



**GENERAL STUDIES TEST 8**

Name of the Candidate

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TEST 2320

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World History,  
Post Independence,  
Geography

UPSC 2023 Roll Number

0867247 Date - 23<sup>rd</sup> Aug '23

Time Allowed - 3 Hours

Maximum Marks - 250

Table of Marks			Instructions Set	
QUESTION	MAXIMUM MARKS	MARKS OBTAINED		
1	10		<p><i>Please Read each of the following instructions carefully before attempting questions:</i></p> <ul style="list-style-type: none"> <li>• There are <b>TWENTY</b> questions printed in <b>ENGLISH</b>.</li> <li>• <b>All</b> questions are compulsory.</li> <li>• The number of marks carried by a question/part is indicated against it.</li> <li>• Answers must be written in English and must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in a medium that the authorized one.</li> <li>• Use on black/blue pen ink to write answers. Do not use pencil other than for drawing diagrams/sketches.</li> <li>• <b>Answers to Questions no. 1 to 10 should be in 150 words, whereas answers to Questions no. 11 to 20 should be in 250 words.</b></li> <li>• Keep the word limit indicated in the question in mind.</li> <li>• Any page or portion of the page left blank in the Question-cum-Answer (QCA) Booklet must be clearly struck off.</li> </ul>	
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COMMENTS			TIME TAKEN	EVALUATION DATE
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Email ID for Test Submission - testsubmission@smartworklabs.in			SPECIAL REQUEST WITH REGARDS TO EVALUATION -	
Email ID for any Grievance - grievances@smartworklabs.in				
Email ID for other queries - info@smartworklabs.in				

## **MACRO FEEDBACK**

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- 2.1 "Industrial revolution in England is different from other European countries in many aspects." Elucidate. (150 words, 10 marks)

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Ans: Industrial Revolution is a transformative event in the world history that led to replacement of manual labour with mechanised power and handicrafts industry with large scale factory based mass production, beginning in England in 18<sup>th</sup> century.

### \* Industrial Revolution in England:

- ① Based upon textile industry → cotton boom.
- ② State acting as facilitator in the process
  - ↳ free market based process  
(laissez faire principle of Adam Smith)
- ③ Abundance of raw materials and capital from colonies. (e.g.) → exploitation
  - market for <sup>✓</sup> of Indian labour
  - manufactured goods
  - capital (After Plansey) 1957
- ④ Well connected inland rivers system.

for effective transportation of goods & easier

### \* How different from other countries:

- ① State sponsored Industries in other nation -> Germany: Bismarck played crucial role  
(Italy, Mussolini's role. corporate state)
- ② Lack of extensive colonial empire for market and cheap raw material in European countries.
- ③ Germany, Italy, Belgium France depended upon imported capital for their industrial revolution.
- ④ focused on capital industries as opposed to consumer products in England.  
Though the process began in England, Industrial Revolution encompassed the entire European world leading to scramble for 'sphere of influences' in 18th-19th century across globe.



Q.2

Enumerate the salient features of the tribal policy adopted after independence. Also, discuss the reasons for slow progress of tribals despite various efforts.

(150 words, 10 marks)

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Ans: The independence of India was followed by nation-building process with the integration of tribals as one of the most significant aspect resolved through Nehru's 'Tribal Panchsheel' Policy.

### \* Tribal Policy after Independence:

- ① few leaders focused upon assimilation of tribal into mainstream society & economy
  - ↳ rejected on the basis of diverse tribes and their practices
- ② Nehru gave Panchsheel Policy focusing upon their 'Integration' rather than assimilation with following features:-
- ③ - focusing upon their independent growth & development without interference.

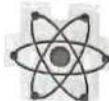


- ④ Enabling tribals to develop in a manner unique to them.
- ⑤ Provide them training in self-government.
- ⑥ focus upon their capacity building -
- ⑦ focusing upon the outcome & not the monetary outlay of the Policy.
- ⑧ developing tribals within their natural habitats → harmony with nature.

#### \* Slow Progress of Tribals

- ① Inability to follow the Panchsheel.
  - ↳ displacement of tribals for developmental projects.
- ② → more focus on assimilation than integration → not listening to their grievances.
- ③ upsetting their traditional rights in land & habitat → corruption & lack of political will.

focusing upon their unique capacities and learning to live in harmony with tribals along with targetted policies are the way forward.



Q.3

"Weathering is a complex phenomenon involving a number of processes and is influenced by various factors". Elaborate.

(150 words, 10 marks)

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Ans: Weathering is the phenomenon of scraping of solid rocks and materials under the influence of winds, water or chemical compositions, in situ.

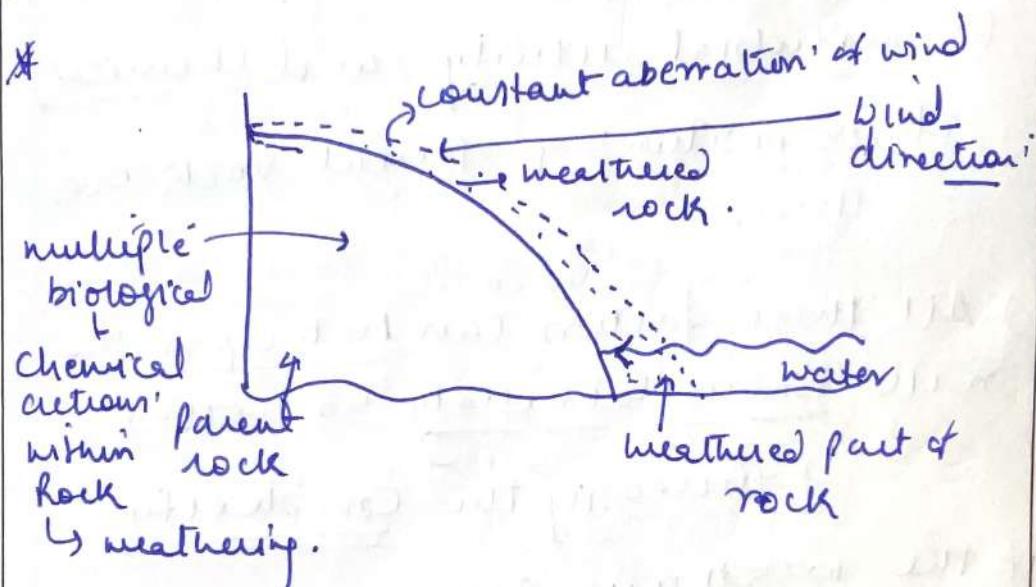
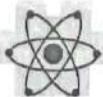


