

**GSSCORE**

**An Institute for Civil Services**

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**TEST COPY**

**VIDUSHI SINGH**

**AIR - 13**

**(CSE 2022)**

**GEOGRAPHY OPTIONAL**

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**GEOGRAPHY REVISION TEST**

Time Allowed: 3 hrs.

Max. Marks: 250

Q.	Marks	Instructions to Candidate
1.		<ul style="list-style-type: none"><li>• There are 20 questions.</li><li>• All questions are compulsory.</li><li>• The number of marks carried by a question is indicated against it.</li><li>• 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.</li><li>• Keep the word limit indicated in the questions in mind.</li><li>• Answers must be written within the space provided.</li><li>• Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.</li></ul>
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92Name Vidushi SinghRoll No. 40666

Mobile No. \_\_\_\_\_

Date \_\_\_\_\_

Signature Vidushi

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# REMARKS

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**Section - A**

Q1. Explain the concept of seismic micro-zonation. Discuss the need and relevance of seismic micro-zonation studies for urban areas. (10 Marks) (150 Words)

SEISMIC MICROZONATION refers to the process of subdividing earthquake prone areas into zones with respect to their geological characteristics.

Explain concept elaborately

Need for seismic microzonation

Seismic zonation of entire country may be inadequate to deal with hazard assessment of cities.

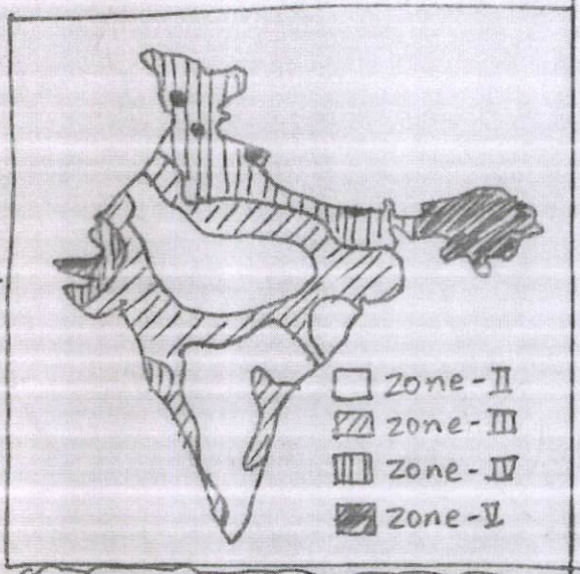


Fig: Seismic Zonation of India (Zone II - least active & Zone VI - most active)

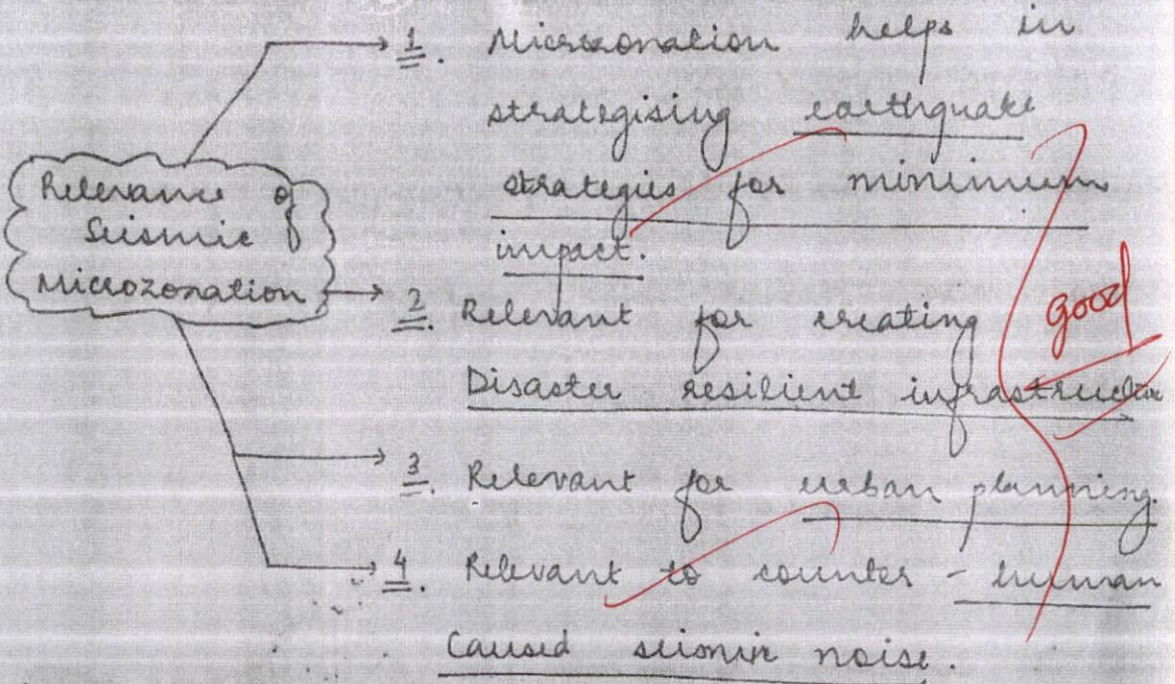
Explain clearly  
Add example

Microzonation maps can serve as basis of evaluating site-specific risk analysis.

- ) Necessary for mitigation and rehabilitation strategies. (Explain)
- ) Necessary for earthquake specific construction.

Remarks

Relevance of Seismic Microzonation:



Challenges of seismic Microzonation:

- 4) Hazard mapping: is inadequate due to data deficit. *(why data deficit is there ??)*
- Human caused seismic noise is scattered and unpredictable.
- Unpredictable plate movements. } *Explain*

Therefore, seismic microzonation is an important exercise to create disaster resilient infrastructure, but it needs structural improvements in terms of better data availability.

Remarks

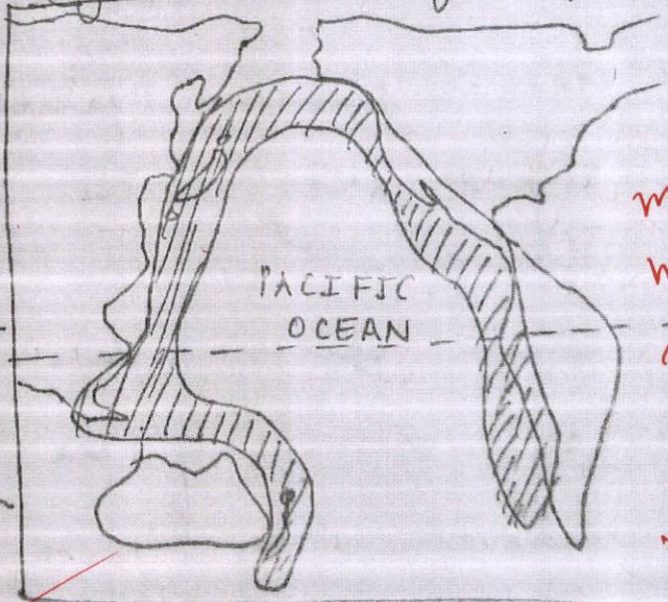
Q2. Discuss the various reasons behind the formation of "Fire Girdle of Pacific" and major landforms along it. (10 Marks) (150 Words)

FIRE GIRDLE of PACIFIC or Ring of fire in Circum Pacific Zone is a 400000 km horse-shoe shaped chain of volcanoes extending from southern tip of South America along West coast of North America & Japan Archipelago & till Southern New Zealand.

good

Reasons behind formation of Ring of fire / Fire Girdle of Pacific

Fig: Fire Girdle of Pacific



map making skill need to improve

1. zone of convergent Plate Boundary: Formed due to Subduction of denser oceanic tectonic

write examples of plates which are convergent

Plate beneath lighter continental plate margins. 2. Subduction and subsequent melting & destruction of denser oceanic plate margin

Remarks

gives rise to lava and magma beneath the Earth's surface.

Major landforms along the Fire Circle of Pacific :

The Fire Circle of Pacific is home to 90% of world's volcanoes.

write important locations related to it

1) VOLCANOES: over 450 volcanoes, including most active volcanoes of the world.

write examples related to it

2) OCEANIC TRENCHES: Presence of deep oceanic trenches parallel to volcanic island arcs. These formed due to convergent collision & subduction of denser oceanic plate.

4

3) FAULT ZONES: of sea floor spreading are characterised by earthquakes & volcanic activity.

The Fire Circle of Pacific is an important region for studying geological aspects of landforms on Earth's surface.

Remarks

Q3. Discuss the concept of palaeomagnetism and geomagnetism. Elucidate the role of palaeomagnetism in supporting Sea Floor Spreading theory propounded by Harry Hess.  
(10 Marks) (150 Words)

PALAEOMAGNETISM : is the study of record of Earth's magnetic field with help of magnetic field records of rocks, sediments, etc.

•) It is important for studying various processes which helped in formation of earth's crust and evolution of landforms.

GEOMAGNETISM : is the study of dynamics of Earth's magnetic field which is produced in inner core of Earth.

•) Earth's magnetic field is predominantly geo-axial dipole.

Palaeomagnetism and Sea floor Spreading:

Sea floor spreading was propounded by HARRY HESS on basis of magnetic anomalies.

He argued that, sea floor is constantly spreading due to eruptions at crust getting

Remarks

→ Explain this with diagram

good

Explain Geomag-netism elaborately

good



wedged (after solidifying) into the ridges.

•) sea floor spreading was supported by

PALAEOMAGNETISM as:

Palaeomagnetism & Sea Floor Spreading

Draw diagram  
in this  
context

4

1. On studying palaeo-magnetic rocks on either side of Mid-Oceanic Ridge (MOR), it is found that alternate magnetic rock stripes were flipped so good that ~~one~~ stripes are of different polarity.

2. Palaeomagnetic rocks of similar characteristics of ~~same~~ polarity were equidistant from MOR.

Sea floor spreading successfully proved movement of tectonic plates on asthenosphere & widening of ocean floor as propounded by continental drift theory. Hence, Palaeomagnetism is essential in proving the theory.

