

# **GEOGRAPHY, DISASTER MANAGEMENT AND AGRICULTURE**

*Time Allowed: 3 hrs.**Max. Marks: 250*

<b>Q.</b>	<b>Marks</b>	<b>Instructions to Candidate</b>
1.	3.5	
2.	3.5	
3.	3.5	
4.	4.5	
5.	4	
6.		
7.	3.5	
8.	—	
9.	4	
10.	1	
11.	2	
12.	5	
13.	—	
14.	5.5	
15.	3.5	
16.	4	
17.	—	
18.	—	
19.	—	
20.	—	

48Name SWETHA S

Roll No. \_\_\_\_\_

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

Date \_\_\_\_\_

Signature Jyoti

1. Invigilator Signature \_\_\_\_\_

2. Invigilator Signature \_\_\_\_\_

**REMARKS**

Dear Candidate,

Following are the areas where you need to improve

- Your need to improve your structure-presentation of answer. write either in point form or paragraphs.
- Avoid writing in Subheading. Each subheading should be explained properly.
- Proper flow is not there in your answer.
- Avoid writing in flowchart form. write either in point form or paragraph form.
- write proper introduction and conclusion to each answer.

Keep writing for better results.

## Section - A

- Q1. Discuss the major features of Tropical Rainforest Biomes. How Human activities are impacting these biomes? (10 Marks)

Tropical rainforest biomes are located in the equatorial belt ( $5^{\circ}N$  &  $5^{\circ}S$ ), which ~~is~~ receives heavy convectional rainfall throughout the year.

### Major features

#### Geographical

- High rainfall Zone
- Equatorial forests → Green throughout the year
- Soil poor in nutrients due to leaching.
- Eg:- Amazon rain forest, Nilgiris in India
- Rich in biodiversity.

Explain  
these  
subheadings

#### Economic

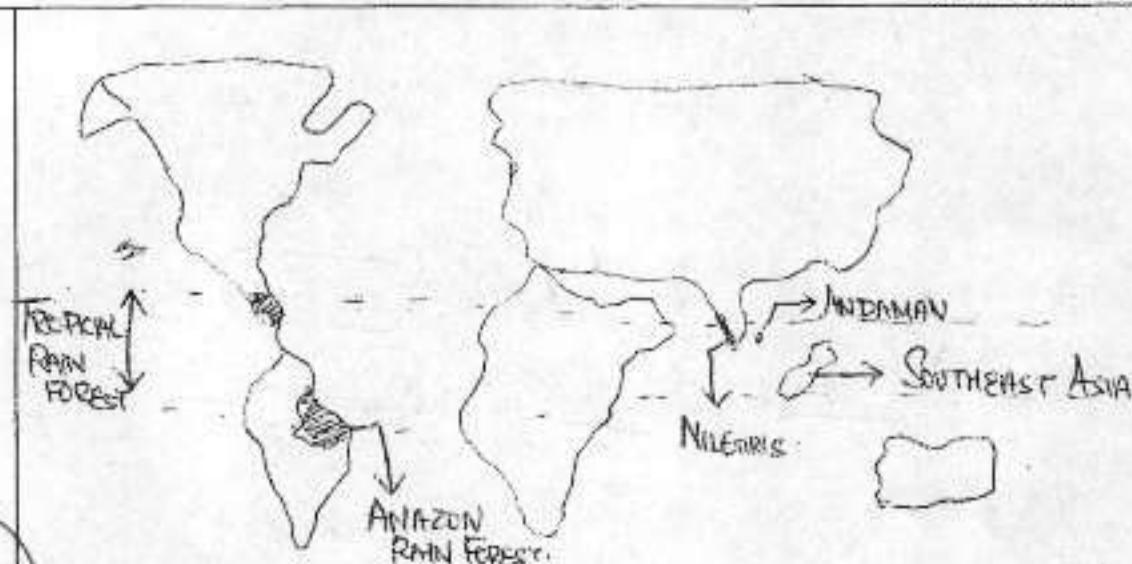
- Plantations such as bamboo, rubber, coffee.
- Developing & underdeveloped regions.
- Demographic dividend (Youthful population)
- Rice as a staple crop.
- Domination of primary sector.

Explain  
these  
subheadings

#### Historical

- Common colonial past.

Remarks



35

Human Activities & Threats

- ~~Explain environmental + social impact~~
- Deforestation for industries, plantations etc.
  - Palm oil cultivation replacing equatorial forests.
  - Orangutans endemic to Borneo on the verge of extinction.
  - Soil erosion.
  - Spread of diseases such as malaria.
  - Global Warming & Climate change intensifying.
- Solution
- REDD+ initiative of UN to monetize the value of forests.
  - India as a regional leader lead the global fight against deforestation.