Fig: Complex process of weathering.

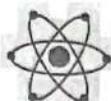
### ④ Factors influencing weathering

- ① water: rocks are broken away through constant water movement over the surface of rocks.



- ④ → river action' on the sides.
- ⑤ Wind: important factor that causes 'abrasion' on the rock surfaces  
↳ → hot arid regions of Rajasthan.
- ⑥ Biological & Chemical factors: due to microbial activity and chemical decomposition of parent rock over years.
- ⑦ All these factors can act upon the rock simultaneously as well →  
↳ increasing the complexity of the weathering process.

The breakdown of rocks leads to erosion & movement of materials from place to place, and contributes towards minerals replenishment in the process.



Q.4

Discuss how Sustainable Land Management can be the key to reduce the impacts of Climate Change? Also mention few practices to adopt Sustainable Land Management. (150 words, 10 marks)

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Ans: As Per UNCCD report, approximately one-third land in India is facing threat of land degradation, requiring sustainable management of land on urgent basis.

\* Sustainable land management → key to reduce impacts of climate change.

① Better soil quality → leading to improved soil productivity  
↳ food security for people.

② Better water use efficiency in agriculture → decreased climate change impacts.

③ Urban land use in sustainable manner - ↳ reducing urban



### heat island

↳ reduce energy requirements.

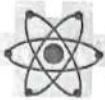
### \* Practices to Adopt for Sustainable Land Management

- ① Capacity Building of urban spaces :- ↳ Placemaking
- ② Developing 'Blue-Green Infrastructure'  
↳ - 'Delhi 2024 vision plan' for sustainable land management.
- ③ Improving precision farming practices, watershed management practices.

When land is considered as a finite resource and Behavioural change in people is effected, then India can achieve its 'Panchamit Targets'.

### CASE STUDY

↳ Place making 'Matherum', 2021 for capacity building of urban spaces in Maharashtra & Vadodara (using a flyover as an open angadwadi centre)



Q.5

Assess the impact of climate change on urban spaces. What steps can be taken to mitigate these adverse impacts? (150 words, 10 marks)

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Ans: Climate change has affected the entire ecosystem of the world, more so for the urban spaces which are expanding at an unsustainable pace

India's current urban population at ~35% is poised to rise to more than 60% by 2050 → putting pressure on urban land & space.

#### \* Impact of Climate change (C) on Urban spaces.

① Reclamation of water bodies for infrastructure development :

(e.g.) Delhi's 239 water bodies are lost in past decade.

② Causing urban floods: - (e.g.) - Chenai.  
③ Unhygienic living conditions → increasing pollution of urban spaces

(e.g.) → Delhi's Bhalswa garbage pit



③ Increasing energy demand in urban centres due to Climate change..

④ → urban Heat island

### \* Mitigation steps.

① Improving the ecological balance

② → Tamil Nadu restored  
128 water bodies.

② Community Engagement curied:

② → water Harvesting techniques  
in Thane, Maharashtra.  
↳ restoring the ecosystem of  
urban spaces.

③ Governments concerted steps →

② → Energy efficient Buildings.  
→ energy code in green-  
Buildings.

Resilience of urban spaces is must  
along with developing disaster-risk  
reduction, infrastructure for sustainable  
Cities (SOG II)



Q.6

Describe the various land forms created by glaciers.

(150 words, 10 marks)

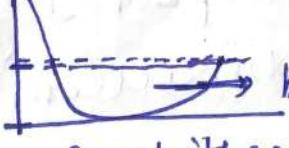
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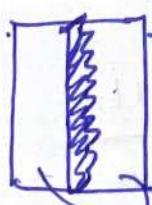
Ans: Glaciers are huge mass of ice that moves under the effect of gravity and creating both erosional and depositional landforms on its way.

### \* Erosional landforms:

① Formed due to abrasion of the adjoining land of valley or sides of mountains.

② → ① Cirques:  bowl shaped amphitheatre like depressions caused by the small glaciers.

③ Aretes and Horns



→ Steep crest separating 2 Glaciers.



Pointed peaks  
Bounded by on  
3 sides by  
Glaciers.

UPSC--CSE--EXAM

Two different Glaciers.

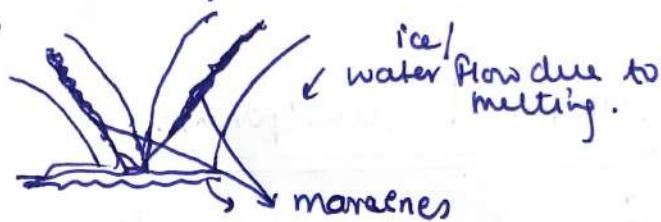


\* Depositional landforms: those which

are formed by deposition of glacial  
coarse or fine debris.