Remarks

Q4. While discussing the causes of formation of planetary winds elaborate on their major characteristics.  
(10 Marks) (150 Words)

PLANETARY WINDS or Primary / Permanent winds are a result of General Circulation of the atmosphere. These winds are permanent winds which are affected by several factors and affect the climate of regions.

*Write Impressive introduction*

Pattern of Planetary winds depends upon:

- ) Latitudinal Variation of atmospheric heating.
- ) Emergence of Pressure Belts.
- ) Distribution of continents & oceans.
- ) Relation of Earth.

*explain these points*

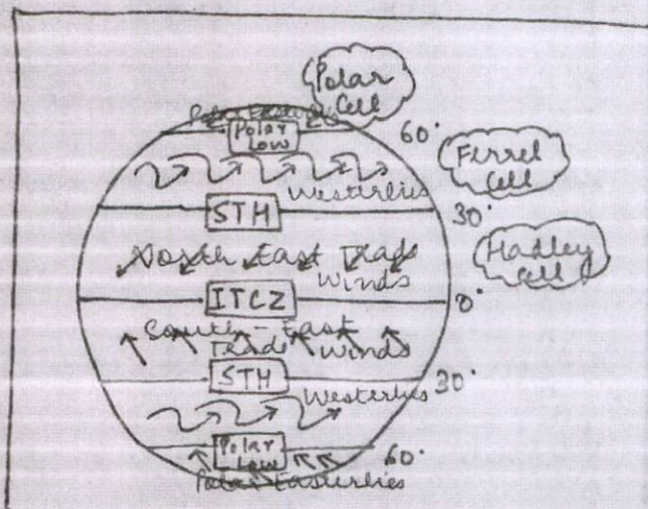


Fig: General Circulation of Atmosphere

Formation and major characteristics of Planetary winds:

Remarks

1) Equatorial low at Inter-tropical convergence Zone (ITCZ) attract Trade winds which flow in sub-tropical regions and form HADLEY CELL. These are moisture rich winds responsible for monsoon and cause heavy rainfall.

Focus more on the context of Planetary winds

2) In middle latitudes ( $30^{\circ}$  -  $60^{\circ}$ ), WESTERLIES flow from Subtropical high (STH) to Sub-Polar low pressure belts → FERREL CELL

4  
You have focused more on formation of different cells

Westerlies are stronger in Southern Hemisphere due to vast oceans and is regular in Northern Hemisphere. These produce wet spells and variability in weather

3) In Polar Regions, POLAR CELL develop due to movement of Polar Easterlies from High pressure polar areas to Sub-Polar low areas. These are cold winds.

Remarks

Q5. Discuss briefly the theory of Isostasy? What is its role in the geo-morphological context?  
(10 Marks) (150 Words)

ISOSTASY : is the state of gravitational Equilibrium between Earth's crust (Lithosphere) and Mantle such that crust floats at an elevation that depends on its thickness & density.

\*) Isostasy explains how different topographic heights can exist at Earth's surface.

Role of ISOSTASY in geomorphological context:

Role of Isostasy

1. PLATE TECTONICS: when continents collide, crust thickens and upper part of crust may become mountain range. Therefore, explains mountain formation.

explain with diagram

Theory of isostasy need to be explained elaborately

Remarks

Role of ISO-STACY

2. MANTLE CONVECTION: Isostatic

equilibrium postulates that crust floats on mantle thus mantle should be at rest. However, mantle convection often alters the landforms leading to higher variability of landforms.

3. Determines lithosphere-Asthenosphere Boundary.

4. Seismic Zones: If isostatic equilibrium is disturbed, it can lead to seismic noise leading to Earthquakes.

ISOSTASY or ISOSTATIC EQUILIBRIUM is important in explaining the huge diversity of landforms on earth's surface in geomorphological context.

2 1/2  
Conceptual Clarity is lacking  
Mainly focus on context of isostasy.  
Discusses Mountain height, density and formation and root of mountain

Remarks

Q6. Discuss the role of albedo of ice caps in maintaining the heat budget of earth. Analyze the impact of deposition of black carbon on ice caps on their albedo.

(10 Marks) (150 Words)

ICE - ALBEDO FEEDBACK is a positive feedback climate process where a change in area of ice caps alters albedo and surface temperature of a planet.

write better introduction

\*) ICE is very reflective and therefore some of the solar energy is reflected back to space, maintaining the HEAT BUDGET of Earth. ∴ Ice reflects insolation, temperature remains low in high latitudes and with high albedo of ice caps, surface temperature is not affected, preserving the heat budget.

explain clearly the role of ice albedo in Heat budget management  
use data to explain it clearly

\*) However, today, with increasing global temperatures, permafrost thaw and melting glaciers are reducing the ice cap cover, thus affecting the albedo &

Remarks

heat budget.

Impact of Black-carbon deposition:

→ If Black carbon is deposited on ice caps, its reflective capacity is compromised and hence albedo is reduced. This will lead to higher insolation, melting of ice caps and more insolation being absorbed by Earth's surface, leading to warmer surface temperature.

good

→ This will further accentuate the melting of ice cover, increasing the warming of the planet.

Avoid similar points

→ This is why the CRYOSPHERE is called 'Nature's thermometer' as a loss in cryosphere leads to rising global temperature and disturbed heat balance of Earth.

34  
32

Remarks

Q7. Why is the fishing industry more developed on the western coast of India than eastern coast? Discuss the recent steps taken by the Indian government for the growth of this sector. (10 Marks) (150 Words)

The West coast of India accounts for over 70% of national fisheries production according to a report by FAO.

*good*

Reasons for more developed western coast of India in fisheries industry:

- 1. lesser Natural calamities: leave the ecosystem in balance.
- 2. Submerged coast: allow for easy catching of fish than the emergent East coast.
- 3. commercial varieties are abundantly found in western coast.
- 4. Arabian Sea has lesser no. of rivers' mouth, thus, maintaining the stability in the ecosystem.

Reasons

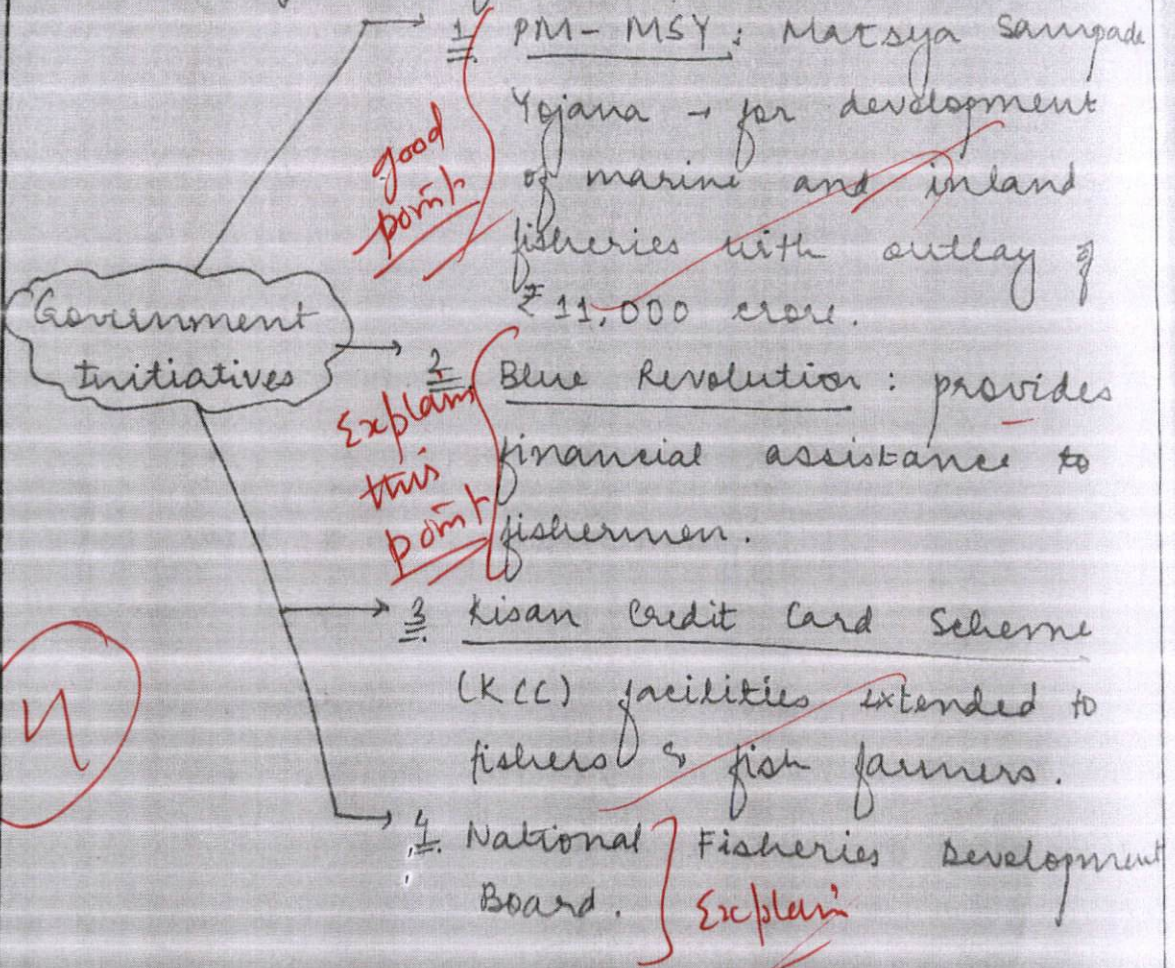
*Explain*

*Also discuss impact of developed market in western coast*

Remarks



Fishing Industry in India employs 14.5 million people and India ranks 3rd in fisheries production globally. Seeing this, the Govt. has taken several steps to ensure growth of this sector:



