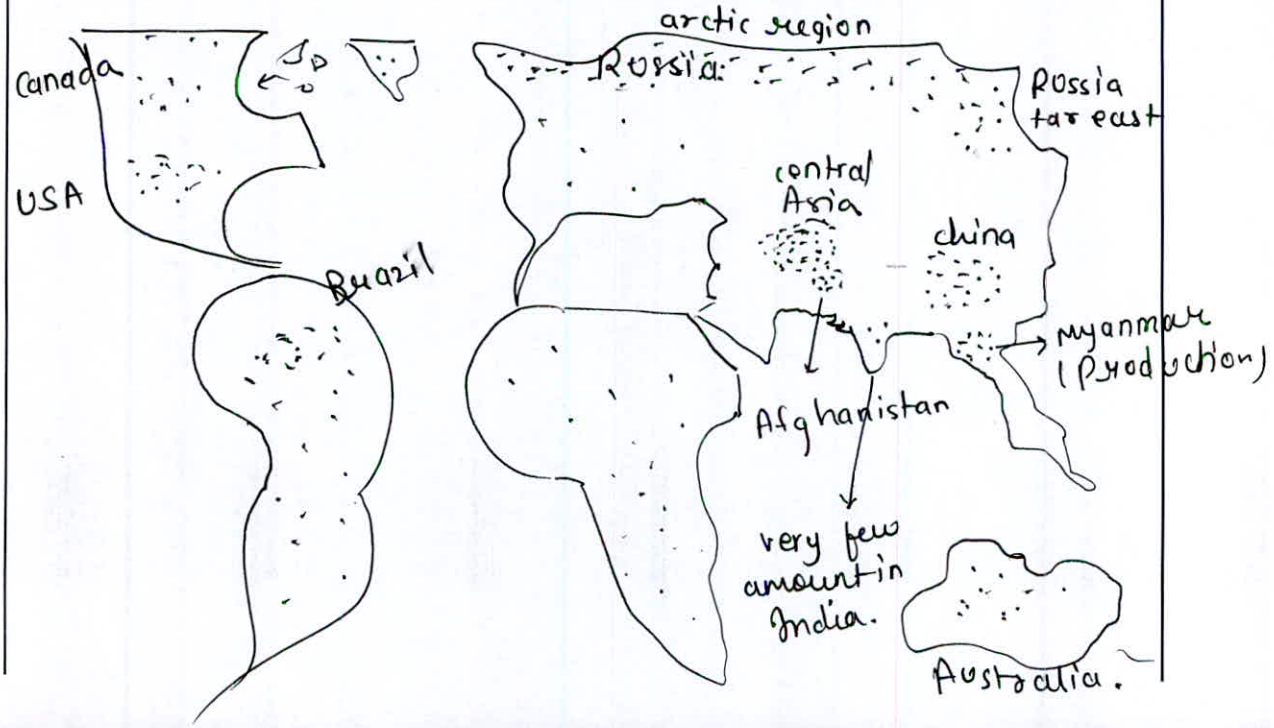
With the growing demand for rare earth elements, their distribution has become a critical aspect of the global economy. Discuss the distribution of rare earth elements across the world, their uses, and the environmental impact of their extraction. (Answer in 250 words) 15 Marks

Rare earth ~~metals~~ elements are the group of metals whose concentration in the ore is very low and the extraction becomes difficult due to technological gap.

often said, 'Data is fuel for future world' and rare earth metals form the storage and transfer of data.

Ex:- ~~Ptasm~~ lanthanoids and non-lanthanoids. (Yttrium etc).

Rare earth metals are unevely distributed globally.



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Major producer of rare earth ~~metals~~ elements is China. The countries with deposists of rare earth metals will have an edge in the future data economy.

Rare earth Elements (RRE) are used in variety of applications like:

1. Computers and storage devices
2. Electronic appliences.
3. RREs are used for research purposes
4. RREs can be used in spaceships and space missions.
5. High speed trains and planes.
6. It can be used in making explosive
7. RREs can be used to understand Earth's geological history.

But extraction of rare earth elements has certain environmental impacts as follows:-

1. Extraction technology can be emission intensive. which will increase global warming.

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② Chances of radiation leakages which will ~~after~~ affect the humanity as whole and extraction workers particularly.

③ Deeper extractions can lead to landslides

④ Extraction in artic region can increase ocean pollution and increase arctic melting It will also alter faunal composition.

RRE, are the basis for future economy but the technology to extract them should be competant enough to ensure sustainability.