Q. → ① moraines are long ridges

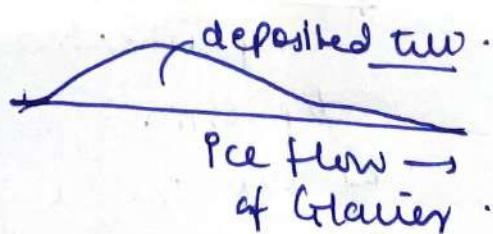
of deposits of glacial debris when  
they melt.



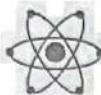
② Drumlins: ridge shaped like

structures in inverted spoon

position → deposited glacial till due to  
minor obstruction in the way.



The glacial landforms are  
significant for their placer deposits,  
of gold & other minerals and are a  
indicators of geological formation of



Q.7

Mention the consequences of altering the natural flow regimes of rivers and streams.  
(150 words, 10 marks)

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Ans: River regime is the overall flow of the river throughout its course encompassing its tributaries. The regime alteration can have adverse impacts on its nearby areas.

### \* Factors leading to altering of natural flow

① Due to increased water flow or decreased water flow.

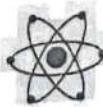
↳ Diversification of ancient Saraswati River -

② Climate change induced changes.

↳ → excess siltation causing change of natural boundaries of rivers

### \* Consequences

① Drying up of streams



- ② water logging in nearby areas.
- ③ floods in the adjoining regions at the flood plains.
- ④ Impacting the irrigation patterns for agricultural communities.
- ⑤ Loss of drinking water for certain communities.
- ⑥ May impact the adjoining local industries dependent upon water availability.
- ⑦ Cause damage to the bio-diversity of the river ecosystem.
- ⑧ Affect the entire ecosystem of people, animals & native centred around the river or stream.  

River water is crucial for survival of biodiversity & the dependent communities thus sustainable management of watershed is the requirement amidst climate change.



Q.8

Analyse the changes in distribution patterns of iron and steel industry in India. To what extent do government policies influence their location? (150 words, 10 marks)

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Ans: The iron & steel industries are the 'backbone' of the country's industrial development, feeding multiple agglomerate industries and building the manufacturing prowess of the country.

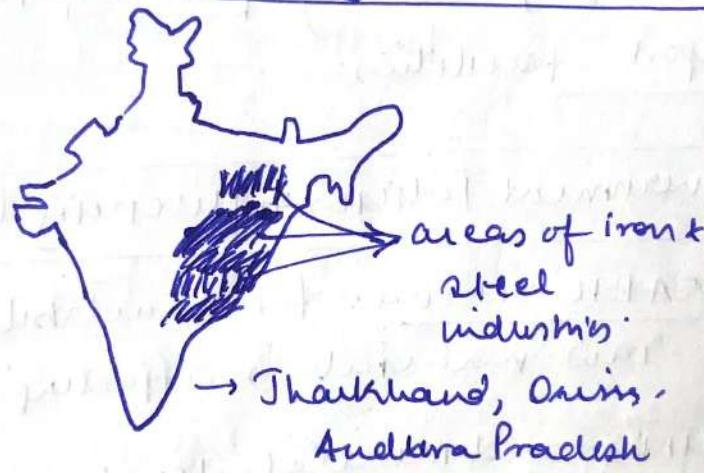


Fig: location of iron & steel industries.

\* changing pattern in distribution of iron & steel industries.

- ① location: initially developed closer to raw material producing regions → TISCO industry

in Jamshedpur.

↳ now increased connectivity through railways → industry is developing in far away regions as well.

③ Market accessibility; industries developing nearby ports for faster export facilities.

\* Government Policies influencing location:

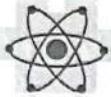
① KABIL scheme: for availability of raw materials → affecting location.

② Mining and Minerals development Act.

↳ leading to easy regulations and effective extraction of raw materials.

③ Port Upgradation through technologies ↳ impacting location.

Iron & Steel being the feeding industry  
 Governments push to develop the complementary infrastructure is the need of the times



Q.9

The effective management of land and water resources will drastically reduce the human miseries. Explain.  
(150 words, 10 marks)

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Ans: As per the UN Population Fund report, India has surpassed China in becoming number one in population with 18% share in world population and 2.45% land area. → thus puts burden both on land & water resources.

\* Effective management of land leading to Human woes

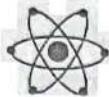
① for Agriculture: → ensure food security  
→ improve farmers' income  
- help people grow climatically suitable crops  
    ↳ millets

② land for Infrastructure: → for providing affordable housing for all  
- reduce over exploitation of soil & river beds for construction  
    ↳ PM-Awas Yojana

## \* Effective water resource management reducing Human miseries

- ① Drinking water availability for all.  
 ↗ Water ATMs in Delhi
- ② Bio-diversity management through sustainable water bodies  
 ↗ → Turtles used under Namami Gange Programme for river rejuvenation
- ③ 'Arth Ganga' Project - for providing economic opportunities to people based on the Ganga River management.

Sustainable management of both land & water resources is imperative for attainment of SDGs (SDG 11, SDG 15) and the <sup>2020</sup> net energy by 2070 targets under 'Pancharatna' targets.



- Q.10 Describing the distribution of coffee-producing states in India, indicate the challenges faced by the coffee industry in India. Also, suggest measures to address these challenges. (150 words, 10 marks)

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Ans: Coffee production is possible under the suitable conditions of hot and humid climate with clear sunshine for proper aromatic qualities along with adequate rainfall upto 250 cm and temperature upto 28°C.