4

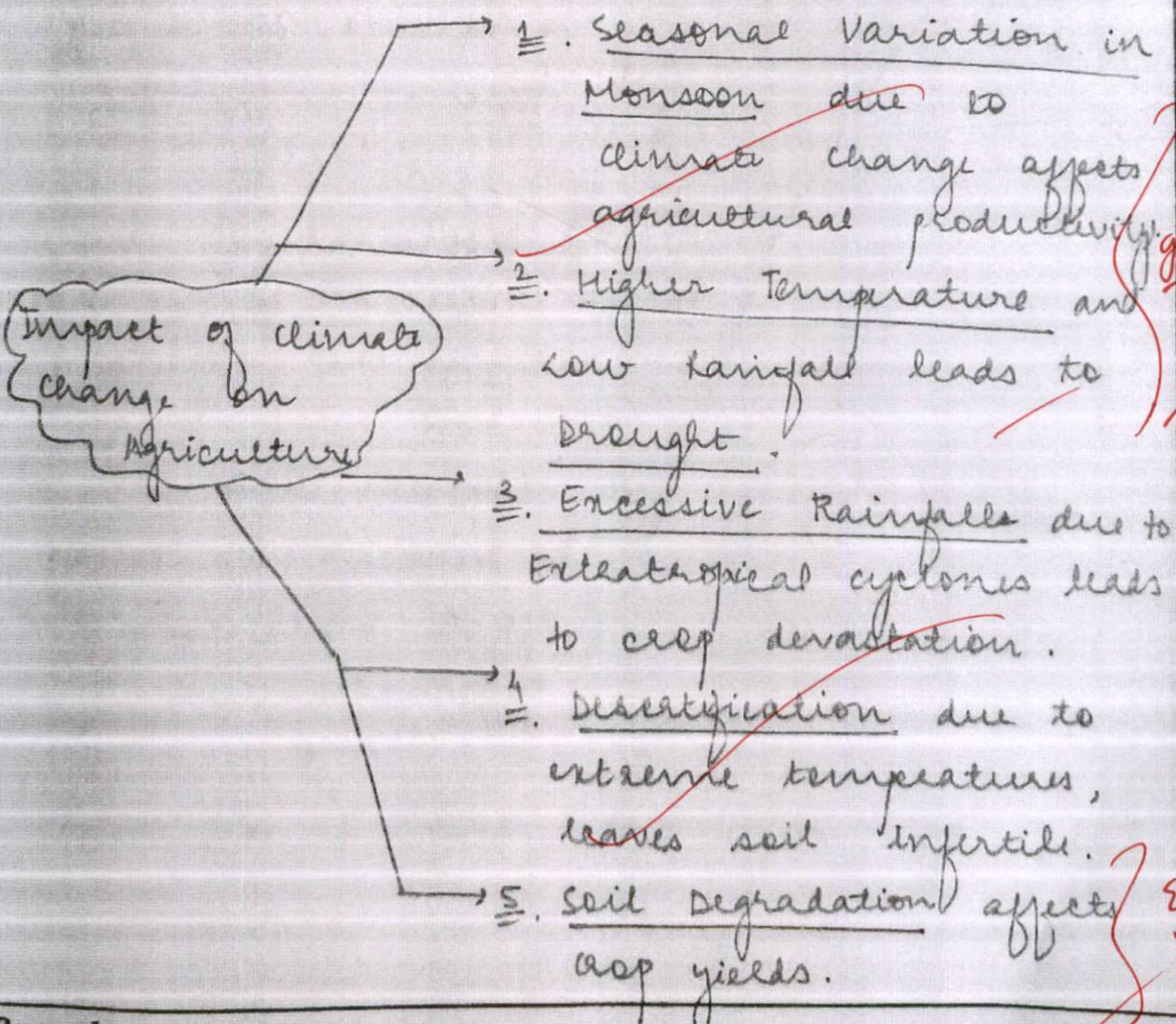
Fishery sector in India has huge potential and the government initiatives need to be targeted efficiently.

Remarks

Q8. Agriculture is not only sensitive to climate change, but also one of the major drivers of climate change. Critically evaluate. (10 Marks) (150 Words)

Climate change and Agriculture are interrelated processes, both of which take place on a global scale, with adverse effects of climate change affecting agriculture, and vice-versa.

Impact of climate change on Agriculture:



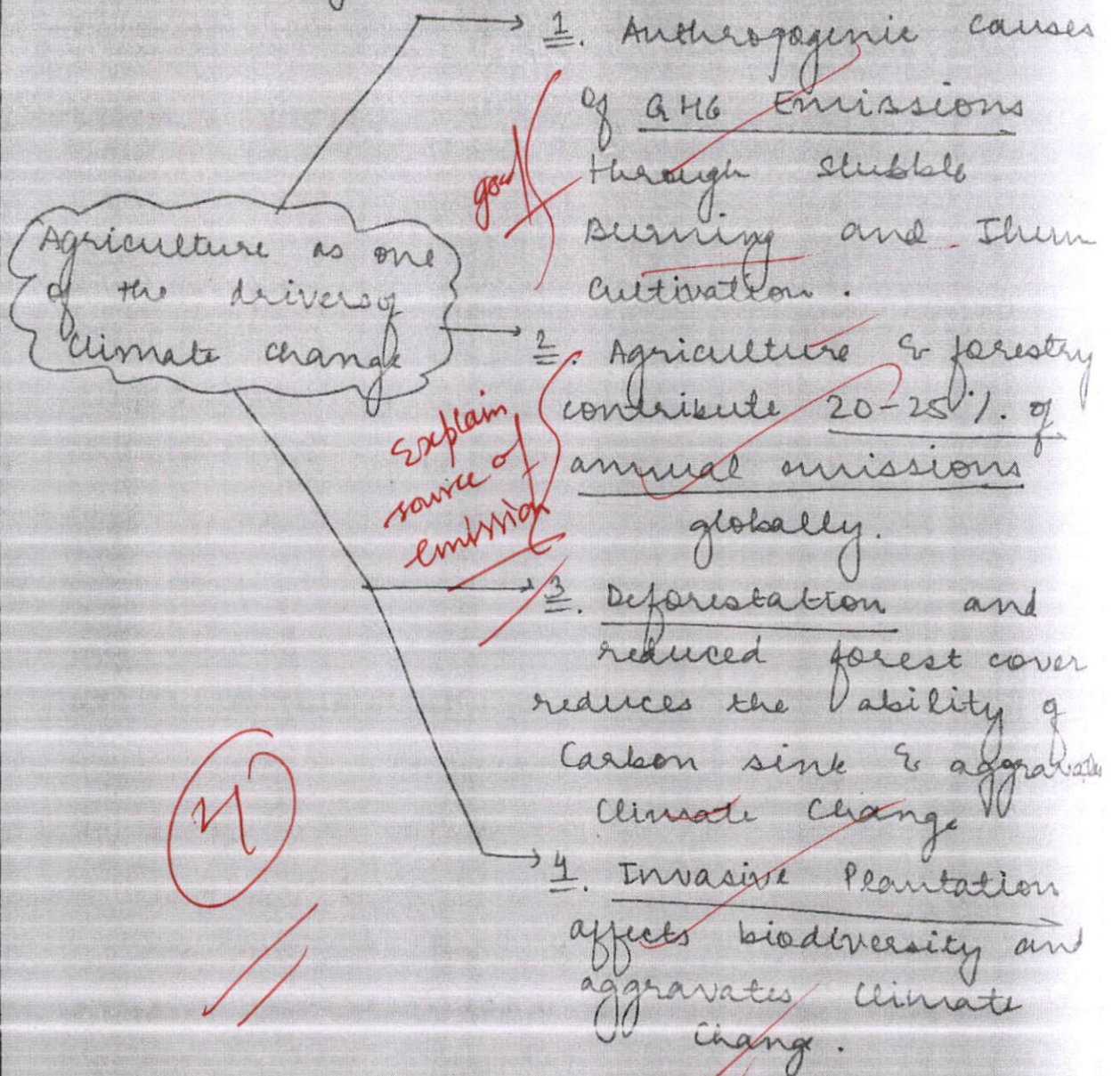
good

good  
Add specific data + example

explain impact of climate change

Remarks

However, Agriculture also has adverse impact on climate by contributing to climate change.

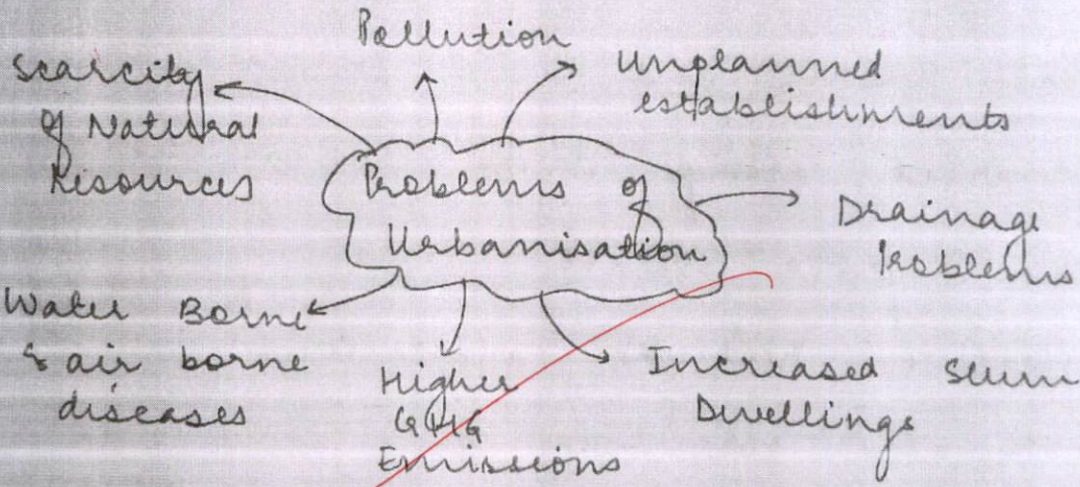


Thus, Agriculture can also be a driver of climate change.

