

GEOGRAPHY & DISASTER MANAGEMENT

Time Allowed: 3 hrs.

Max. Marks: 250

Q.	Marks	Instructions to Candidate
1.		<ul style="list-style-type: none">• There are 20 questions.• All questions are compulsory• The number of marks carried by a question is indicated against it.• Answer the questions in NOT MORE THAN 200 words each. Contents of the answer is more important than its length.• Answers must be written within the space provided. <p>Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.</p>
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1. Invigilator Signature

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Name Jai kishan

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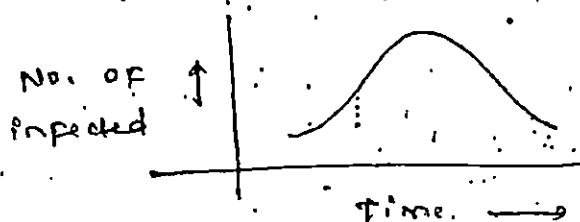
REMARKS

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Q1. What do you understand by biological disaster? While listing the workplace and occupations prone to biological hazards, discuss the preventive and control measures that are required to be taken at these places. (12.5 Marks)

Biological disasters may be categorized as man-made or natural disasters caused due to spread of infectious disease in the population. The disaster may be spread due to - virus, bacteria, fungi, parasites or even prion. These are called disasters because it spreads in the population over a shorter duration and kills people. In few cases, they are lethal and brings widespread mortality eg - The spread of Ebola virus, spread of Zika virus, swine flu.

They can also take the form of epidemics.



characteristics of Biological Disaster.

In India, it is controlled by Ministry of Health and Family Welfare.

Remarks

Briefly discuss reasons for it being highly prone

The workplaces which are affected more in India are →

- ① The Hospitals.
- ② Those places where health services are provided.
- ③ The cleaning and housekeeping.
- ④ The school, college, hostels, or firms where centralised air cooling is provided.
- ⑤ The places where veterinary services are provided.

The preventive and control measures in such cases are:-

① Awareness among people through social media.

② Personal Hygiene:-

washing your hands after coming from hospital, regular bath, using sanitizers, mask gloves

③ Personal Protection:-

It includes using surgical mask, shoe-covers, apron, reflector glasses.

Biological disasters can also turn into biological warfare where countries involve in spreading diseases to enemy country.

Remarks

Q2. Community based disaster management processes build local resilience, strengthen existing coping strategies and enhance security of lives and livelihoods. Examine.

(12.5 Marks)

Over the last few decades, disaster management has taken a significant turn. We have moved from crisis management to disaster risk management and role of local bodies and local people is given a prior focus.

This is because

(a) Disaster Response:- The local body and the local people are the first responders to any disaster. Example:- When Chennai flood occurred, the community participation was commended.

(b) Prevention and Mitigation:-

Much depends on the awareness and capability of the people to prepare for any unforeseen natural hazard.

(c) The local people also know which are the most vulnerable section and they also have traditional knowledge about the natural hazard.

Sirai Ramani
Write Example
CBDM
Local community

Remarks

In 2015, Sundar Framework realised this aspect and it envisions that local community's role in disaster management would bring down losses.

Answer

the local community's capability can be enhanced by:-

①

① Training :- Train them, how can they be first responder. In India, National Institute of Disaster Management prepares training modules.

② Mock drills :- Timely mock drills and simulations are needed.

③ Delegation of finances and functions to local bodies for disaster management.

Kerala has delegated disaster management to local bodies

The Disaster Management Act, 2005 also gives District Disaster Management Authority a nodal agency for crisis management. The role of state is vital because it is the state government which supervises the local bodies and district administration.

Remarks

Q3. There is a need to move away from disaster management to disaster risk management which requires us to pursue all developmental activity in a manner that lead to reduction of disaster risk. Discuss. (12.5 Marks)

The 2nd ARC Report on Crisis Management says that there is a need to move from crisis management to disaster risk management.

Sendai Framework, 2015 and Asian Ministerial Conference on Disaster Risk Management, too highlights on disaster risk management.