Remarks

- Q2. India is slowly cleaving into two countries - a richer, older South and a poorer, younger North. Critically analyze. (10 Marks)

India has a unique diversity in its regional demographic profile.

### Northern India

- Population :- Majority in the 15-49 age group ("Young")
- Labour surplus zone
- Source of demographic dividend
- Potential to lead India's future growth
- Economy :- "POOR"
  - Migrant outflow to the developed south
  - Few industries located here in comparison to South
  - Ease of doing business is poor → & - Political instability, infrastructure deficit, unskilled population, power supply erratic

You need to critically analyse + explain reasons for

### Southern India

#### Population

- Replacement level fertility rate (2) is achieved.
- Aging population

#### Economy

- Major contributor to country's growth.
- Strong manufacturing & service sector presence Eg: →

#### Remarks

Metropolitan cities: Chennai & Bangalore → IT hubs  
 Coimbatore → Textile Industry  
 Karnataka → Iron & steel industry  
 Andhra Pradesh → Leads in  
 NITI Ayog's  
 Ease of doing business  
 → But, the South  
 is dependent on North for  
 labour supply.

### Implications

#### Negative

→ Conflict between North & South  
 In 15th Finance Commission discussions  
 → South opposes more allocation  
 of funds to North as they have  
 been economy's major drivers.

→ Spark Regionalism, Linguism, zone of soil theory.

→ Opportunity for youth in South reduce.

→ The out migration from increasing hostility  
 north leads to underdevelopment of the northern belt.

#### Positives

3.5 → Increased interaction strengthens "nationalism" &  
 contains the North vs South tension.

→ Remittances from migrants helps reduce regional  
 imbalance.

Add map

Observe  
data from  
centres  
& Analyse it

Remarks

Q3. Critically examine the Malthus theory of population growth and discuss its relevance in context of India? (10 Marks)

According to Malthusian theory, while natural resources move in "arithmetic progression", population multiplies in "Geometric progression". Hence the population will be outnumbering resources → forced reduction in population

India has a population of 2.5 billion (largest in the world). Population is yet to stabilize as the fertility rate is still above 2.0 (replacement level).

Hence the population is beyond the "Carrying Capacity" of Indian mainland.

Critically examine the basic features of Malthusian theory

3.5

### Relevance in India

- Shortage of resources :- Scarcity of water, power
- Food Security :- Availability, Affordability & accessibility still remains an unfinished challenge. Eg:- Hunger death reported in Orissa recently.
- Farmers Suicides :- Scarcity of land is further reducing land holding size. This reduces the productivity of land further.

Remarks

- Climate Change is real :- By increasing vagaries of nature - monsoon, drought etc, it further threatens availability of resources.
- Human Capital :- Education & health are still undeliverable at an affordable cost to all in India
- Disease spread :- Infectious disease spread far & wide killing people. Can be seen as a natural way to balance the imbalance in population growth.

### Countering the Malthusian Theory

- Production of food in India is sufficient to feed the population.
- Technology can bridge the gap by increasing productivity & production :- Eg - More grain crop.
- Water scarcity is more about mismanagement & less about availability

- Q4. Critics argue that organic farming is inefficient and requires more land than conventional agriculture to yield the same amount of food. Do you agree? Critically analyze the potential of organic farming in solving hunger problem and its economic viability for farmers.

(a)

(b) (10 Marks)

~~Organic farming refers to the practice of using minimum chemicals. Instead it operates in an environmentally friendly manner by using bio-pesticides, organic manure etc.~~

⇒ ~~Inefficiency of Organic farming~~

- It demands the use of costly inputs rather than the cheap easily available chemicals in the market.
- It needs far more attention from farmers.
- Knowledge intensive :- How to provide nutrients? What amount of nutrients? Climatic conditions in which it has maximum productivity etc are unknown to farmers.
- Given our small per capita land holding size, organic farming is difficult as it needs large areas of land since it needs minimum chemicals, water etc.