Remarks

Q9. "The emphasis laid by UN-Habitat III on planning for urban centers coupled with its adjoining peri-urban and rural areas in an integrated manner has provided a solution to India's rapidly expanding cities". Elucidate.  
(10 Marks) (150 Words)

Around 31% of Indian population resides in Urban Areas and it is expected to reach 60% by 2050. Excessive Urbanisation has led to several problems in Indian cities, such as :



NEW URBAN AGENDA of UN-HABITAT III aims at :

- 1) Promoting integrated system of cities and human settlements.
- 2) Strengthen Urban Governance.
- 3) Effective financing Networks.

Explain in the context of question

Remarks

Integrated planning for urban centres can be a solution to the rapidly expanding Indian cities as:

1) SATELLITE TOWN PLANNING can absorb the incesses of metropolitan areas and lead create an equitable ecosystem.

2) Peri-urban and Rural Areas can be planned along with urban areas to improve overall urban planning.

3) Effective resource allocation in integrated planning can solve the problem of scarcity.

4) Sustainable Practices can reduce GHG emissions.

Thus, Integrated Urban Planning as promoted by UN-Habitat III can help in realising SDG - 11 of sustainable cities & communities.

Add specific examples

But how to do that??

↳ what?? Explain

3/2

Remarks

Q10. Geological, geophysical and inherited tectonic factors imprint on the climate and contrasting geomorphology of the Indian peninsula. Explain.

(10 Marks) (150 Words)

India is a vastly diverse country in all aspects, including climatic and geomorphological.

Write better introduction

INDIAN PENINSULA was a part of GONDWANA-LAND, when it broke away some 200 million years ago.

GEOLOGY & GEOMORPHOLOGY of Indian Peninsula:

- Indian Peninsula comprises of igneous rocks of Deccan traps and Plateau regions of Malwa, Ustanagpur, etc.
- It is rich in minerals.
- Indian Peninsula experiences the South West Monsoon and North-East Monsoon in western and Eastern coasts respectively.
- Bound by seas and oceans, coastal

main explain Impact of geological factors on climate and geomorphology of Indian peninsula

Remarks

regions have similar climate throughout the year, while ~~inland~~ plateaus are subject to extreme weather conditions.

### TECTONIC FACTORS of Indian Peninsula:

These comprise mostly of Gondwanaland endowments and resemble it closely.

Rift Valleys of Narmada and Tapti due to ogenic forces.

~~There is~~ a general continuum in tectonic forces is observed with other Gondwanaland fragments, thus implying similar features.

Indian Peninsula is a stable landmass with varied landforms and properties.

It is a storehouse of commercial and natural minerals and is of crucial importance to the economy.

Remarks

Here explain

Impact of tectonic factors

on climate and geomorphology of Indian Peninsula

2

You have not understood question

**Section - B**

**Q11. Discuss the emergence of Himalayan Mountain ranges on the basis of theory of plate tectonics. Elaborate with geographical evidence supporting collision of different types and nature of tectonic plates during process of orogeny. (15 Marks) (250 Words)**

HIMALAYAS are an example of young fold mountains which started forming due to collision of Indian Plate with Eurasian Plate some 40-50 million years ago. (mya)

Emergence of HIMALAYAN MOUNTAIN RANGES  
on basis of theory of Plate Tectonics:

*briefly explain first journey of Indian plate*

India was a large island situated off Australian coast in a vast ocean.

Tethys sea separated it from Asian continents till 225 mya.

India collided with Asian Plate some 45-50 mya which started

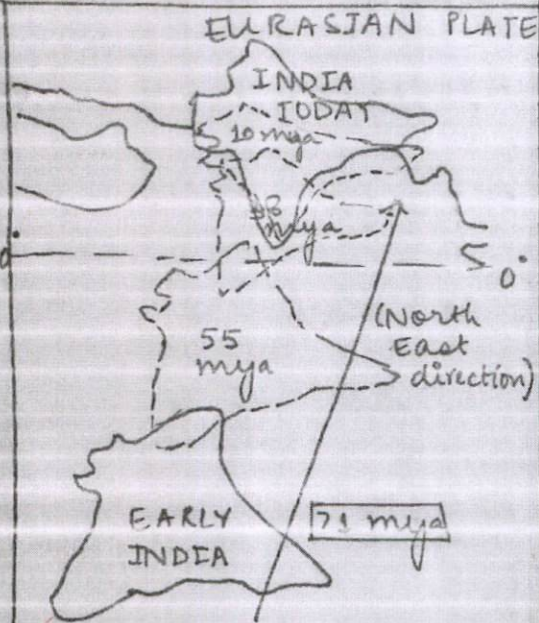
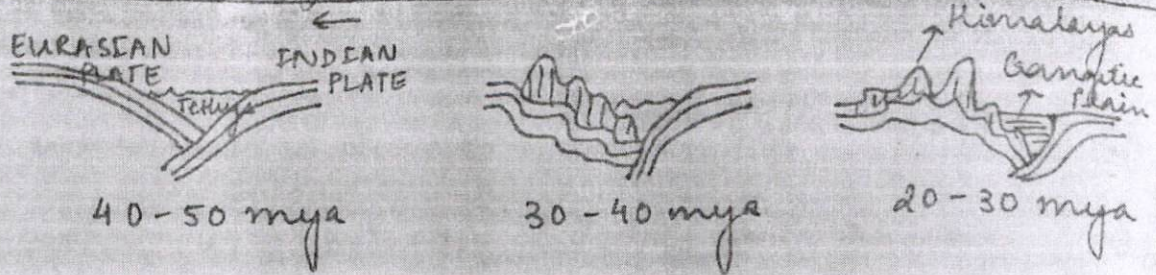


Fig. : Movement of Indian Plate

Remarks



## Formation of Himalayas.



As per Plate Tectonics theory, after collision of Eurasian & Indian plates, sediments accumulated in Tethys sea

were compressed as a series of folds one behind the other, giving birth to HIMALAYAN mountain system.

Indian Plate is still moving northwards at rate of 5 cm / year, thereby increasing height of Himalayas.

Collision of different types of plates during Process of orogeny:

The Western side of Indian Plate resulted

Remarks

- with collision with ARABIAN PLATE  
which formed DWEN FRACTURE ZONE.
- ) African Plate and Indian Plate Collision led to formation of Central Indian Ridge
  - ) Eurasian Plate and Indian Plate collided to form HIMALAYA & HINDU KUSH, called the MAIN HIMALAYAN THRUST.
  - ) Collision of different types of plates during orogeny led to variability in landforms all across the Indian Plate.
  - ) Different plates' evidence have also been found as similarities between deccan peninsula and other fragments of Gondwanaland prove the Northward movement of Indian Plate.
  - ) Different plates have also resulted in different relief features of Himalayan system as a whole.

good

good

7

good analysis  
→ you have discussed all important points

Remarks

Q12. Highlight the major reasons due to which the frequency of the western disturbances has increased in recent years and discuss its impact on agriculture in India.  
(15 Marks) (250 Words)

good

WESTERN DISTURBANCE is an extratropical storm originating in the Mediterranean Region that brings sudden winter rain to Northern India. It is crucial for healthy Rabi Crop Harvest.

Reasons due to which frequency of western disturbances has increased:

Reasons for increased Western Disturbances

1. El-Nino: leads to weak Indian Monsoon and droughts in India. This leads to higher surface heating and creation of low pressure zones in months before October, leading to extratropical storm.  
*be specific to the context of frequency of the western disturbance*

Remarks

Reasons for increased Western Disturbances

2. Climate Change: affects climatic conditions and leads to hotter summers & colder winters, creating space for abrupt western cyclones to emerge in India.

3. Negative Indian Ocean Dipole leads to weaker monsoon & compounded by El-Nino, intensifies the impact of Western Disturbances.