Disaster risk management refers to 3 things :-
 # ~~Prevention~~ ^{Preparedness} # Mitigation # Reduction

It is important to make a sync between pursuing our developmental activity like construction of bridges, structures etc. in a manner that lead to reduction of disaster risk.

The prime minister of India while hosting Asian Ministerial Conference on Disaster Risk Management, came up with a 10 point action program to achieve this which are →

Risk Assessment
 Risk Prevention
 Disaster Preparedness
 Disaster Response

Remarks

① Making a sync between developmental prog: and disaster management.

② Risk Mapping.

③ Empowering women in risk management.

④ Leveraging IT technology.

⑤ International cooperation and so on.

Let us look at illustration:-

If a bridge is to be constructed in an area, the construction must be done taking into the account of all natural hazards which can affect the area. This way reduce the chance of collapse of structures.
few steps.

① In Urban areas, we can make construction of new houses mandatory to follow the National Building Code.

② For effective drought management, make groundwater conservation tank mandatory.

There is no conflict between Development and Disaster. If we look for sustainable development, we are going for disaster risk reduction. Out of 17 SDG, 10 SDG have disaster reduction goals.

Remarks

Q4. Examine the cause of frequent forest fires in Indian hilly states in recent years. Also, suggest strategy to control this problem? (12.5 Marks)

The forest fires can be natural or man-made. Natural forest fires are essential in the sense they control the ecosystem balance by killing the invasive species. However, in India most of the forest fires are induced by human. It has detrimental effect on ecology. The reasons for forest fires are →

① Natural reasons:- In hot and dry areas of Telangana, Eastern ghats, thunderstorms and lightning may be one of the reasons. *Include more factors*

② Man-made reasons:-

(a) Due to negligence of tourism, often tourists organise camp fires, leaving live fires on the spot.

(b) In Maharashtra, people burn the grass meadows. This spreads the fires in forest.

(c) The timber industry is also responsible. The trees are burnt so that moisture evaporates and timber can be obtained.

Remarks

Ecologists have contended opinion about control of forest fires. Few want strict control but few say that it should be lenient.

Following recommendations:-

Parliamentary committee on forest fires suggested that in Uttarakhand, the pine trees dead leaves and pine must be removed through vacuum cleaning.

Few want replacement of pine trees of Uttarakhand with Broad-leaved trees.

Community need to be made aware about ill-effects of forest fires. They also need to be trained because they are the first respondents.

State government must delegate its responsibility to local bodies and empower them.

A national policy on forest fire is needed and the vulnerable forests must be mapped.

Forest fires are natural if it is uncontrolled it have ruining impact on biodiversity.

Remarks

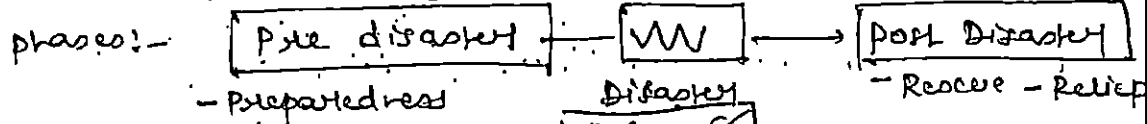
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Forest fire
Prevention

Methods of
controlling
forest fire

Q5. The advances in science and technology lend themselves to greater possibilities for more efficient disaster management worldwide. Elaborate. (12.5 Marks)

With greater advancement in science and technology, humans are somehow able to reduce the damages caused due to natural hazards. It has got its presence in all



Awareness:- The mass communication has helped in bringing awareness.

warning:- Now warning to many hazards can be given. India has developed a state of the art warning system for cyclone.

INCOIS - Indian National Centre for Oceanic Information Services provides real time warning. Now loss of lives due to cyclone has reduced to considerably low number.

science and technology also helps in designing structures which are resilient to the disasters. Example: Bureau of Indian Standards came up with National Building Code for making Earthquake Resistant Homes.

Rescue and Relief:- The use of Nano-Bots

Explain through
an example
1999 Odisha
tsunami
vs
Pakistan

Remarks

inflated numbers has helped in maximising the efficiency of search and rescue.