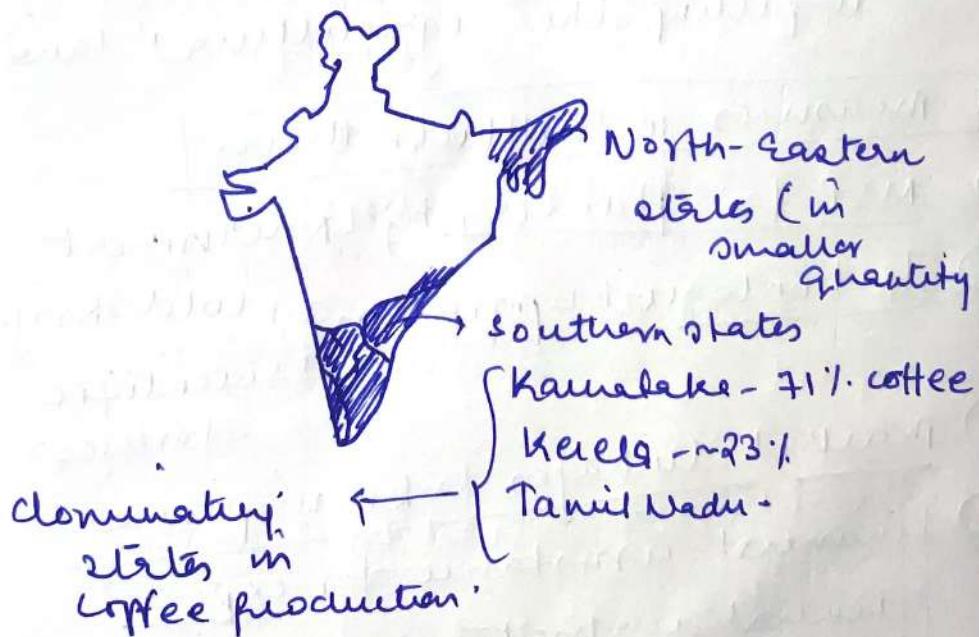


fig: distribution of coffee producing states.



### \* Challenges faced :

- ① labour intensive: → majority handpicked
- ② Climatic vagaries due to rainfall pattern changes → reduces the quality & productivity.
- ③ low Technological usage → in the storage & distribution of the produce.
- ④ low Remuneration for Planters.
- ⑤ Plantation-based products → adversely impacting the agriculture land.

### \* measures to address them

- ① MSP for Planters by Government
- ② Technological upgradation → cold storage, scientific storages.
- ③ market linkages to be improved.
- ④ financial assistance for export potential realisation.

Dedicate Government support can help India improve its export targets & improve the Planters' livelihood.



Q.11

French Revolution of 1789 was a key turning point in the history of France and indeed a good portion of Europe as well. Discuss. (250 words, 15 marks)

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Ans: French Revolution of 1789 was a watershed movement that ushered the end of orthodox, feudalistic mindset of Europe towards emergence of ideals of "Equality, fraternity and liberty".

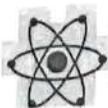
\* key turning point in france

① Death of old aristocratic monarchy.

↳ the ruling class was autocratic with no regards for the sufferings of the people.

↳ lived extravagant lifestyle when masses were reeling under price rise & inflation.

↳ Thus French Revolution was death knell for this outdated system.



② Church privileges taken away:

- ↳ Church used the ''grievances letters' as instruments of corruption.
- ↳ owned more land than 3rd estate but did not pay any taxes.
- ↳ Revolution brought this class under control of masses.

③ Rise of Napoleon in the aftermath of the revolution → a revolutionary event for France due to

- ↳ Codification of laws
- ↳ Industrialisation for France began.

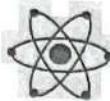
④ Ideas of Enlightened Philosophers - Rousseau.

\* Impact of French Revolution on Europe

① The Ideas of Equality & Liberty

started similar reactions in the colonial empires of Britain -

- ↳ 'Instability within Britain'.



- ② Napoleonic actions laid the foundation of nationalistic movements in Italy & Germany leading to their movement for unification.
- ③ The fearful despots of other nations, like Metternich left throne and fled. Those who stayed → made reforms in their system ↗ to encompass people's aspirations.

The French Revolution remained a constant inspiration for revolutionaries and nationalists worldwide and led to transformation of medieval Europe to modern enlightened Europe.



Q.12

"There arose a serious challenge to the democratic state system between the two world-wars." Evaluates the statement. (250 words, 15 marks)

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नहीं लिखान  
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Ans: The period between the two world wars is sometimes called "an armistice" that created conditions ripe for outbreak of 2<sup>nd</sup> world war by adversely affecting the democratic principles & state systems.

#### \* Immediate challenges in Aftermath of WWI.

① Instability throughout Europe → political, economic & social.

- ↳ Britain though victorious did not have enough economic resources for reconstruction.
- ↳ High inflation → people suffered.

② Democratic system affected when



Italy was not given the earlier promised territories under League of nations' arrangement

③ Germany's self-determination rights were taken away → a serious blow to democratic aspirations of people.

### \* Democratic State system under challenge

① Rise of Hitler: aggression against the smaller nations  
↳ Sudetenland  
↳ Czechoslovakia  
↳ Poland.

② The Rise of Mussolini in Italy brought similar challenges to democracy in Italy.



- ③ ~~Elections were done away with~~ by Hitler → only Party in Germany was Nazi Party.
- ④ Assumed dictatorial power → 'Führer'.
- ⑤ Quelled any dissent against the state and imprisoned or killed political opponents.
- ⑥ Democratic nation followed policy of appeasement → believed the democratic ideals

Thus, these developments between the 2 wars created an environment of fear, apprehension among people and serious impact on the ideals of equality & fraternity. With the invasion of Poland, World war 2 began.