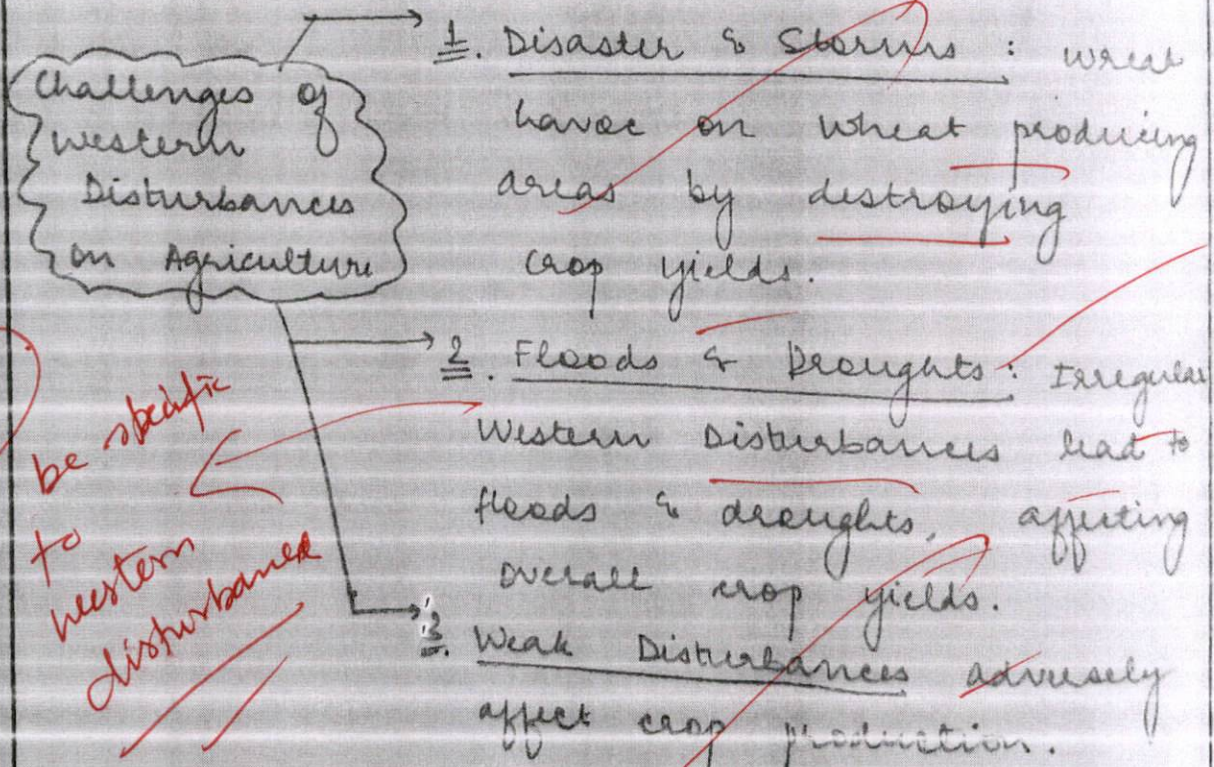
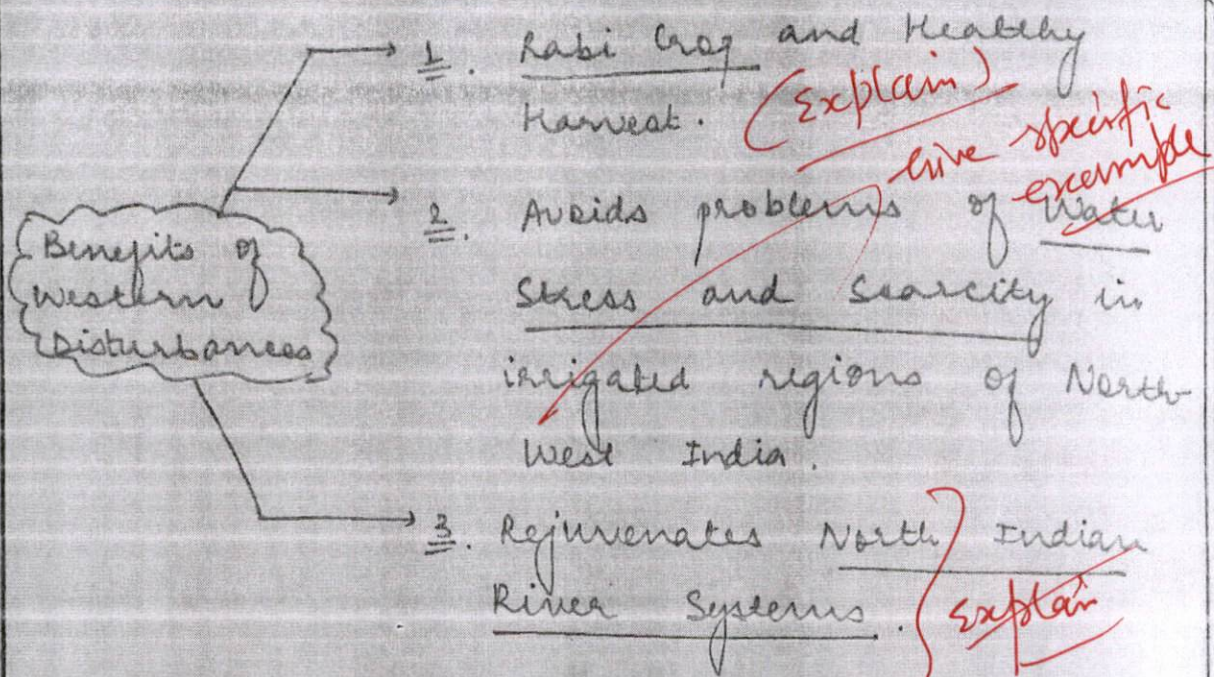
4. Global Warming: due to high Carbon Emissions leads to higher heating of Indian Subcontinent and thus higher frequency of Western Disturbances.

Both are similar points  
→ Avoid it

Impact of Western Disturbances on Agriculture in India:

Rabi crops (Winter crops) receive rainfall mainly from Western Disturbances.

Remarks



5  
be specific to western disturbances

Thus, Western Disturbances are essential phenomenon for Indian Agriculture as 2/3rd farmers depend on whims of monsoon

Remarks

Q13. Melting glaciers and loss of seasonal snow pose significant risks not just to the people but to the stability of water resources in the South Asia region as well. Discuss. Suggest lasting remedial measures. (15 Marks) (250 Words)

HIMALAYAN & HINDU KUSH Mountain & Glacier System is referred as THIRD POLE due to high intensity of glacial coverage in this region.

However, higher incidence of melting glaciers and loss of seasonal snow have emerged as significant risk to water resources in the region.

Reasons for melting glaciers and loss of seasonal snow:

1. Climate change: has affected the snowfall pattern by randomising the overall amount of snow in the region.
2. Global warming: has increased the incidence of glacier melting leading to several disasters.

Remarks

Risks associated with melting glaciers and loss of seasonal snow:

1. Floods and landslides: Melting glaciers can increase normal volume of water and loss of snow can expose the mountains to erosional factors leading to landslides and inundation. *(Add specific example in this context)*

*You need elaborate the content of stability of water resources in South Asian region*

2. Water scarcity: Floods contaminate the freshwater sources, rendering the problem of water stress aggravated in South Asia.

3. Stability of Water Resources: Water resources in Northern India originate from Himalayan glaciers. Loss of seasonal flow can directly affect sustainability of water resources to rejuvenate itself.

*good*

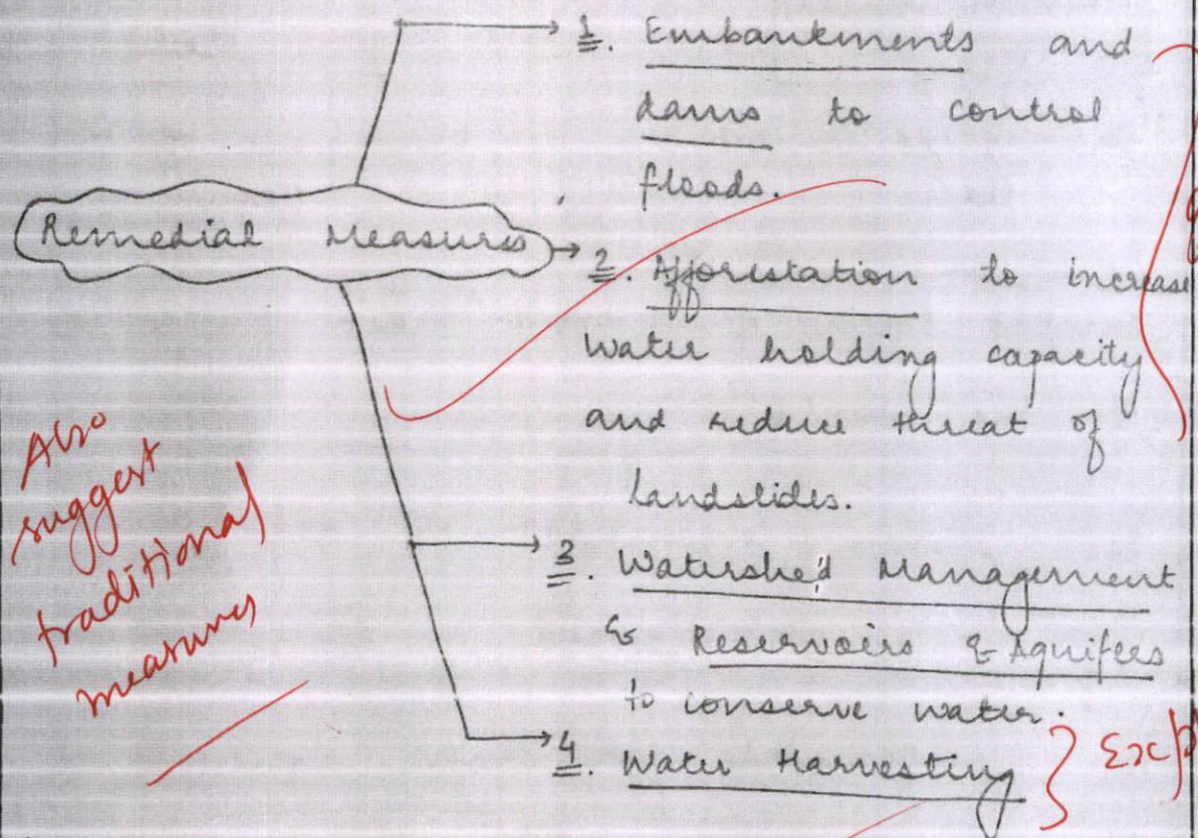
Remarks

and pose high risk to life and property in terms of floods.

4. GLOF (Glacial lake Outburst Floods): can cause destruction to life & property as was recently witnessed in February 2021 in state of Himachal Pradesh & Uttarakhand.

good

lasting remedial measures:



good

6

Also suggest traditional measures

explain

It is imperative to conserve water resources to curb the problem of water stress in India.

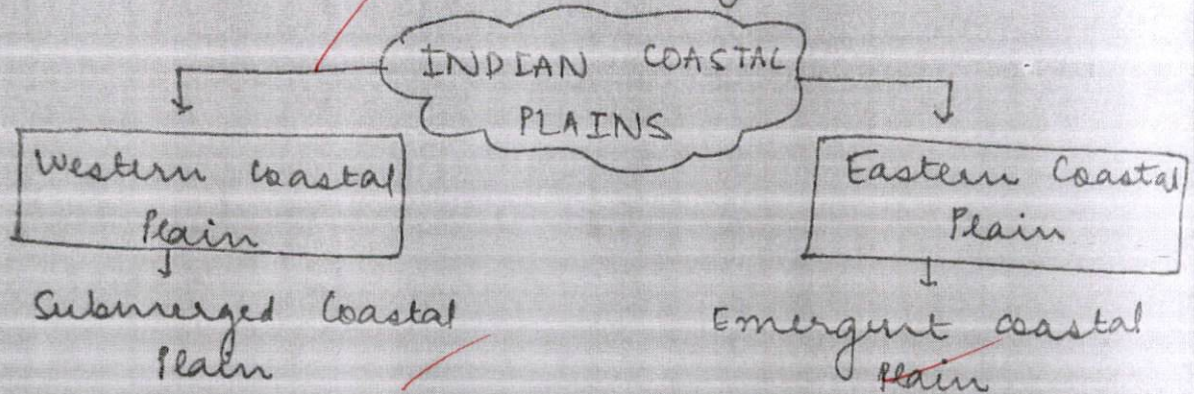
Remarks



Q14. Alluvial cover of the coastal plains of India makes it one of the most fertile plains of the world. Elucidate. Also, discuss why the West Coastal plain is infertile and agriculturally not prosperous unlike eastern coastal plain. (15 Marks) (250 Words)

INDIA has a vast coastline of ~7500 km.