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Q.18 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 the leading producer of sugar in the world. and its has many sugar factories whose location is influenced by following factors :-

① Geographical factors.:

(a) Near the availability of large patches of sugarcane ~~cultivate~~ plantations

(b) Good availability of water source

(c) High rainfall areas.

(d) Plain areas

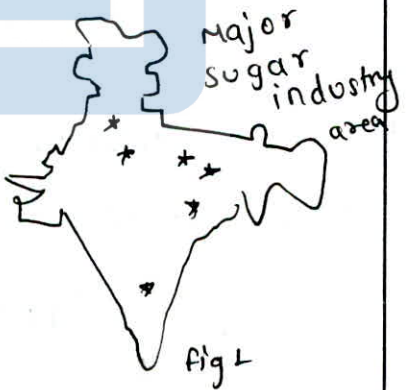


Fig 1

② Economic Factors :-

(a) Cheap labour and land.

(b) Good transport facility.

(c) Availability of near and expanded market

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when a sugar industry grows, it does not grow in an isolation, but contributes to the growth of other industries in India and globally in following ways:-

① Sugar acts as a raw material in food processing industries. which is a sun rise industry in India.

② By product of sugar industry is used to make bio fuel like bioethanol. (Ex): It will lead to innovations in automobile sector and emergence of flex fuel vehicles. Bagasse

③ Fiberous tissues / by product is used to make fibres and develops textile industry sustainably.

* Geographical factors affecting sugar industry in India.

① Water availability :- Sugar cane is a plantation crop which ~~nea~~ needs good

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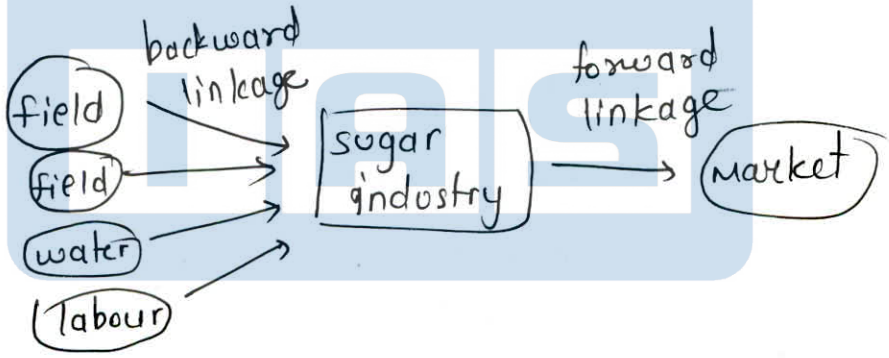
water availability. So sugar factories are usually found ~~on~~ in cities on river bank.

② Good sunlight :- Sugarcane needs proper sunlight for growth. So sugar industries are not common in hilly areas.

* Economic factors :-

① Sugar industries are found in well developed transport areas for easy market access

② Forward and Backward linkage



Thus the presence of industry is influenced by many factors which play an important role in sustainable profeetering of the industry.

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Q.19 पहाड़ी राज्यों में पर्यटन, इस क्षेत्र की पारिस्थितिक वहन क्षमता से अधिक हो जाने का खतरा है। इस प्रवृत्ति के लिए योगदान करने वाले कारकों का विश्लेषण कीजिए और इस घटना के संभावित पर्यावरणीय प्रभावों का मूल्यांकन कीजिए। इन राज्यों में धारणीय पर्यटन को सुनिश्चित करने के लिए क्या उपाय किए जा सकते हैं?

(250 शब्दों में उत्तर दीजिए) 15 अंक

Tourism in the hilly states is threatening to exceed the ecological carrying capacity of the region. Analyze the factors contributing to this trend and evaluate the potential Environmental impacts of this phenomenon. What measures can be taken to ensure sustainable tourism in these states?

(Answer in 250 words) 15 Marks

Tourism, a major factor in India's economic derelopement is becoming unsustainable for hilly and geologically fragile areas due to high tourist inflow which also threatents to challenge the ability of the region to sustain the local people also.