Q.13

Post-Independence, India's need for a federal system was more an imperative than a political choice. Critically analyse. (250 words, 15 marks)

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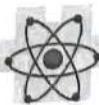
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Ans: The task of nation-building and bringing unity after Independence was a herculean one, undertaken by our leaders and consequently succeeded in creating a federal structure.

\* Federal System → more an Imperative

① Presence of Princely states: After Independence 532 Princely states had to be integrated within Indian Union.

'Instrument of accession' and 'Standstill agreements' were 'Imperative', given the political uncertainties.



② Diversity of language and communal tensions were heightened:

- ↳ The multiple ethnicities were present → needed to be integrated without much protests and upheaval.

③ language based states' reorganisation:

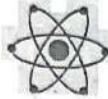
- ↳ 'Impatience of the times'
- ↳ Potti Sriramulu's death causing uproar → States' reorganisation Act, 1956.

↳ Andhra Pradesh created as a new state.

④ Tribal Panchayat Policy for integration of tribals → 'Impatience' for political unification.

\* Federal System → Political Choice

① The leaders like Vallabhbhai Patel, Nehru

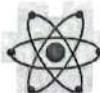


understood the prevailing situation, thereby devised Pragmatic plan for integration:

- ↳ through continuation of Punjab princi for Princes.
- ↳ 'Rajpramukh' title → politically pragmatic action.

② Administering such diverse people would be difficult by central government so - giving federal powers to fulfill the aspirations of people.

The 'integration' of India after independence was both a process of integration & assimilation guided by the political exigencies and Pragmatism of our leaders → India became a "union of states".



- Q.14 Describe the various regional and global factors that have influence on Indian monsoon. (250 words, 15 marks)

Ans: Indian monsoon is a unique phenomenon characterised by the seasonal reversal of winds and impacting the rainfall patterns within country & overall climatic conditions of adjoining South Asian region.

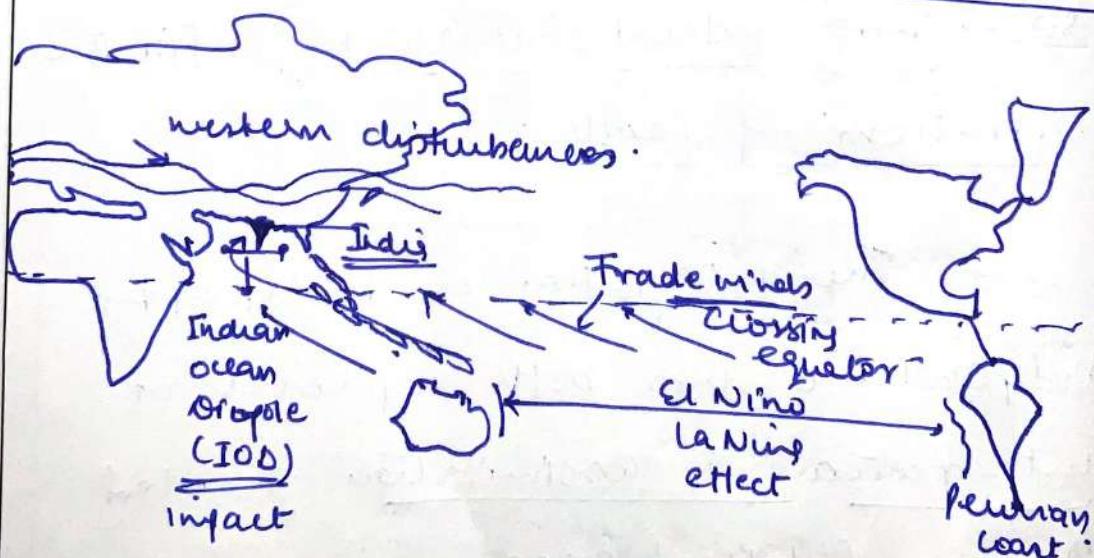


Fig: multiple factors affecting Indian monsoon

- \* Global factors: ① El Nino La Niña Impact



→ the sea surface temperature between the Eastern Peruvian current & western Australia Pacific ocean → impacts Indian monsoon

① western Disturbances: the upper jet streams coming from Mediterranean sea & bringing moisture to North India during winters → causing rainfall in North west.

② The Southern Oscillation - the fluctuations in the air pressure coupled with El Nino effect over Pacific.

### Regional factors

① Presence of Himalayas

- ↳ acts as barrier for monsoon winds
- ↳ heavy rainfall

② Western Ghats:

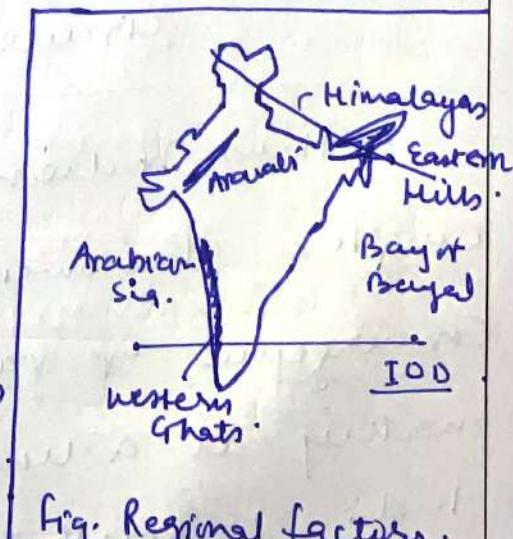
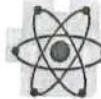


Fig. Regional factors.

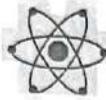


orographic rainfall in the adjoining regions by monsoonal winds.

- ⑧ Indian Ocean dipole (IOD): → sea surface temperature of Arabian sea & Bay of Bengal has impact on the intensity of rainfall & strength of monsoon.