On the basis of location and geomorphological processes, Indian coastal plains are divided into 2 categories:



Coastal plains of India: one of the most fertile plains of the world

*good*

The Indian peninsula is characterised by a dense network of rivers which are responsible for high agricultural fertility of the coastal plains in India.

Remarks

- 1) Large number of river systems in Peninsular Region flow West to East, thus creating large alluvial fans and Deltas on the Eastern Coastal Plain → eg: Godavari Delta, Krishna Delta, etc.
- 2) Western Coastal Plains are narrower plains characterised by Backwaters in Kerala & Western Ghats, act as source of rivers. These regions witness high port activity and fishing.
- 3) Variety of crops are grown in different regions of coastal Plains, eg: Rice in Dattaic regions of Godavari & Krishna; Cotton in Maharashtra, etc.
- 4) The versatile coastal plains of India are a testament to its fertility and high alluvial cover.

Explain this briefly

Western Coastal Plain: infertile and not agriculturally prosperous as Eastern Coastal Plains:

Remarks

1) Western coastal plains are narrow and submerged coasts, ∴ not as fertile as Eastern coastal plain.

2) No delta formations on western coastal plains as west flowing rivers are very less and ephemeral.

3) Tropical climate of Western Ghats leads to less organic matter in soil due to hot and humid climate, leading to infertile agricultural expanse of the plains.

4) Continuous chain of Western Ghats and less west flowing rivers leads to less erosional and depositional activity, ∴ agriculturally infertile regions.

However, Western Coastal Plains are crucial because these are natural harbour sites, important for international trade of India.

Remarks

good

good

6  
2nd part need to be focused more

Q15. Analyze the importance of endogenetic forces in the formation of rift valleys by citing examples of Narmada rift valley and east African rift valley.

(15 Marks) (250 Words)

A RIFT VALLEY is a lowland region that forms where Earth's tectonic plates move apart or 'rift'. ~~these~~ It is found both on land and ocean crust and are created by process of SEAFLOOR SPREADING.

good

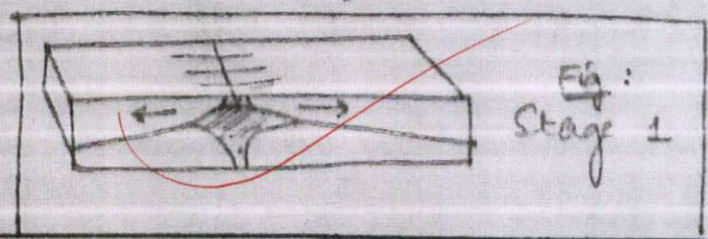
Formation of Rift Valleys:

Rift valleys are created by the action of a geological rift or fault.

Stage 1 → Upwarping - Fault zones

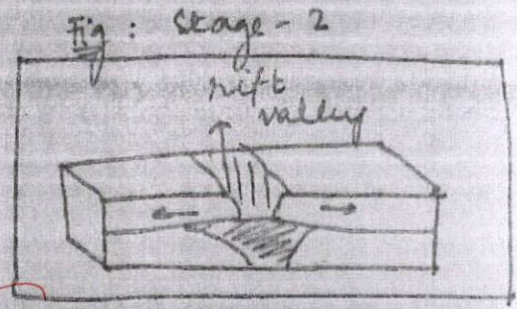
→ rising limbs of convection currents create a plume that tries to escape the surface by doming the lithosphere upwards.

good



Remarks

## Stage-2 → Rift Valley Formation



- 1) FAULTING due to divergence creates extensive rift system.
- 2) lithosphere is subject to horizontal extensional force and it will stretch eventually forming a RIFT VALLEY.

- 3) EAST AFRICAN RIFT is an active type of rift which has beneath itself a rise of large mantle plume doming the lithosphere upwards, causing it to weaken and creating the East African Rift.

- 4) NARMADA and TAPTI RIFT VALLEYS are formed through a different mechanism.

Remarks

Explain with map

\*) Narmada rift valley formed due to 'Bending of Indian Plate's Northern part during formation of Himalayas'.

→ ENDOGENETIC FORCES → or internal forces are of 2 types → (i) SUDDEN (ii) SLOW (Diastrophism).

\*) Rift Valley of Narmada is an example of OROGENIC Diastrophism, which was created during mountain-building process.

\*) East African Rift is an example of EPIROGENIC Diastrophism, which was created during continental building process.

Thus, endogenetic forces play a crucial role in formation of rift valleys and several other landforms.

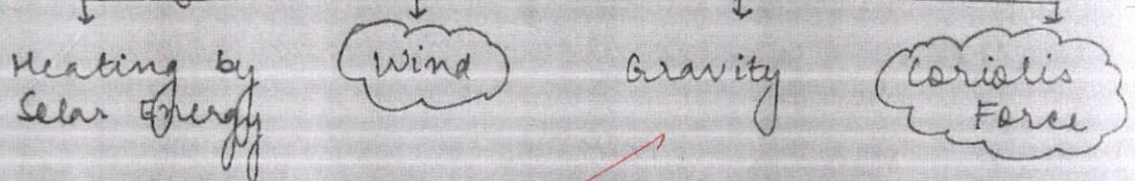
Explain with diagram  
Bring more clarity  
in the formation of Narmada rift valley

6

Q16. Major ocean currents are greatly influenced by the stresses exerted by the prevailing winds and Coriolis force. Discuss the forces which influence the major currents of oceans. Explain with examples why oceanic circulation pattern roughly corresponds to the earth's atmospheric circulation pattern. (15 Marks) (250 Words)

OCEAN CURRENTS are continuous, predictable, directional movement of seawater. It is driven by : (a) PRIMARY FORCES that initiate the movement of water & (b) SECONDARY FORCES that influence currents to flow.

Primary forces of Ocean currents



Impact of Winds and Coriolis Force on Ocean currents:

- 1) WIND: blowing on the surface of the ocean pushes water to move. Friction between wind & water surface affects movement of water body.
- 2) CORIOLIS FORCE: causes water to move rightwards in Northern Hemisphere and leftwards in Southern Hemisphere.

Remarks

FORCES influencing MAJOR CURRENTS of Oceans:

Major ocean currents are greatly influenced by prevailing winds and Coriolis force as demonstrated above.

Other forces affecting Major <sup>Ocean</sup> Currents:

- ) Water density gradients affects vertical mobility of ocean currents.
- ) Solar Energy: causes water to expand and creates gradient slope for vertical movement of water.
- ) Gravity: tends to pull water down the pile and create gradient variation.

Bring more clarity

ATMOSPHERIC CIRCULATION PATTERN and Major Ocean Current:

Oceanic circulation pattern roughly corresponds to earth's ~~at~~ atmospheric circulation pattern.

EXAMPLE → Air circulation over ~~the~~ oceans

Remarks



in mid-latitude is anticyclonic.

therefore, oceanic flow in mid-latitude is also anticyclonic.

→ Oceanic circulation transports heat from one latitude to another in a manner similar to general circulation of atmosphere.

EXAMPLE → Gulf-stream, a warm current in Mid-latitude, moves towards Sub Polar low Region, <sup>from Sub-tropical high</sup> creating a pleasant climate in Western Europe.

Thus, we can see that oceanic circulation pattern roughly corresponds to Earth's atmospheric circulation pattern. This leads to seasonal variations all across the globe.