The list is endless. However,

science and technology has some shortcomings

Prediction and warning for few disasters like - Earthquake and volcano not possible

It has given rise to a new kind of hazards like -

Chemical Hazard.

Nuclear Hazard.

etc

The most advanced nation - Japan was hit hard by tsunami, Nuclear disaster and earthquake.

Hence, we see science and technology has some limitations as well.

Remarks

Q6. Water resource augmentation, conservation, efficient utilization will be very important determiner of India's future development. What is the status of water resource in India and discuss needs for its conservation and efficient utilization. (12.5 Marks)

Water is one of the basic needs of Human. In India, need for water is as follows:-

Agriculture > Industries > Household;

India with a population of about 16% have access to water resources which 2.4% of total water resources available as freshwater barring polar ice caps.

Problems associated in India.

- ① India's rainfall is localized for 100 days within 3 months, 75% of rainfall is witnessed in India.
- ② Excessive use of water by agricultural sector, Industries have led to downfall of ground water.
- ③ few areas are witnessing the problem of water pollution - like arsenic contamination in lower Gangaic plains.
- ④ climate change has aggravated the issue, the needs for its conservation and efficient utilization are →

Water or water resource

percentage availability - 1816cm

Remarks

(A) Water as basic need - for drinking & sanitation.

(B) Food security! - We need to conserve water, because lack of water resources would be a threat to food security.

(C) For National Integration! -

Water disputes especially among southern states have become a new normal, it imbalances the national harmony and cooperative federalism.

(D) Climate change! -

Climate change has disturbed the normal monsoon and at the same time Himalayan glaciers are affected.

There are many recommendations -

NITI Aayog Commission has recommended that a unified National Water Commission to be formed.

The National Water Policy needs to be revised.

Farmers should be encouraged to adopt dryland farming, precision irrigation in areas of low rainfall.

National Green Mission, CAMPA fund, afforestation policy would help in solving the issue.

Traditional water storage and groundwater storage.

Remarks

Q7. What factors are behind the growth and present location pattern of automobile industry in India? (12.5 Marks)

Automobile sector is one of the booming sector in India. It has been one of the sector where we have been competitive and we export.

The reasons for growth of automobile industry in India is its huge market. People's purchasing power has been rising specially the middle class. The young population and improvement in infrastructure specially road connectivity.

Other than that raw materials like steel, rubber, ~~etc~~ technical textiles are locally available.

The sector is also benefited from skilled manpower which is affordable as well.

Many foreign firms looking at greater prospects in automobile have invested in India like Hyundai, Suzuki, Ford etc.

The location pattern of automobile sector is influenced by following:

cheap labour

Remarks

Market:- The Maruti-A Suzuki's automobile plant is purely influenced by location of market.

State policies:- Tata Nano's plant was influenced by the policy of the state government. It shifted from West Bengal to Gujarat because it could get better policies there.

The recent trend in automobile industry is its location near port towns.

This is because many firms are exporting the automobile to, Sri Lanka, African nations. Hence, they are being located in the coastal areas. India's goal to port-led growth via Sagarmala and first container

port in Tamil Nadu would catalyse more firms to locate in India due to its competitive production cost.

(3)

Growth prospects of Auto industry

Remarks

Q8. Renewable energy is emerging as anchor of Indian economic development. What is the spatial distribution of renewable energy resources in India? What efforts have been made to augment these resources? (12.5 Marks)

Renewable Energy refers to those energies which are environmental friendly, and its uses are limitless like - Solar Energy, Wind Energy, Tidal Energy, Geothermal Energy.

Spatial Distribution of Renewable Energy in India are -

Solar Energy :- Since, India is lying between the tropics, it is well endowed with solar insolation. The southern states and central Indian states are using it.

Wind Energy :- It depends on velocity of wind and longness. The coastal states - Andhra Pradesh, Tamil Nadu, Gujarat and others are well endowed.

India can also use offshore wind turbines. A policy on offshore wind Energy has already been formulated.

Tidal Energy :- They are localised to areas where we find frequent tides.