⇒ ~~But~~

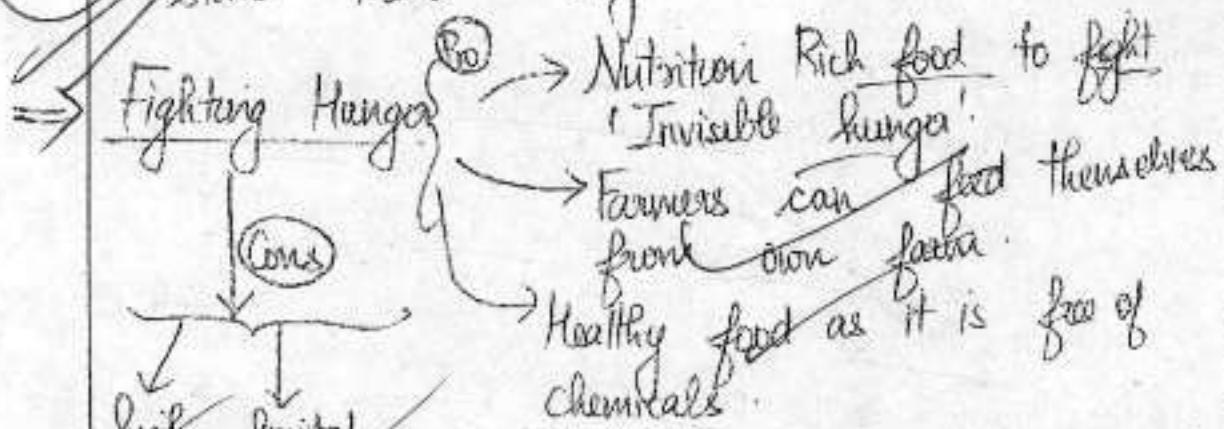
- It allows farmers to use farm generated inputs such as manure from dried leaves, biopesticides from neem.

Remarks

→ Pooling of land can compensate for the large land requirement. E.g.:-

→ Sikkim, India's first organic state was led by small farmers by community farming, drip irrigation, usage of traditional knowledge. It got minimum support from state. Hence any state can achieve.

U.S



⇒ Economic Viability

- APEDA is providing guarantee of organic food
- Export markets can be tapped especially West
- Rising income & expanding middle class  
↳ More demand
- Health Consciousness increasing
- E-commerce help in marketing

Hence Organic farming under

can help achieve the goal of Doubling farmers income by 2022 & create a nutritious India.

Remarks

- Q5. 'Animal rearing is a key livelihood and risk mitigation strategy for tribals and small and marginal farmers, particularly across the rainfed regions of India'. Substantiate; also discuss some strategies to realize the potential of this sector? [10 Marks]

~~Animal rearing can help counter the difficulties faced by small farmers & tribals especially in regions practicing "dry land farming"~~

### Livelihood

- Supplement Agriculture income
- Provides 'Insurance' against drought, floods etc.
- Maintenance cost is low. Hence poor tribals & peasants can also raise them even in drought
- Provides nutrition to family through meat & milk
- Through cooperatives such as Amul can sell the milk on a regular basis.
- Poultry consumption on a rise due to urbanization & expanding middle class.

### Risk Mitigation

- When Agriculture fails ⇒ Their Animals save their lives
- Can help the government reduce number of farmer suicides
- With Climate change, vagaries of nature are increasing

Remarks

But Cattle, Poultry can even survive in hardy conditions - drought

→ Bee farming & Silviculture are a traditional occupation of tribals If commercialized, can help them overcome poverty

→ Input to Output ratio is high ⇒ Low Risk high Return venture

### Strategies

Food → fish food  
 → fodder for cattle  
 → food for poultry } Quality of food decides quality of product

Pro include credit & insurance + insurance policy → Disease → Veterinary service to be extended.  
 Eg: Bird flu, Swine flu

Knowledge → Scientific Animal husbandry practices through farmer-scientist (ICAR Programmes)

Cooperatives → Replication of Animal Model for milk & meat

Counter Climate Change → Poultry in Telangana affected by heat waves.

Add Conclusion

Remarks

Q6. What is mass movement? Discuss its various types?

(10 Marks)

Mass Movement refers to large scale movement of people from one place to another. The types can be classified based on the reason :-

 Mass movement  
in Geography

- ① Natural disasters
- Floods, droughts etc can force an entire village to evacuate.
  - Rising sea levels due to climate change.
  - Eg:- Recent North East floods forced people to leave villages in Assam.
  - Eg:- Several tiny islands of Pacific are on the verge of submerge.
- ② War & Conflict
- Lyrian migrant crisis has caused mass movement to Turkey, Egypt & European countries.
- ③ Ethnic Cleansing
- Can leave many people 'stateless'.
  - Eg:- Mass exodus of Rohingyas from Bangladesh.
- ④ Social ~~Issue~~ Movement
- To express a grievance, people may participate in mass protests.
  - Eg:- Recent farmer protests in Maharashtra - Mass movement from remote districts to state capital.