- ⑨ Other factors → Closer to coast  
) → continentality in the interiors.  
presence of anti-cyclone circulation in Arabian sea.

Thus Indian monsoon is a complex phenomenon bringing convergence of varied factors and making it a unique process for India & south Asia.



Q.15

Highlighting the significances of rare earth minerals, list down the consequences of its extraction? Also mention the geographical distribution of rare earth minerals in the world. (250 words, 15 marks)

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Ans: Rare Earth minerals (REM) are the group of elements that are difficult to extract and are highly useful for the multi manufacturing processes. China has monopoly over extraction of REM.

### # Significance of REM .

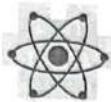
- ① Usage in Industrial Processes → electricity generation
- ② Used for automobiles sector
- ③ Highly useful for energy production
- ④ Sought after for defence purposes.
- ⑤

- REM
  - lithium
  - cobalt
  - vanadium
  - polymetallic nodules
  - cerium



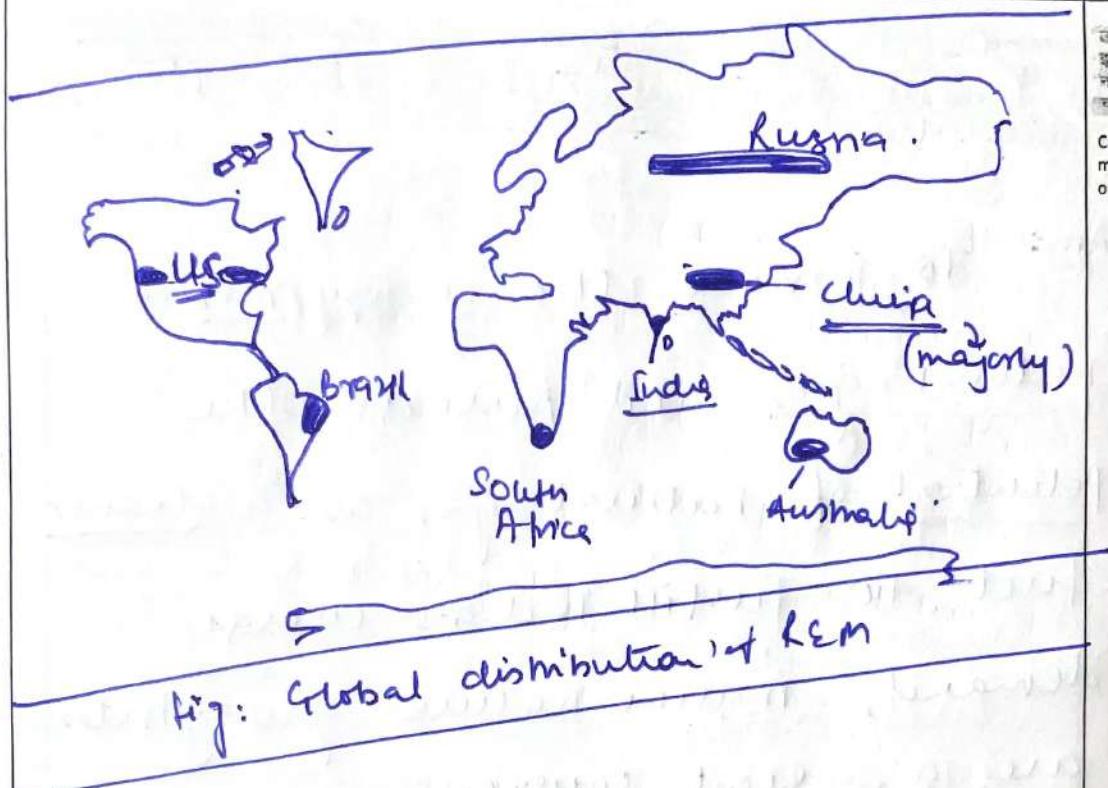
### Consequences of Extraction

- ① Environmental damage to the ecosystem → causing pollution of groundwater
- ② Extraction is highly technical task
  - ↳ need for technological upgradation → diversion of capital
- ③ displacement of indigenous communities and associated health challenges of the emitted radioactive substances upon extraction.
- ④ 'Race to Top' : China has monopoly leading to other nations competing for extraction
  - ↳ aggravating the polarisation of world.



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The extraction of rare earth minerals is a financially and technologically herculean task and concerted efforts from all stakeholders is needed for India to harness the power of REM to fulfill its energy targets and in 'this Amrit Kaal'.



Q.16

Increased production of natural gas from domestically available resources could help India reduce gas imports, achieve national emission intensity targets, and honour international climate commitments. In this context discuss the challenges in realising the Potential of Marine Natural Gas Hydrate Energy in India. (250 words, 15 marks)

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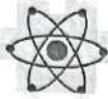
Ams:

To increase the energy mix of natural gas and harness the potential of natural gas as a cleaner fuel, to fulfill India's energy demand, marine natural gas hydrates are a great source.

\* Production of Natural Gas from Domestically available resources :

I. Reduce Gas Imports: → currently, majority of our natural gas is imported → putting huge burden on the exchequer

II. Achieve national emission intensity



Targets: India's targets under 'Panchamit'

- ↳ reduce emission intensity under 45% by 2030
- ↳ can be achieved through natural gas → as it reduces the carbon dioxide emissions.
- ↳ less polluting in nature, and highly efficient fuel source for automobiles.