Geothermal Energy :- They are found in areas where we have hot water springs, they

use maps to show spatial distribution

Remarks

are found in the Himalayan states like -
 Himachal Pradesh, North-Eastern States,

In order to augment, government has taken following steps:-

- ① India has founded International Solar Alliance for bringing international cooperation in solar energy.
- ② National Mission on Solar Energy.
- ③ ~~Fast~~ Renewable Purchase Obligation - It makes mandatory for power distribution companies to purchase few portion of renewable energy.
- ④ National Green Corridor for easy transmission.
- ⑤ Renewable Energy has been put under priority sector leading to grant cheap credit.
- ⑥ National policy on offshore wind energy.
- ⑦ Empowering states for capacity building.

Remarks

- Q9. Environmental concerns have emerged as major area of Urbanization and urban planning in India. What are the reasons behind this? What effective steps must be taken to ensure that Indian urbanization is environment friendly? (12.5 Marks)

India over the last few decades have witnessed uncontrolled urbanisation, this has led to amorphous growth of cities and hence it has led to many problems. The major reasons for environmental concerns due to Urbanization and Urban planning in India are →

- (A) Excessive Immigration to cities has led to growth of slums. The slums are unable to provide basic facilities - water, sanitation and Healthcare.
- (B) Rise of pollution related diseases - WHO came out with a report showing chronic obstructive pulmonary disease (COPD) is one of the leading killer in India.
- (C) Urban Hazards → Hazards like - House fires, Urban flooding, collapse of weak structures.
- (D) Encroachments - Many lakes, flood plain are being encroached. It has led to polluting the environment.
- (E) Excessive concretisation has led to Urban

Remarks

Explain the way these factors impact the environment

Heat Island problem.

The effective steps to Sustainable Urbanisation are

- ① Provide Employment opportunities in rural areas.
- ② Provision of Urban like Amenities in Rural areas.

Above two factors would reduce migration. The government's scheme of MGNREGS and ~~various~~ Rurban Mission are two steps.

③ The government must protect the lakes and flood plains. The role of NGP in this regard is high.

④ To reduce the use of vehicles, government must focus on -

- # Bus Rapid Transit
- # Metro lines
- # Feeder Buses

The government has initiated it in the form of AMRUT Yojana.

The highly ambitious scheme Smart City Mission must move from cluster based development to entire city based. In this regard, we can invite foreign companies.

Remarks

Q10. What do you understand by energy security? How India should develop its energy mix to assure sustainable energy access to its people? Also discuss the steps taken by government in this direction. (12.5 Marks)

Energy security means availability of energy resources at affordable rate to a country so that its growth is not hampered. India's growth forecast says that it needs energy for next few decades and it would become the largest consumer of oil and natural gases after a few decades. India's energy demands specially the crude oil is dependent on its imports. We import about 80% of our crude oil.

Major Imports - Natural Gas, (LNG), Crude oil, coke, Uranium fuel.

India should develop its energy mix in such a way to reduce its imports. This would reduce our dependence as well as save our forex. It can be done by :-

- (A) Exploring India's own resources through collaboration with private sector.
- (B) Diversify the market from where we import.
- (C) We must give priority to Renewable sector.

Remarks

Energy mix
99

(d) We can focus on blending of gasoline, promote production of jatropha, sugarcane.

(e) Focus on Bio-waste to wealth.

The steps taken by government

(a) India has diversified its market from GUPP to Venezuela, Russia to South East Asia for crude oil.

(b) ONGC Videsh is collaborating with foreign firms like - Russia and Iran.

(c) India has boosted its Nuclear Energy programme, signing ~~10~~ Civil Nuclear deals with 14 countries.

(d) India is creating Strategic oil reserves at - Vizag, Padur, Bikaner etc.

(e) India has focused on a generation of 175 GW of Energy through Renewable sources by 2022.

(f) Research and Development, Government's New Exploration Licence Policy (NELP) is one of the steps taken on this regard.