Remarks

0

⑤ Economic failure :- may force people -  
to move in search of better opportunities  
Eg:- Mass migration from rural to urban areas

⑥ Political instability :-

Implications

- Imbalance :- Unplanned movement  $\Rightarrow$  shortage of resources
- Uninvited mass movement :- Marginalization, threat of deportation
- Loss of identity to migrants
- Eg:- Those who escaped the conflict in Afghanistan & Sri Lanka & came to India continue to live without citizenship rights.

Mass movements have become a new normal since it is a trans-national issue, action from all countries & International Organizations needed.

Remarks

- Q7. Recently, India's Prime Minister has appealed for a "three-pillared" approach to farming, which included crop farming, agro-forestry and animal husbandry. Discuss what needs to be done to successfully implement this approach to bring about farmer's welfare.

(10 Marks)

Three pillar approach proposed by the Prime Minister can help achieve the goal of doubling farmer's income by 2022 with social justice

### Crop farming

→ Problems :- → 2/3 of farmers depend on monsoon  
→ low soil fertility :

- Lack of scientific farmers
- Per Capita land is very small
- Infrastructure - Storage, Transport, Marketing
- Globalization increasing vulnerability

→ Strategy :- → Drip Irrigation, Sprinkler Irrigation  
→ Soil testing soils & soil ~~test~~ correct scheme

- help determine correct nutrients
- Farmer - scientist → Agriculture Extension programmes

- Land pooling to be encouraged
- Private participation for building infrastructure
- South-South Cooperation & WTO negotiations to protect farmer interest

Remarks

Agroforestry: Growing trees on farm land

Problems

- Lack of Awareness of the concept
- Availability of quality seeds
- Government giving less attention
- Elite Capture - Big farmers main gainers

Solutions

- State Government + NGOs to promote
- Gram Sabhas to distribute seeds
- Small & marginal farmers to be targeted

Explain  
these  
either  
in point  
or  
paragraph  
form

### Animal husbandry

Add  
conclusion

(3) Solutions

- Diseases
- Lack of quality feeding
- Poor marketing facilities
- Infrastructure → Ponds, water, No cow sheds, No facilities
- Veterinary services
- E-Ham to include Animal husbandry
- Promote Cooperatives in this sector
- Government to provide infrastructure on soft loan

Remarks

- Q8. India need significant focus in agriculture research through projects like TIGR2ESS using multi-partner approach to deliver a second, more sustainable Green Revolution. In this context, discuss TIGR2ESS project funded by Global Challenges Research Fund (GCRF) by Research Councils UK in India. (10 Marks)

---

*Remarks*

---

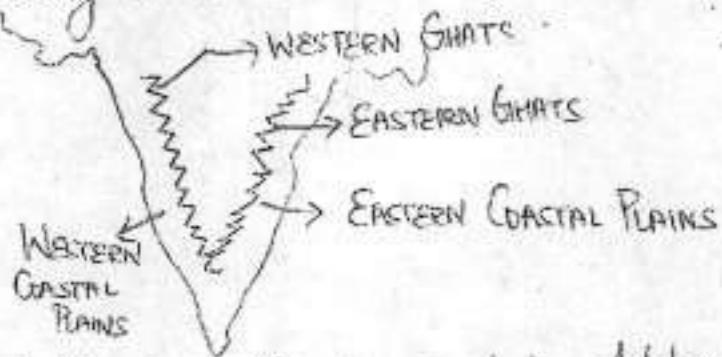
*Remarks*

- Q9. Why fishing industry is well 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. Also discuss why commercial fishing is less developed in southern hemisphere?

(10 Marks)

Fishing industry flourishes in India from a subsistence to ~~commercial~~ level thanks to the viable geographical conditions

Fishing industry on Western Coast flourishes :-



- ① Natural Lagoons  $\Rightarrow$  Kerala : - Vembanadu Lake, Ashtamudi Lake  
 $\Rightarrow$  Gujarat : - Gulf of Cambay & Kutchh

- ② Submerged Continental Shelf  $\Rightarrow$  Provides deep waters needed for fishing

- ③ Cyclones : - Less common in Arabian sea than Bay of Bengal

Eg : - Sea virtually closed for fishing in Tamil Nadu between October - November

- ④ Depletion of reserves : - Destructive practices like Bottom trawling depleted resources Eg. Palk Strait

- ⑤ Presence of Commercial players in Maharashtra, Gujarat

- ⑥ South West Monsoon fills ponds & lakes in Western Coast

Remarks TN receives only North East Monsoon.

⑦ Natural ~~beaches~~ of Maharashtra & Goa create demand for sea food.

explain  
them  
elaborately

Recent Steps → Neena Kumar Committee recommendations followed up to tap the potential.