III. Honour international climate commitments: at Paris conference

- ↳ India targets to achieve net-zero emissions by 2070.
- ↳ natural gas is a viable option:
  - ↳ abundantly available
  - ↳ cheaper source
  - ↳ used for multiple industries

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## \* Challenges of Marine Natural Gas Hydrate Energy

- ① Required Technology: ~~is not yet~~  
↳ India lacks the necessary technological and R&D. for harnessing the marine gas hydrates.
- ② Environmental concerns: to marine biodiversity
- ③ Administrative lacuna due to  
↳ cumbersome clearances  
↳ protests by people due to its environmental impact
- ④ Adequate finance not available:—  
↳ Private Partnership with Public (PPP) needed—

The collaborated, concerted and careful approach by Government is needed to fully harness the potential of natural gas in India & achieve its energy targets.



Q.17

What are the features of India's changing demographic profile? How will this change affect India? (250 words, 15 marks)

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Ans 8 India has surpassed China in population to become the most populous nation in world; giving edge of 'Demographic dividend' to India.

\* features of Changing Demographic Profile

① Replacement levels at 2.0 (Total fertility rate) achieved in India.

↳ more young people now than aged.

② The share of young working population has increased in the overall workforce → "Demographic dividend".

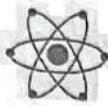


⑥ The number of elderly is relatively stable → get better social security benefits.

### \* Demographic Profile changing India

#### I. Positively -

- ① Create more tax base for the Government → better social spending through welfare schemes.
- ② more economic empowerment for women : able to get employment opportunities.
- ③ Disposable income increasing → creation of demand within economy → increased industrial growth.
- ④ Better Bargaining power of the more independent generation → quality of life better.



## II. NEGATIVELY

- ① Creates pressure on resources due rising demands from the people.
- ② Unemployment rate still higher than 6% (CMIE report & NITI Aayog)
  - ↳ Lack of opportunities:
- ③ Higher poverty and nutritional security challenges (malnutrition, stunting)
- ④ Healthcare & Education services
  - ↳ not accessible to all
  - ↳ distorted development of regions & societies.

To bring social justice and inclusive development of all, for the government must work with all the stakeholders and prevent the turning of demographic dividend into 'demographic disaster'.

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Q.18 Explain the factors responsible for the origin of ocean currents. How do they influence regional climates, fishing, and navigation? (250 words, 15 marks)

Ans: Ocean currents is the predictable and systematic movement of the ocean water depending upon the temperature and salinity of ocean water.

### \* Factors responsible for Ocean current

- ① Temperature difference: between the polar cold water and equatorial warm water.
- ② Coriolis force: determines the direction of movement of the Ocean currents
  - ↳ northern hemisphere - deflected towards right
  - ↳ southern hemisphere - towards left



- ③ Winds: creating friction over ocean water creates
- ④ Salinity differences creating upwelling and movement of ocean current.

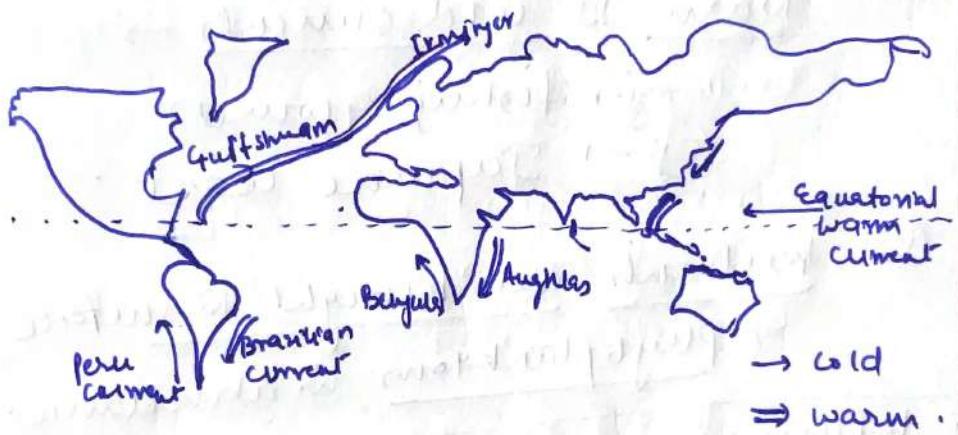


Fig: ocean currents in world.

### \* Influence upon Regional Climate

- ① Cold currents on the western margins of continents creates desertifying effect  $\rightarrow$  deserts are formed  
 $\curvearrowleft \rightarrow$  Sahara desert

- ② Peruvian current: resurfaces



temperature determines the Indian monsoonal intensity

### \* Influence upon fishing

- ① upwelling near meeting of warm & cold currents →  
major fishing grounds  
↳ → Japanese coast.
- ② Nutrients are brought to surface  
↳ Phytoplankton in abundance.

### \* Influencing Navigation

- ↳ helps in easy navigation of ships due to the current movement.

The ocean currents play crucial role in regulating transferring the overall heat of the planet, and affecting the climates of the world across continents.



Discuss the global advantage of India as a location choice for knowledge-based industries. (250 words, 15 marks)

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Ans: Knowledge based industries are the backbone of India's Information and technology & Services sector. Propelling India to become a leader in IT sector

\* Knowledge Based Industries are spread across multiple sectors but monopolised by IT sector in India

- software services
- Platform based services
- Agriculture R&D activities  
based
- Defence knowledge industries.

↳ Moving qualified and highly skilled labour in these industries.



has given India an advantage -

\* Global advantage of India as location

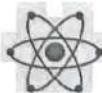
- ① Ease of doing Business' policy by Government → led to multiple startups.  
↳ India's growing startup ecosystem → poised to be number 1 in world -
- ② AI technological revolution:  
Faster digital connectivity → faster service delivery for MNCs.
- ③ → India's AI penetration level  
↳ 3.2 times the global level  
( AI Index 2022 )
- ④ Skills India mission; PM Kaisa



Vikas Yojana, Standup India schemes  
has improved the skilled labour force  
for global companies.