Explain with map showing ocean current and winds pattern

6

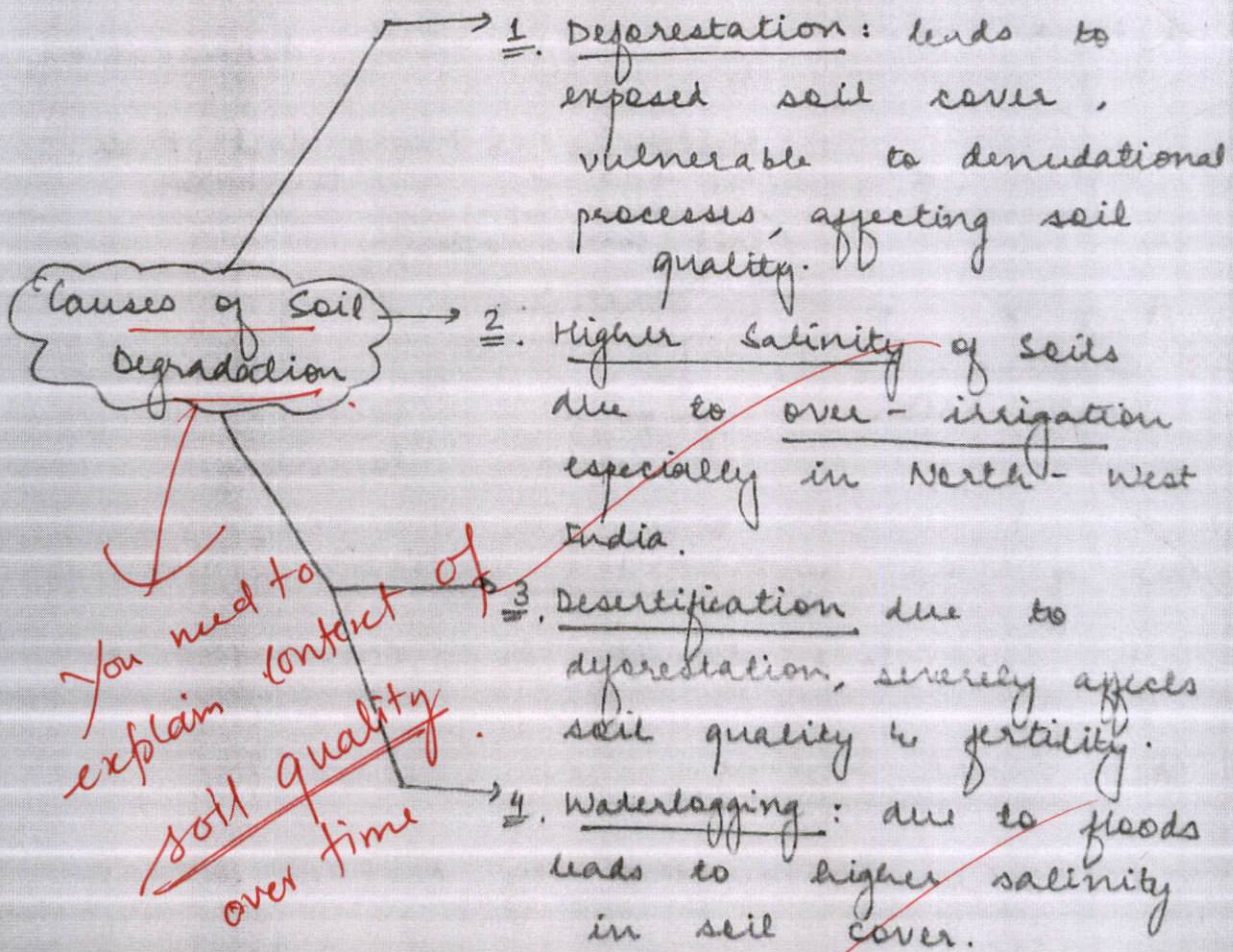
Remarks

Q17. How does soil quality gets deteriorated over the time? Discuss the objectives of Soil Health Card Scheme in rejuvenating the nutrient status of the soil.

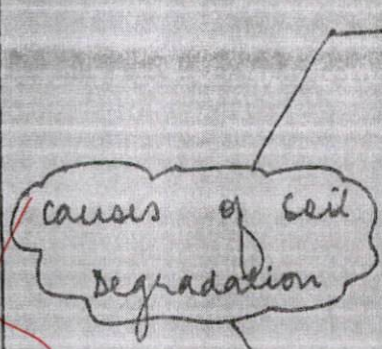
(15 Marks) (250 Words)

SOIL DEGRADATION refers to the process of decline in soil quality over time caused by improper use. It encompasses physical, chemical and biological deterioration of soil cover. } good

Causes of Soil Degradation:



Remarks

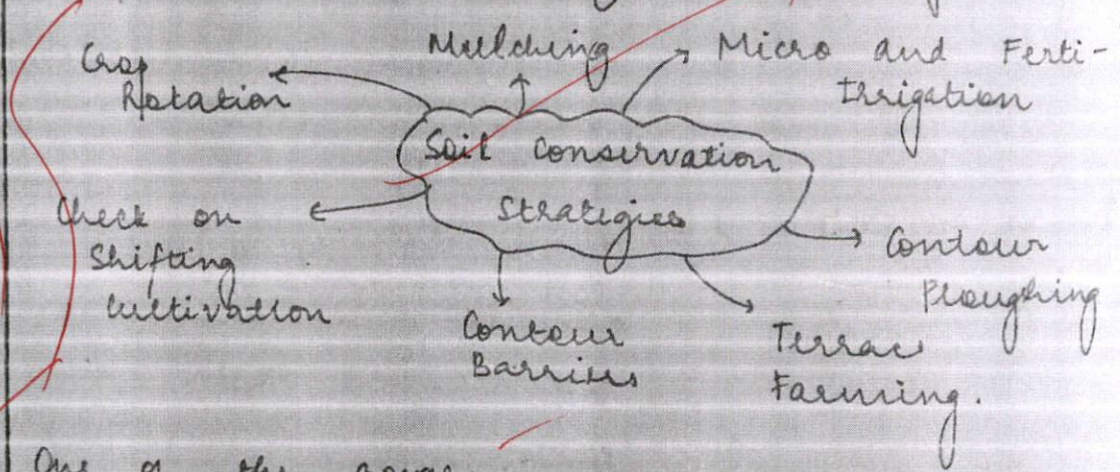


→ Soil Erosion: and other denudational processes expose parent rock and affect quality of soil and organic matter.

→ Overgrazing: adversely affects soil quality.

*Add specific examp*

However, there are several ways to mitigate the effects of soil degradation.



*good*

One of the government initiatives to rejuvenate soil quality is SOIL HEALTH CARD (SHC) Scheme.

SHC Scheme → launched by MOA FW in 2015

Remarks

aims at setting up village level soil testing labs and encourages employment generation and skill development.

-) SHC : is a printed report that a farmer will be handed over, which provides recommendations for agricultural inputs to be used in accordance with soil quality. Through this, original potential of soil gets utilised and farmers get to know soil-specific agricultural strategies.

-) Significance of SHC Scheme :

1. Analyses soil composition & quality
2. Soil-specific agricultural strategies rejuvenate the soil naturally.
3. Creates jobs for youth through soil testing labs.

Thus, SHC scheme is an innovative step in direction of rejuvenating soil quality over time.

Remarks

good

good

6

first part is not

explained properly

Q18. Sustainable Development Goal 14 recognizes that Oceans, along with coastal and marine resources, play an essential role in human well-being and social and economic development worldwide. Discuss their significance in the light of the blue economy.  
 (15 Marks) (250 Words)

Sustainable Development Goal (SDG) - 14

is about 'LIFE BELOW WATER' and

*good* aims to conserve oceans, seas and marine resources for sustainable development

Significance of oceans, coastal and marine resources :

I. Significance in terms of HUMAN WELL-BEING:

→ oceans, coastal and marine

resources provide important products :

→ sea-food ; → seaweed ; etc.

*good* which help in improving nutrition among humans.

→ They also offer several employment

Remarks

opportunities.

II. Significance in terms of SOCIAL and ECONOMIC DEVELOPMENT:

→ Marine ecosystems hold cultural and social importance, eg: Snake Boat Race in Kerala.

→ They offer opportunities for inclusive growth and development through highly productive ecosystems of estuaries and corals.

→ In light of the opportunities offered by the Marine Ecosystem, concept of BLUE ECONOMY was advocated in India.

good  
elaborate the context of human well-being + social + economic development worldwide

Significance of Marine Ecosystems BLUE ECONOMY

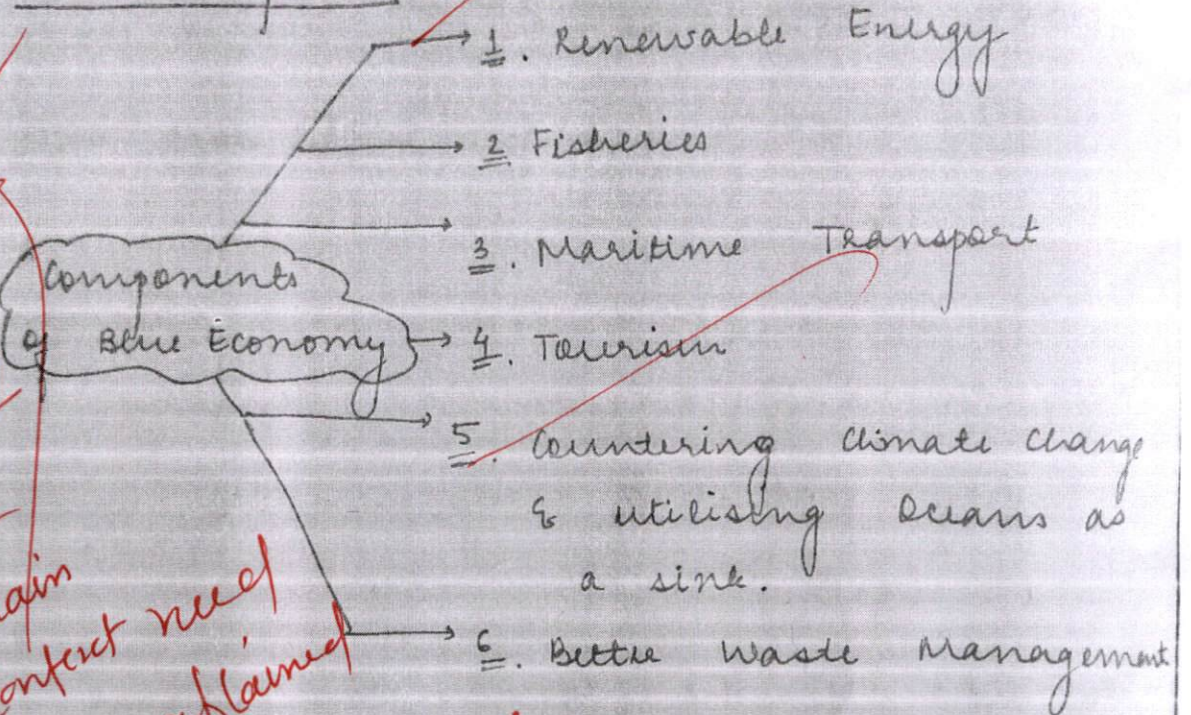
BLUE ECONOMY: refers to sustainable use of ocean resources for economic

focus more on this part

Remarks

growth, improved livelihoods and jobs and ocean ecosystem health.