- Tamil Nadu banned bottom trawling & Coast Guard training in environment friendly fishing.
- Miga food park scheme
- Food Processing of sea food
- Agriculture Product Export development agency (APEDA) to promote exports.

Less developed in Southern Hemisphere

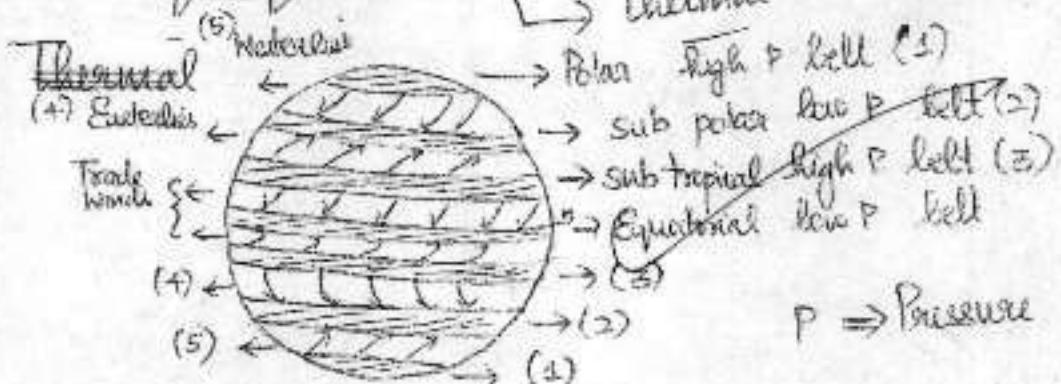
- Economically poor Latin American & Asian & African countries
- Salinity of water more than Northern Hemisphere
- Meeting of Ocean Currents (warm + cold) less here. Eg:- In Japan - Oyashio & Kuroshio.
- Amazon river as an ex, does not form a delta ⇒ Therefore biodiversity zone is absent
- But Chile due to Peruvian cold current is a rich fishing zone. Similarly many South East Asian countries like Indonesia

Remarks

Q10. While discussing the causes of formation of planetary winds elaborate on their major characteristics. (10 Marks)

Planetary winds refer to the permanent winds that blow from a consistent direction & strength.

### Causes for formation



### Thermal Reason :

#### Equatorial low Pressure belt

→ Intensive heating → Convectional currents → low Pressure  
at equator → Created  
deflect as Under Coriolis force → Trade winds blow to fill the low

#### Polar high Pressure belt

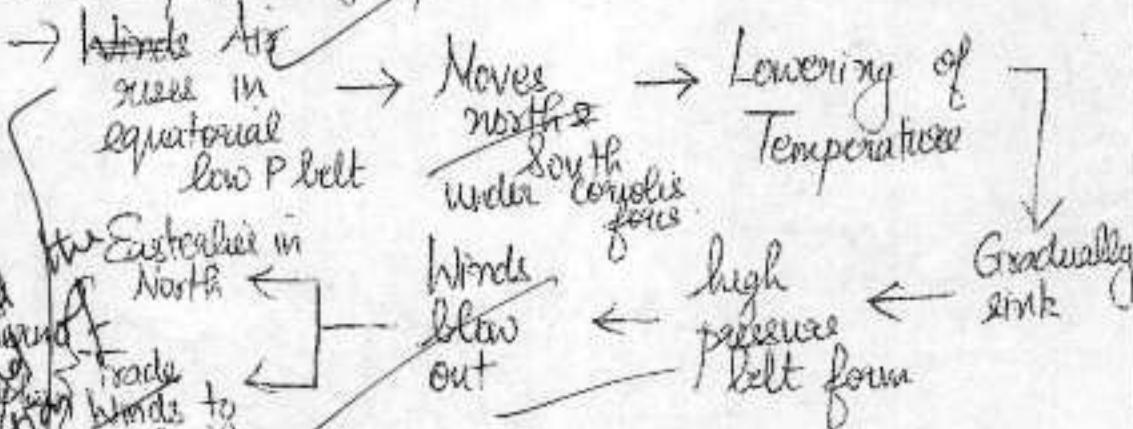
→ Receives slant rays of sun → Very Cold  
deflect as shown under Coriolis → Winds blow out as Westerlies  
Creates a high Pressure → sinking air