④ India is already a world leader in  
IT services → can integrate with  
global players through its knowledge  
based industry → resident supply  
chain.

(Q) SCR I  
India must also focus upon  
harnessing the potential of multiple  
sectors of its knowledge-economy &  
industries to emerge a global  
leader (Vishwa Guru) of 21<sup>st</sup> century.



- Q.20 Explain the role played by Himalayas in influencing the climate of Indian sub-continent. (250 words, 15 marks)

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Ans: Indian Physiography is unique as it encompasses all 16 geo-climatic zones and role played by Himalayas is crucial in this unique geography of the country.

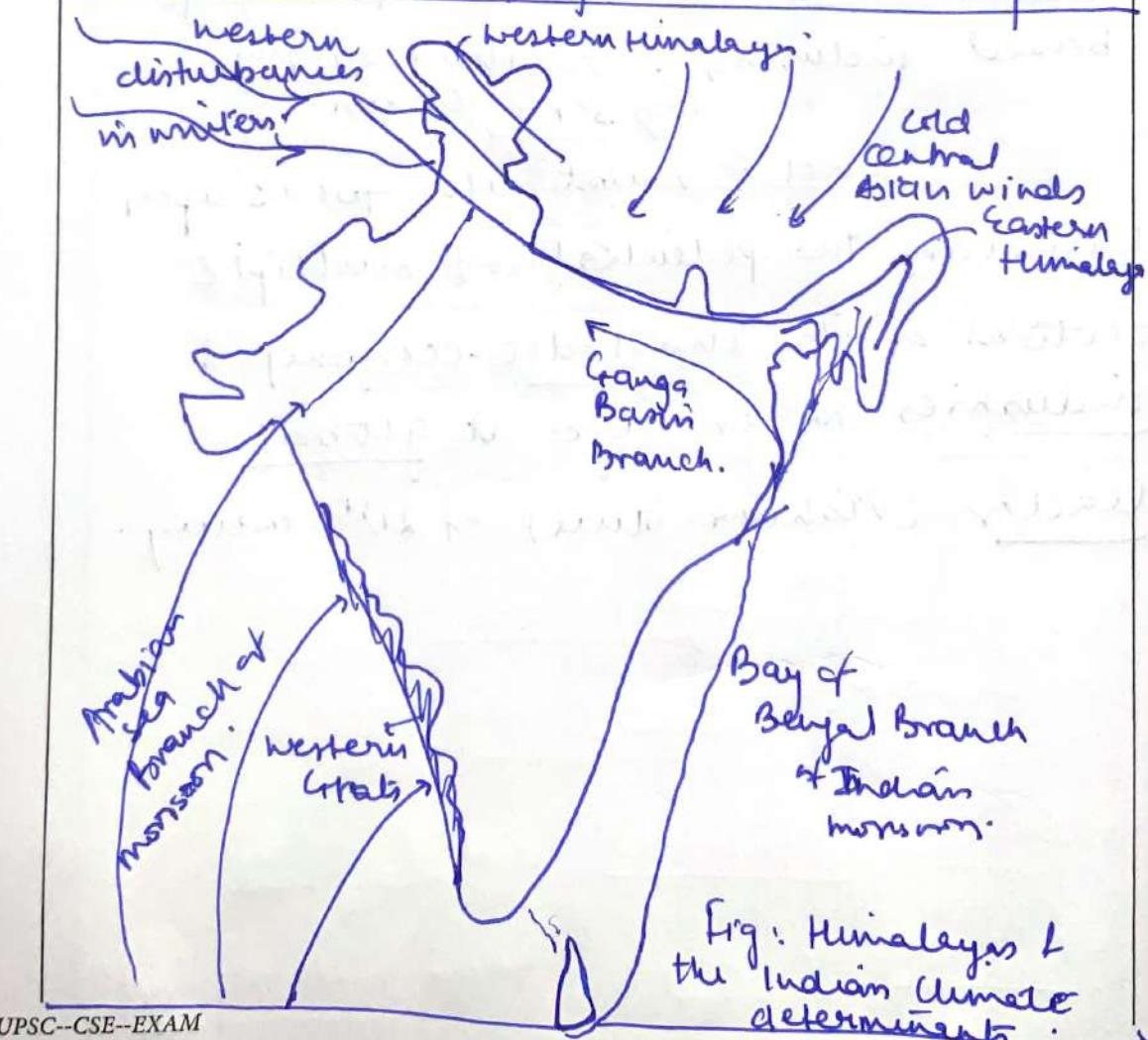
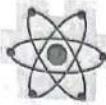


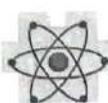
Fig: Himalayas & the Indian Climate determinants.



## Role of Himalayas

- ① Blocks the cold winds from Central Asia → creates a barrier → regulates the climate of northern Indian states.
- ② In winters, Himalayas act as barrier for western disturbances
  - ↳ creates rainfall in northwestern regions.
  - ↳ floods in northern states
    - ↳ Uttrakhand
    - ↳ Himachal Pradesh

Recently
- ③ Indian monsoon is impacted by the Himalayas →
  - Arabian sea branch reaching the northern states in Punjab
  - Bay of Bengal branch → in eastern



Indiā causes rainfall due to  
obstruction of Eastern Himalayas.

↳ The Ganga Basin branch strikes  
the Himalayas → creates rainfall.

④ Himalayas creates a unique  
climate for the Indian subcontinent,  
and has resulted in providing  
flow of perennial rivers for the  
northern states to sustain the  
and grow the Indian societies  
since ages.