Remarks

Q11. Ganga river system has been the lifeline of northern plains, however, this lifeline is threatened by anthropogenic activities, discuss. Also suggest what should be done to make Namami Ganga a success to develop a sustainable river ecosystem? (12.5 Marks)

Ganga river passes through Uttarakhand, Uttar Pradesh, Bihar, West Bengal. The entire Ganga plain is heavily populated and depends on Ganga for water, communication, irrigation, power. However, the health of Ganga is deteriorating due to anthropogenic reasons. The chief problems are →

- (A) Creation of dams :- It hinders the natural flow of river. Tehri dam has affected the flow.
- (B) Climate change :- The Gangotri glacier has been receding backwards due to Global warming. It threatens the very life of Ganga.
- (C) Water pollution :- It is due to various reasons - (a) Industries throwing their effluents (b) Untreated sewage (c) Due to burning and throwing of corpses
- (D) Encroachment of flood plains
- (E) Siltation of rivers due to creation of

Remarks

barriage like - Paritappa Barriage.

Narmami Ganga is an ambitious project which aims -

- # Revival Shala ✓
- # Nirmai Shala ✓

The following steps can be taken -

- (a) create community awareness and make villages on banks of Ganga open defecation free.
- (b) Sewages discharged to Ganga must be treated.
- (c) Narmami Ganga aims to creating Ganga Task force to look after the health of Ganges.
- (d) Industries located on banks of Ganga must treat their discharges.
- (e) We need a National policy on Despollution.

Madhav Chitale Committee has made recommendation on this regard.

Recently, the ~~the~~ Maharashtra High Court gave living status to Ganga and Yamuna so that its health can be preserved.

Remarks

Suggest measures to make Narmami Ganga a success.

Analysis of unsustainable use of ground water in detail required

Q12. India is the largest user of groundwater resources, which is unsustainable with visible signs emerging. Elaborate. How should India manage its groundwater resources with sustainable use? (12.5 Marks)

The major users of groundwater in India are →

- ① Agriculture
- ② Industries
- ③ Households

Water on ground water

One of the ill effects of Green Revolution was that - farmers started to use groundwater indiscriminately for irrigation purposes. The cheap credit for water pumps, subsidised electricity aggravated this problem. This has led to declining ground water resources. In areas such as - Telangana, few districts of Karnataka (Bardol), Maharashtra etc. it has become a major problem.

In order to manage groundwater, it should be a holistic approach:-

① Encouraging the people to use traditional ground water storage structures like - baolis. Even, by laws can be made to make it mandatory.

② We should follow the recommendations of Mishra Shah Commission which wants a National Water Commission in place of two bodies

Remarks

which look after surface water and ground water.

The farmers must be encouraged for precision farming - drip irrigation & sprinkler system. They must also be asked to grow only dryland crops in dryland areas.

5 # India can collaborate with Israel to get water conservation technology and state of the art - dryland farming methods.

The National water policy needs to be revisited and some deliberation must begin on charging a nominal fee for water usage.

The water reservoirs must be desilted to increase its water usage storage.

National Green Mission, Afforestation, Integrated Water shed Management are few steps taken by government to reduce the impact of ~~monsoon~~ climate change on monsoon.

Remarks

Elaborate in context of
 • Seaway being cheapest mode of transport
 • Gateway to international trade

GS SCORE

UPSC MAINS TEST SERIES 2017

Q13. 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.

(12.5 Marks)

Ports are the center of economic activities. This is because →

- (A) they are the hubs of trade.
- (B) the logistics and transport give huge employment opportunities.

India has 12 major ports on its eastern and western coast and many more minor ports. In order to boost our trade, create new job opportunities, the government unveiled Sagarmala Project.

Sagarmala Project is focused on

- (A) port led growth - By improving the export competitiveness.

- (B) connecting hinterland areas to the major and minor ports. This would include Road, Rail and pipe connectivity.

- (C) to increase the exports

- (D) It also aims at creation of clustered manufacturing hubs on the

coastal areas so that the goods

Remarks

Precisely mention the features of Sagarmala project also.

Analysis of significance of Sagarmala project

so produced can be exported.

② The Sagarmala aims at providing job opportunities in logistics as well as creation of the infrastructure.