Remarks

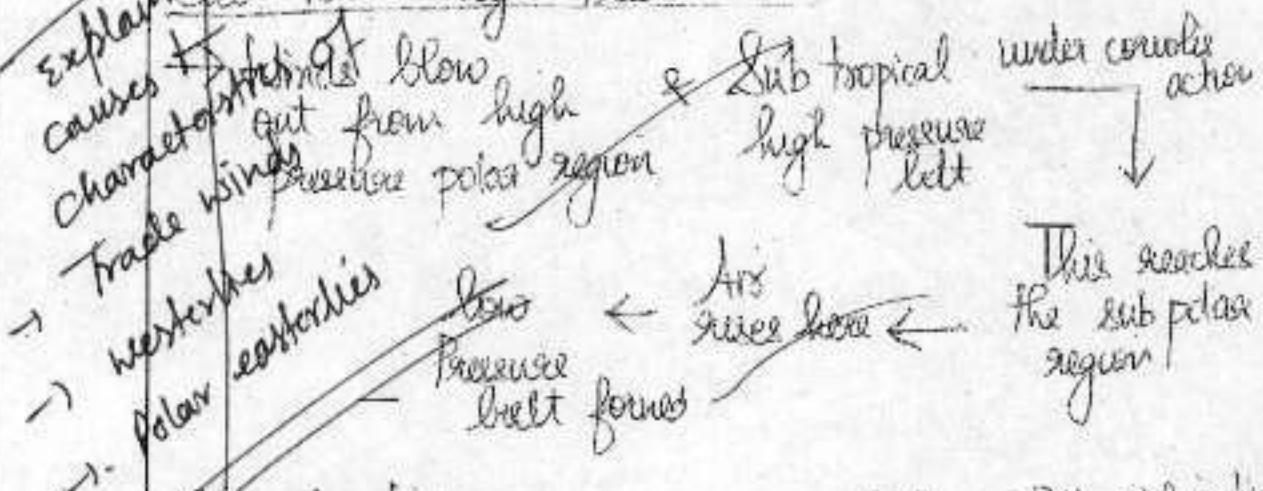
## Dynamic Reasons of Rotation of Earth

### Sub Tropical High Pressure Belts:

(1)



### Explain Sub-Polar High Pressure Belt



### Characteristics

- Sub LP Belt.  $\Rightarrow$  high temperature, high rainfall, rich in biodiversity, No seasons
- Sub Tropical HP Belt  $\Rightarrow$  Cloudless, Low Rainfall, Reserve of Deserts,

Remarks

## Section - B

Q11. Gulf Dust storm is considered as one of the contributing factor (apart from stubble burning) behind the smog that had smothered Delhi and its neighborhood, as per Scientific Assessment of Delhi Winter Air Quality Crisis Report by SAFAR. Elaborate on the factors that increase dust storm and analyze its impact on Indian weather? (15 Marks)

Gulf Dust Storm refers to the ~~peaceful~~<sup>e sand</sup> desert storms that engulf the Middle Eastern region

★ Smog in Delhi

→ Delhi has earned the infamous title of being one of the most polluted cities in the world. Air pollution levels are currently at life threatening levels (WHO)

Gulf Dust storm & Delhi :-



High temperatures in cloudless subtropical regions off Gulf

Convectional Currents generated

Land in desert begins to move with winds.

Remarks

Explain factors that increases dust storm

↓

Acquires a circular motion similar to sea storms.

↓

Westerly winds blow from sub tropic to tropic

↓

Sand & dust dragged into Delhi

↓

serve as hygroscopic particles for condensation of water

↓

Smog → Poor visibility, asthma etc in Delhi

Stick to the demand of question

→ Stubble burning refers to burning of crop residue. Haryana & Punjab farmers commonly do this. Winds carry dust to Delhi causing smog.

→ Delhi's Unique Geographical location :-

- ↳ land locked
- ↳ sea breeze in coast carry away dust generally
- ↳ ∵ dust circulated & gets trapped in Delhi

Remarks

Factors that Intensify ~~Gulf~~ ~~Ho~~ dust storm

→ Strong heating

Barren land that

in the  
rain  
can help storm gain velocity  
again  
wind  
desertification &  
land degradation demand  
of  
water

explain  
these  
subheadings

Desertification &

Strong Westerlies

Strong Coriolis force

Explain  
this  
elaborately

Implications on Indian weather

→ Smog → lower visibility, Flights delay

→ If it meets a local water source can  
bring rains e.g. Common in  
Summer afternoons

→ Can get into eyes & lungs → dangerous

→ Dry weather conditions

Hence, to effectively tackle disasters & bad weather  
conditions, global coordination & action is needed  
as one part of the world can affect others

2

Q12. Oceans are suffocating, as dead zones have quadrupled in size since 1950s. In this context, discuss the causes and effects of Ocean Dead Zones on marine ecosystem.

(15 Marks)

Ocean dead zones refer to regions where life ~~does not exist~~ does not exist. They are on a rise due to anthropogenic reasons.