Factors contributing :-

(1) **High tourist inflow due to :**

(a) work loads and global warming in cities
(b) global tourists inflow
(c) Attraction towards adventourous sports

(2) **Irresponsible Tourism :**

(a) Throwing garbage anywhere.
(b) Undermining local culture.
(c) More use of non-biodegrable substances

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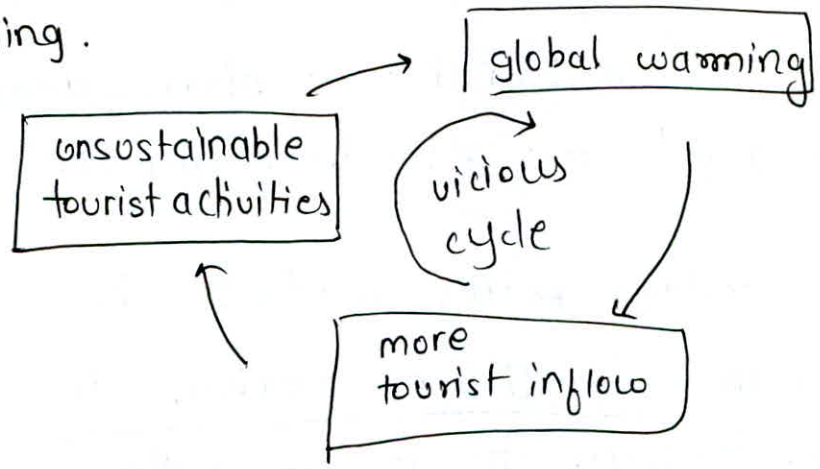
③ lack of sanitation initiatives due to geographical constraints.

This phenomena impacts environment in following ways.

(1) **Pollution** :- It affects the fresh water sources and spreads diseases in the region.

② **Change in floral and faunal composition.** Sometimes, animal eat non-biodegradable things thrown by tourist, it can lead to death of animal. Poisonous gases emitted by vehicle have negative impact on flora of the region.

③ **Positive feedback** : It will increase global warming.



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④ Natural ~~dist~~ disasters : It can lead to life threatening natural disasters due to fragile ecosystem.

(Ex):- Chamoli landslide, recent ~~dise~~ cracks seen in homes of Uttrakhand near Taporan.

Therefore, sustainable tourism has be ensured as follows:-

① Limiting the number of tourist :- As it is done in the case of pilgrims like Vaishavdevi, inflow of tourist to hills to be restricted.

② Scientific survey and EIA to be mandatory for tourist adventurous activities established.

③ Common guidelines should be given by all hotels, dharmashalas, local people etc.

④ Light shows for sostainable tourism ~~should~~ can be arranged for effective impact.

Thus, todays focus needs to be changed from quantitave tourism to qualitative tourism to make India a global tourism hotspot.

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Q.20 भारत में मैंग्रोव वनस्पति के लिए उत्तरदायी भौगोलिक कारक कौन–कौन से हैं? जलवायु परिवर्तन भारत में मैंग्रोव वनस्पति के लिए कैसे खतरा पैदा कर रहा है? (250 शब्दों में उत्तर दीजिए) 15 अंक

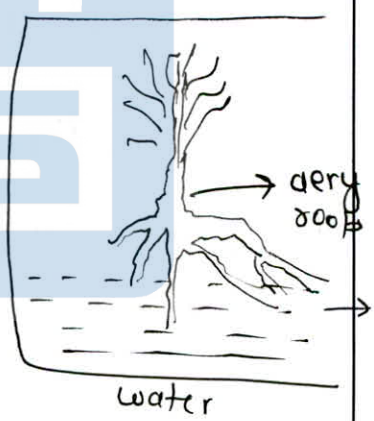
What are the geographical factors responsible for mangrove vegetation in India? How does climate change pose a threat to mangrove vegetation in India? (Answer in 250 words) 15 Marks

Mangroves are a type of salt tolerat plants with adaptations like aeral roots. India has world's high biodiversity rich mangrove area in sundarbans.

Geographical factors responsible for mangrove vegetation:-

① Marshy coastal land: Mangroves are usually found in marshy coastal lands

② Shallow water and nutrients rich are likely to have mangrooves



③ Deltaic region: It makes a ecotone (high biodiversity).
Ex:- Bhitarkanika mangroves

Mangroves are highly adaptable plants they have adopted to high salinity and anerobic conditions.

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Climate change pose threat to mangrove vegetation in following ways:-

(1) Global warming increases intensity and frequency of cyclones which encounter mangroves during landfall and they destroy the roots of mangroves.

(2) If mangroves are destroyed by cyclones it leads to coastal erosion.

(3) Either drying up or flooding of river due to climate changes affects mangroves.

(4) Glacier melting due to climate change increases sea level due to which mangroves get submerged.

(5) Nutrient composition change in sea level due to global warming affect mangroove vegetation.

India has high biodiversity mangroves but sea level rise near Indian cost pose a threat to mangrove

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vegetation which will be irreversible and will aggravate global warming. So programes like MISHTI and sustainable coastal area development is the need of the hour.

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Rough Work