→ It encompasses:



5/2

good

Main context need to be explained

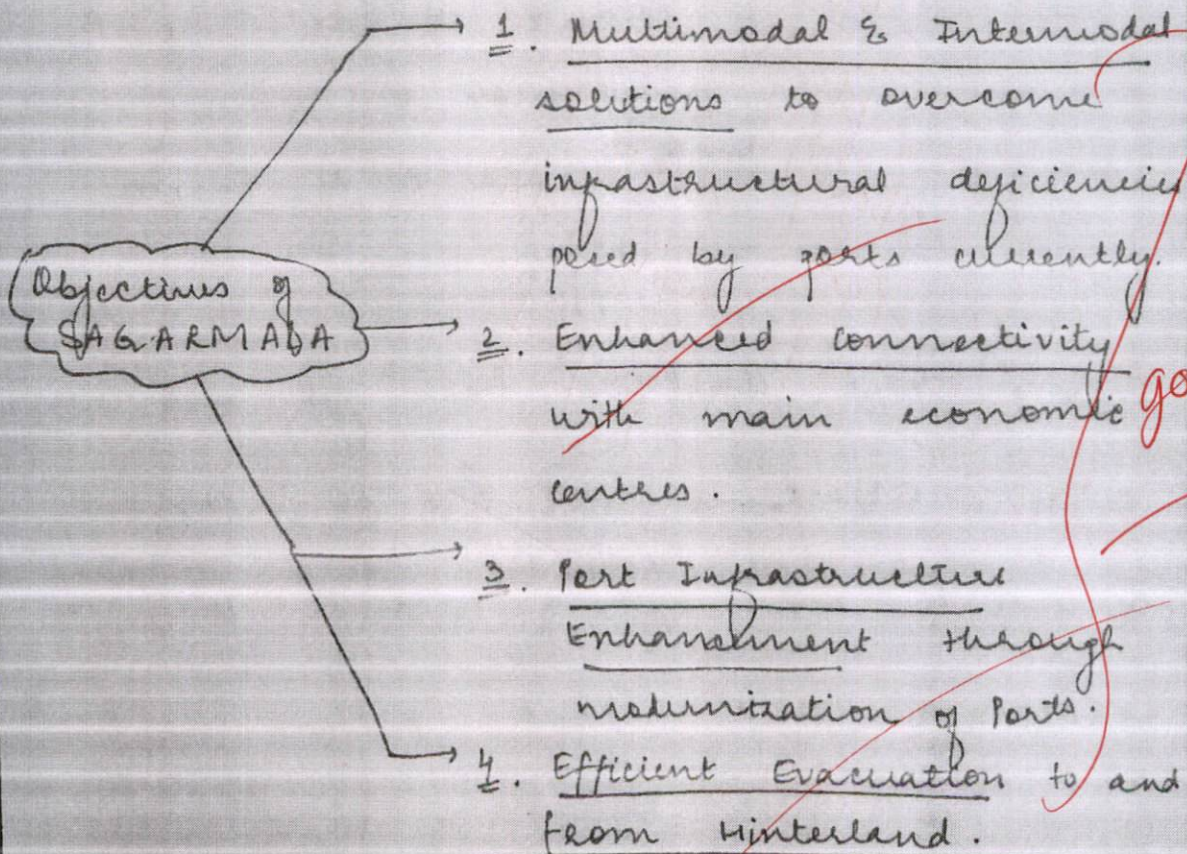
at least 5% of global GDP is derived from oceans. Therefore, it is imperative to fully utilise the ocean resources in a sustainable manner. SDG-14 and Blue Economy together satisfy both criteria and thus, can result in more efficient marine resources and ecosystems.

Remarks

Q19. Ports are not just the facilitator of trade, but could be inclusive centers of economic development. In this light discuss the significance of Sagarmala project and its objectives. (15 Marks) (250 Words)

SAGARMALA PROJECT is a 'port-led development' project aimed at utilising the 7500 km long coastline of India efficiently. It seeks to create a string of ports around India's coast.

Objectives of SAGARMALA PROJECT :



Remarks



Significance of SAGARMALA PROJECT :

Significance of SAGARMALA

1. Faster and comfortable transportation across the nation.
2. Reducing Transportational costs through modernization.
3. Boost Tourism for domestic & markets
4. Improved Infrastructure and connectivity of Economic zones.
5. Generation of Employment opportunities.

*these are general points explain specific form is related to sagarmala project*

India's vast coastline has yet not been fully utilised. ~~Here~~ due to capacity constraints and lack of modern facilities.

SAGARMALA could boost India's merchandise exports to \$ 110 Billion by 2025 and

Remarks

create approximately 50 million new jobs.

Challenges for SAGARMALA Project:

- Challenges
- 1. Infrastructural Gaps: in terms of connectivity.
  - 2. High capital costs and gestation period, i.e., delayed returns.
  - 3. Lack of Multimodal Transport development and dominance of high cost Road Transport.

mainly focus on Challenges and objectives

Challenges are not directly asked

However, SAGARMALA envisions to create string of ports; ~~are~~ with infrastructure - based capacities through expansion of rail, inland water, coastal and road services, thus opening for holistic infrastructure development.

5

Remarks

Q20. Demographic advantage is merely a euphemism and optimist way of looking at population explosion and it offers more threats than opportunities. Critically analyze.  
(15 Marks) (250 Words)

DEMOGRAPHIC ADVANTAGE or DEMOGRAPHIC

DIVIDEND refers to economic growth brought by change in country's population structure with dominance of productive age category (15-59 Years).

India has 62.5% of its population in productive age category of 15-59 Years and will peak around 2036 with 65%.

India is currently witnessing DEMOGRAPHIC dividend in process of demographic transition.

Challenges Associated with Demographic Advantage: (THREATS)

Demographic Advantage also occurs in stage

Remarks

Good  
First explain context of the euphemism & optimist view about population explosion

of population boom (STAGE-II) with high Birth Rates and low Death Rates.

Challenges of Demographic Advantage

1. Asymmetric Demography: with highly dominant productive age category leads to higher demand for employment & thus increase in unemployment.

2. Lack of skills: New job opportunities demand skilled workforce, however India has only 5% of workforce as formally skilled workforce.

3. Low social Indicators and Human Development Parameters. India rank 131st in Human Development Report.

4. Jobless Growth: According to NSSO, India's LFR is 53% in 15-59 Years category implying highly prevalent Jobless Growth.

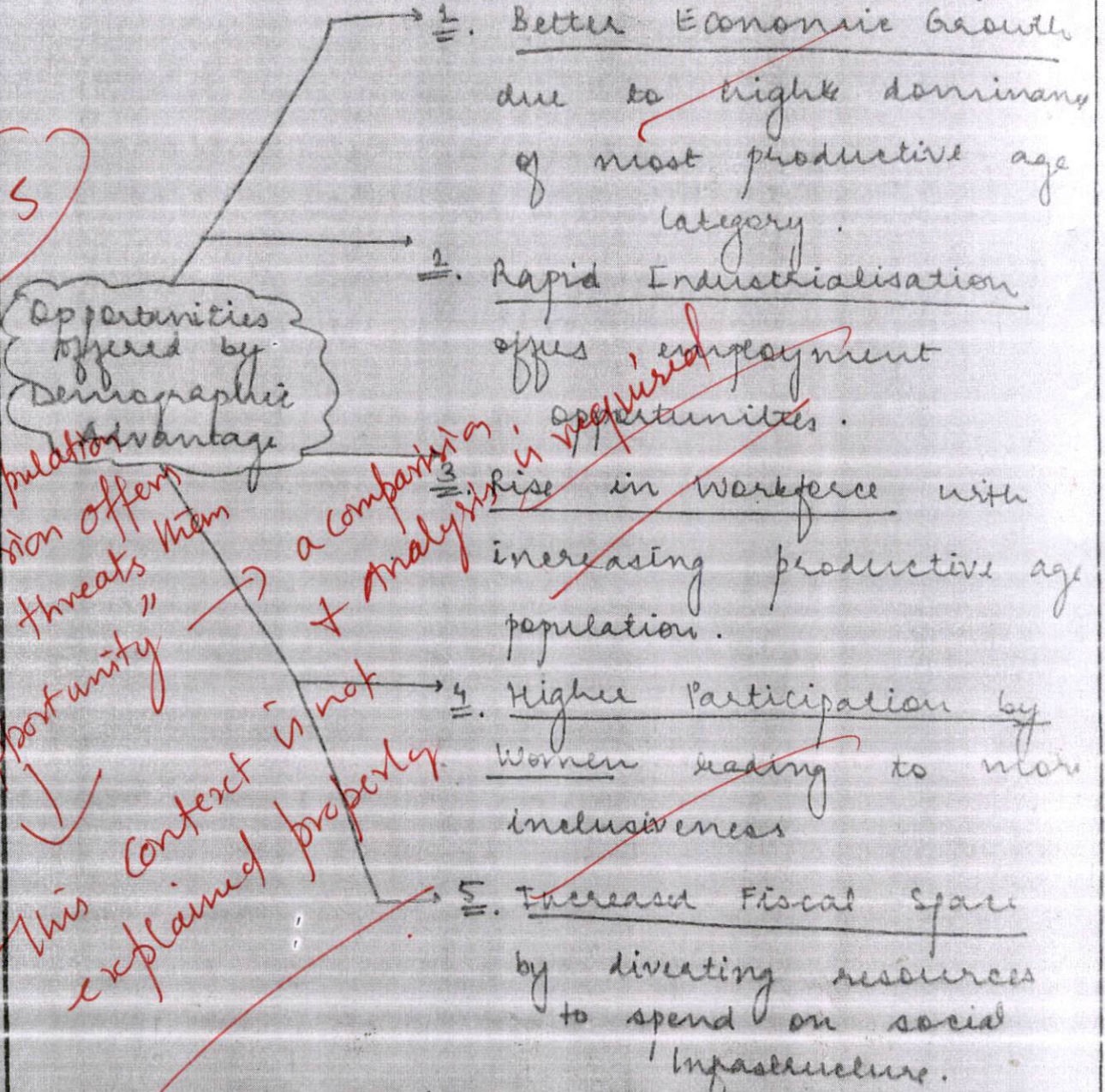
5. Informal Economy

Remarks

good

good

However, demographic advantage also offers opportunities for an economy:



U.S

Has Population explosion offers more threats than Opportunity  
↓  
This context is not explained properly

a comparison + analysis is required

Thus, demographic advantage comes with both threats & opportunities, but in a country like India, it can be enticed to reach inclusive growth.

Remarks