### Causes

→ Exploitation of resources :- Unustainable extraction of resources through methods like

*Bring flow + comprehensive notes*  
 → bottom trawling ⇒ India in Gulf of Mannar  
 Commercial fishing ⇒ USA, Australia in Pacific  
 Corals for cement Industry ⇒ Cost of Andhra Pradesh

### Extraction of Minerals :-

→ Polymetallic Minerals ⇒ India on Western Indian ocean

→ Oil & Natural Gas ⇒ South China Sea

→ Deep ocean drilling ⇒ China for hydrates

↳ This affects the entire ocean ecosystem

### Climate Change :-

→ Ocean acidification : Leading to dissolution of shells of corals due to less carbonates causing death

### Remarks

→ Rising Sea level

→ Rising Ocean Temperature → fishes can bear only small range of temperature

→ With increase in Temperature

↓ O<sub>2</sub> dissolution decreases

→ Dynamite / Cyanide Fishing

→ Kills not just the fish but all the surrounding algae, whales etc.

good

Plankton & algae extraction

→ Form the foundation of aquatic food chain

→ Extracted for medicinal use, food etc.

→ Eg : Sea Grass causing death of dugong

→ Marine Plastic

→ Recent death of a whale near South East Asia with tonnes of plastic in stomach was an eye opener

→ Pacific Ocean near the 'Gyre' is becoming a new dump yard

→ Animals consume plastic as food & die

→ Other reasons Eutrophication, Marine Tourism

Implications

- Marine food chain from algae to whales  
 → fishing industry affected  
 → Explain elaborately  
 → Marine pollution & odour affects Tourism  
 → Through bioaccumulation  
 → Microplastics as an  
 eg. ~~are entering humans~~  
 → Man is asserting himself as the only life  
 worth living → Morally incorrect  
 → Wetlands, deltas, Estuaries dying along with it  
 → Global Warming intensifies → Eg: Plankton do  
 more than half of carbon sequestration

3

Remarks

Q13. The United Nations Convention on the Law of the Sea (UNCLOS) not only protect the jurisdiction and economic rights of its member states overseas, but also the marine life and environment. Examine. (15 Marks)

---

*Remarks*

---

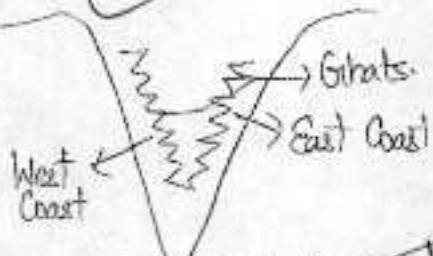
*Remarks*

*Remarks*

Q14. Why are the west coast beaches receive more tourists and are more famous than east coast beaches in India? Also shed some light on India's Port led development initiatives.

(15 Marks)

West Coast is tapping more tourists than Eastern Coast for the following reasons:-



- ① Cyclones :- South West & North East Monsoon bring the tropical cyclones between June to November. This affects Tourism.
- ② Beaches : Mumbai & Goa beaches are world famous tourist attractions that have been developed by state government. Marina Beach in Tamil Nadu is also famous.
- ③ Colonialism : Goa was a Portuguese territory & Bombay a British colony. Hence received world attention.
- ④ Kerala Tourism Policy :- The title of "Gods Own Country" & Most developed state has attracted sufficient attention.

Remarks

⑤ Nilgiris & (Western Ghats) :- Unlike the dry Eastern Ghats it is rich in biodiversity. Hence hill stations flourish, such as Ooty etc.

⑥ World famous tourist spots :- Eg:- { Ajanta & Ellora in Maharashtra.  
Valamballi lake in Kerala }

Chalukyan Architecture in Karnataka  
Rani Ki Vav in Gujarat

⑦ ~~UNESCO Heritage Tag~~  
→ More UNESCO tag sites on West Coast  
Eg:- Papanad Temple, Jain Narayan Temple, Chhatrapathi Shivaji Terminus.

India's port led development initiative

→ Sagarmala is India's port led development initiative.

→ It aims at building ports with state of the art infrastructure such as coastal berths, harbours, storage facilities.

→ Innovative PPP Models for building ports.

→ Linking ports with other multi modal transport such as roads, railways, water ways.