Government apart from above has taken following steps:

- ① Tariff authority of major ports
- ② Focus on Blue Economy and Blue Bond
- ③ The government has ratified Trade Facilitation Agreement on Goods which would increase efficiency of ports.
- ④ Use of Radio Frequency Technology, RESGATE and good connectivity as well to enhance the efficiency of ports.
- ⑤ The deep water container port is being developed in India for the first time.

Remarks

Q14. Sustainability of India's forest cover lies in adoption of social forestry, examine. Also discuss what factors are hampering the growth of social forestry in India?

(12.5 Marks)

India's national forest policy aims at reserving one-third of its areas as forest. However, we have only 23% of area as marked as forest. This too has skewed distribution as Indo-Gangetic plain, Lakshadweep has very little forest cover.

In order to ensure a good forest cover - a middle path between development and conservation needs to be taken. This can be done by promoting social forestry. Social forestry & management of forestry through community participation. India was one of the first nation which came up with a policy of social forestry.

Benefits of social forestry:

- ① People will get wood as fuel specially women.
- ② It would act as a cushion in case of drought.
- ③ Community participation will ensure sustainability.
- ④ Community will get - fruits, shade etc.

Remarks

Define social forestry

The factors which are hampering social forestry are →

- (a) Forestry is a state subject. Cooperation from state is needed.
- (b) Social forestry and the various laws Wildlife Conservation Act, National Biodiversity Act are in conflict with each other.
- (c) It also needs huge finances for community participation, their training and management of resources.
- (d) The private industries which have good influence on forest resources are acting as an impediment.

4
more
diversity

Remarks

Q15. Discuss the origin, movement and characteristic of air masses and explain how air masses influence the world climate? (12.5 Marks)

Air masses are the atmospheric conditions spread over thousand or ~~km~~ kilometers and have distinct characteristics:-

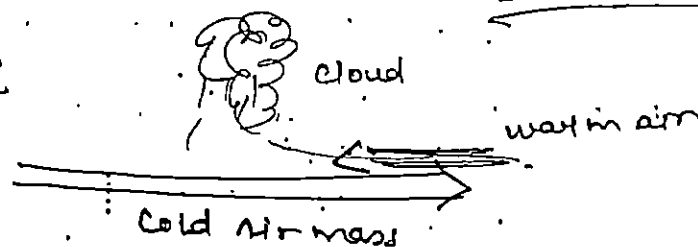
(a) Temperature

(b) Humidity.

For example - Tropical marine air mass is characterised by hot and humid whereas tropical continental air mass is characterised by hot and dryness.

The air masses get their distinct characters based on insolation and presence of water-bodies. These air masses are relatively stationary but in higher latitudes their movement is responsible for - temperate

Cyclones.