→ Building new ports Eg:-

Add more points

Add Bharatmala

Remarks

not asked  
in question

\* write it  
in conclusion

S.S

- Implications → Ease of Doing business (India ranked)  
→ Infrastructure bottle necks removed  
→ Exports increase as envisaged in foreign trade policy 2015-2020  
→ Coastal Economic belts created  
→ Regional imbalances corrected  
→ More FDI → More Business → More Employment  
→ Strengthen India's position in Indian Ocean & counter Chinese "String of Pearls".  
Reap demographic dividend

Remarks

Q25. Migration is a physical and social transformation and is also an instrument of cultural diffusion and social integration. Elaborate. Also, explain the nature of gendered mobility in India. (15 Marks)

Migration has a socio-political-cultural & economic transformation on the source & destination.

### \* Physical Transformation

#### Source

- less population
- lesser dwellings
- Nale have a deserted look with time

Explain  
these  
headings

#### Destination

- crowded
- Civic infrastructure such as roads, power, water become overburdened
- houses crowded since real estate prices increase
- New Metros & innovative transport Eg - Pod Taxi in Delhi-Gurgaon
- Ghats proliferate Eg - Mumbai Dharavi
- More entertainment centres such Cinema, hotels etc.

not  
arrested

### \* Social Transformation

#### Source

+ destination Source  
are not defined  
Explain what migration of rural & poverty  
is left behind  
social transformation force  
caused by migration  
marked

#### Destination

- Feeling of isolation & confusion since new culture

- Aging population
- Psychological distress since lonely.
- Poverty increases as ~~soil~~ underdeveloped
- But, remittances can lead to its growth.

- Young population
- Rise in Unrest
- Rising economic inequality as all migrants can't find jobs.
- Sons of soil theory triggered - Regionalism can lead to social conflict
- Social mobility due to new opportunities.

### Cultural diffusion

\* Explain with example what are the sources

- Source
- Migrants bring new ideas to source.
- New products such as Social Media
- Caste & religious divide may give rise as equality & justice concepts flourish in urban areas.
- Globalization - New clothes, English language etc.

### Destination

- National integration as people from different regions meet.
- Celebrate festivals from across the country
- Learn new language
- New dresses, gadgets etc
- New ways of entertainment
- Gender Equality
- Women Empowerment

Remarks

- Hence the above factors contribute to social integrations
  - Less Gender conflict
  - Acceptance of LGBT, transgenders
  - North Vs South divide reduce
  - Casteism, Communalism reduces

But may also lead to disintegration

Explain the  
nature of  
gender mobility → Regionalism  
Regional Imbalances



Remarks

- Q16. Population growth and urbanization rates will have dramatic impact on food security across the world by 2050. In light of this, discuss the role of Big-data and upcoming start-ups in bringing next green revolution in the Indian agriculture? Examine. (15 Marks)

Population growth & Urbanization are threatening the 3 key pillars of food security - accessibility, affordability & availability

Big Data refers to a technology that collects large amount of information with the ability to analyze & provide interesting analysis

Start-ups are primarily led by youth who bring in innovation & technology to provide new solutions to old problems

Hence, together they have the potential to usher in the next green revolution in Agriculture

### Big Data

- Collect information about weather, soil, crop production, pest attacks etc.
- Information to be obtained from different regions across different seasons
- On collating this information, data analytics to be used to find new cause &

Remarks

effect correlations -

Information can be shared with the scientific community for research process

Information to be transferred to technology solutions

related  
it to  
next  
green  
revolution  
as per  
demand  
of  
question

- Eg ① Microsoft in collaboration with Karnataka Govt  $\Rightarrow$  Crop forecasting method to reduce vulnerability
- ② Inputs to farmers on the correct soil nutrients, crops etc for highest yield in the region

### Startups

$\rightarrow$  Can help bridge the supply chain bottlenecks  
Eg. storage, marketing etc.

$\rightarrow$  Direct delivery of produce from farm to market E.g. Organic produce that is popular in urban areas

$\rightarrow$  Information asymmetry on MSP, seed, fertilizer prices etc can be overcome

Explain it  
in the  
context of  
next  
revolution

(1)

Remarks

- food processing startups - Can provide the missing link between agriculture & industries
- Direct employment generation especially for rural youth

Remarks

- Q17. Every hazard is unique in terms of local socio-environment factors that control it, social response it generates and the way each social group deals with it. Citing specific examples, examine the importance of the role of local government and community in dealing with disasters. (15 Marks)

Remarks

---

*Remarks*

---

*Remarks*

**Q18.** Drought is a broader concept than just deficiency of rainfall. Discuss, how drought is more of a man-made disaster than a mere deficiency of rainfall. Elaborate on the consequences of desertification that drought prone regions face. Also, bring out the preventive steps need to be taken in light of targets to curb desertification as mentioned under the SDGs. (15 Marks)

---

*Remarks*

---

*Remarks*

---

*Remarks*