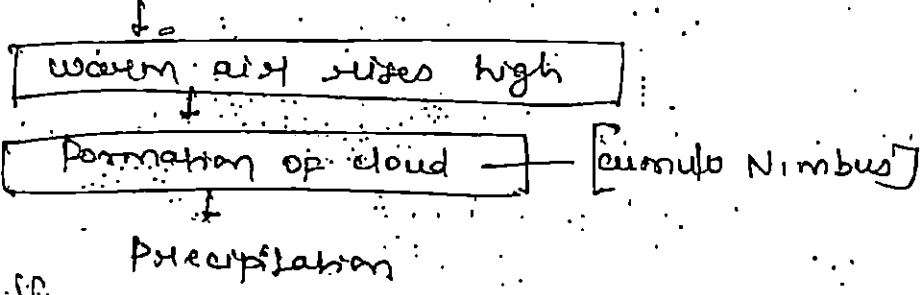


In above diagram, the cold air mass is active and it cut off the

Remarks

3

warm air mass from ground,



Frontogenesis

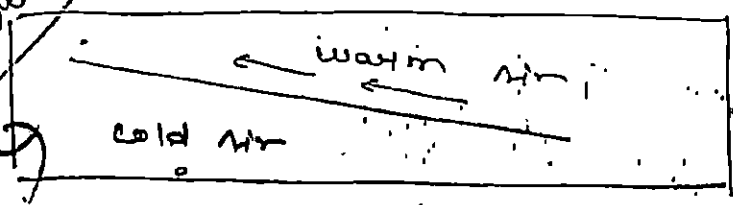


Diagram 2

Here, cold air is stationary, the warm air is rising slowly

It leads to formation of stratus cloud

- It leads to rainfall

See model answers

The weather pattern of upper latitude is affected much by air mass movement

Remarks

Q16. Explain the geographical factors responsible for the growth of mangrove vegetation in India and discuss its role in coastal ecology. (12.5 Marks)

The mangroves are mainly found in the deltaic regions. The mangrove vegetation chiefly requires

- # Deltaic region
- # submerged region
- # Salty region.

What are mangroves?

In India, mangrove vegetation are found in

- ① Sunderbans - West Bengal
- ② Komga Wildlife Sanctuary - Andhra Pradesh
- ③ Koru Deltaic Region
- ④ On western coast - we have its presence in Patnagiri, Pali Kutchh regions.

Mangroves have unique biodiversity as the plants of mangroves develop →

- # Viviparity :- the saplings grow on the mother plant itself before detachment
- # Pneumatophores :- Localised adaptation of root to submergence.

The role of mangroves in coastal ecology are →

- ① Mangroves ~~are~~ have diverse biodiversity

Remarks

Geographical factors responsible for growth and development of mangroves

because it provides calm refuge to many sea animals.

② Sunderban Mangrove hosts Bengal Tigers.

③ Mangroves are also known for nesting ground of birds like - Bonga Wildlife Sanctuary.

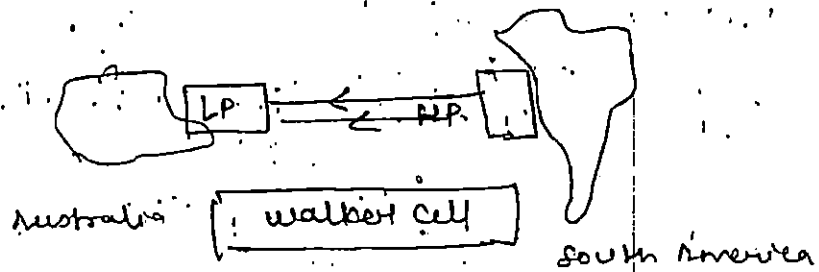
④ As it is an example of ecotone, its biodiversity is usually greater.

⑤ It acts as a shield against tsunami and tides.

⑥ Mangroves also help in delta formation by reducing the speed of rivers.

Remarks

Q17. Describe, how EL-Nino affects the Indian Monsoon? Also, analyze its economic impact on India and world? (12.5 Marks)



EL-Nino is a weather event where warm tropical water replaces the cold currents on the western coast of Peru. This has many teleconnections →

- (a) It reduces the high pressure region of Peru and weakens the Walker cell.
- (b) It has been found that weakening of Walker cell reduces the Indian Monsoon prospects.

(c) During El-Nino years, Indian Monsoon is suppressed and India witness below normal monsoon. India also sees late onset of Monsoon.

Remarks

Impact of El-Nino on Indian Economy

El-Nino leads to below normal rainfall

↓

Agriculture sector is affected much

↓

the rural consumption expenditure decreases, the sectors like - Real Moving Goods, Motorbikes, ~~Concrete~~ cement etc witness sluggish demand,

Teleconnection of El-Nino on world,

- ① In Indonesia faces severe drought,
- ② The California State of the United States face flooding - due to heavy rainfall.
- ③ famine like situation in Africa as well
- ④ Most importantly, due to El Nino, upwelling of Peru current decreases. This lead to decrease in nutrients available to fishes and reduced fishery output in Peru.

Remarks

Q18. With increasing population pressure on pastoral and agricultural economy, the importance of marine resources is certain to increase. In this context explain, how India has utilized its marine resources? (12.5 Marks)

Marine resources include - fishes, ~~the~~ both for food and ornament, ~~the~~ sea grasses and coral polyps which are used minerals for medicines and decoration and jewellery.

India has become the second largest producer of marine fishery after ~~the~~ China. Over the years, India has utilized its marine resources well.

India this year has come up with National Marine Fishery Policy which seeks

• government's assistance in boosting marine sector.

• Traditional rights given to local fishermen in territorial waters would continue

• The government would invite private companies for fishing in Economic Exclusive Zone, the recommendations of Meerakumari Committee would be taken care of.

• The state ~~to~~ shall give technological assistance to fishermen - G.P.S enabled boats, use of

Remarks

Geo-Information System.

The idea of assistance would be sustainable use of marine resources.

India has ~~also~~ also focused on Blue Revolution where focus would be on steering

India's marine sector.

apart from fishery, other marine resources like -

Exploration in Kaveri-Godavari Basin for oil and natural gas.

India's claim of rights for exploring poly metallic Magnesium nodules in Indian

Ocean from International Seabed Authority,

ongoing research and development programmes

for use of sea-grasses for bio-medicine.

Remarks

Q19. While alluvial plains are rich for agriculture, the plateau regions are great for mining and resource exploration. Elaborate with suitable examples. (12.5 Marks)

India's alluvial plains include - Ganga plain, Punjab plains, Brahmaputra plain, and coastal plains. These areas are food baskets of India.

The Northern plains - They are producers of wheat, Paddy, sugarcane, cotton (Punjab), legumes like - gram.

The coastal regions like - Kaveri delta is known for sugarcane and paddy cultivation.

Gujarat plains - are pioneer in production of spices, groundnut and cotton.

Alluvial plains are characterised by - fertile land, good availability of water resource, densely populated region.

However, alluvial soils are poor in Nitrogen content. Hence, these regions also see the excessive use of ammonia fertilisers.

The plateau regions of India are

Remarks

known for minerals.

(a) The ~~the~~ Mahanadi and Son, Damodar Valleys are rich in coal.

(b) Shastri region of Karnataka rich in coal.

(c) The ~~the~~ Deccan plateau is also rich in Bauxite and Aluminium.

(d) Chotanagpur plateau -

The most ~~the~~ rich region. Here, we have - coal, Iron ores, Mica, Copper ores, Jaduguda Mines - largest for Uranium.

(e) ~~the~~ Orissa :- Mica, Iron ores, Coals,

the regions of North-East have presence of coal, marine origin fuel like petroleum in Assam (Digboi). The Karbi-Anglong plateau is rich in tertiary coal.

India is fortunate to have

- (a) Alluvial areas for - agriculture
- (b) Mineral rich plateaus.

Remarks

Q20. Discuss the problems of agro-based industries in India. Do you think agro-based industry could be a better option to absorb shift of labour force from agriculture. What steps has government taken to promote agro-based industries in India? (12.5 Marks)

Agro-based industries have the potential to absorb labours from farming sector but unfortunately, there are certain problems -

- ① Indifference of the government for past ~~few~~ ^{decades}
- ② the obsolete Agriculture produce marketing ~~steps~~
- ③ the lack of cheap credit.
- ④ lack of forward and backward linkages
- ⑤ Since, M&MFI are not well evolved in India, only agro based industries suffer from the same problem.

Agro based industries can be a game-changer. The industries like food processing, packaging, could not only give jobs but it would also improve our exports.

The government has taken following steps :-

- ① In 11th five year plan - the government issued guidelines for food processing industry
- ② In 12th five year plan, we talked about formation of Mega food parks and the

Remarks

cold chains.

Recently, the government in collaboration with NITI Aayog came with many schemes

(a) Model APMC Act where perishable

goods would be ^{de}motivated

(b) Pradhan Mantri Rashikarn Vigyan Yojana

(c) SAMPAD scheme for enhanced food processing

(d) MUDRA Yojana to grant cheap credit to MSMEs.

(e) 100% FDI allowed in food processing.

(f) Make in India, Skill India and India's Export Policy to enhance ~~food~~ agro based industries.

Agro based
industry - Fertilizer, sugar
paper, processed food

Remarks