

88

GEOGRAPHY

Time Allowed: 3 hr.

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/part 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 in 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 Digvijay Bodke

Roll No. _____

Mobile No. _____

Date 3/11/2015

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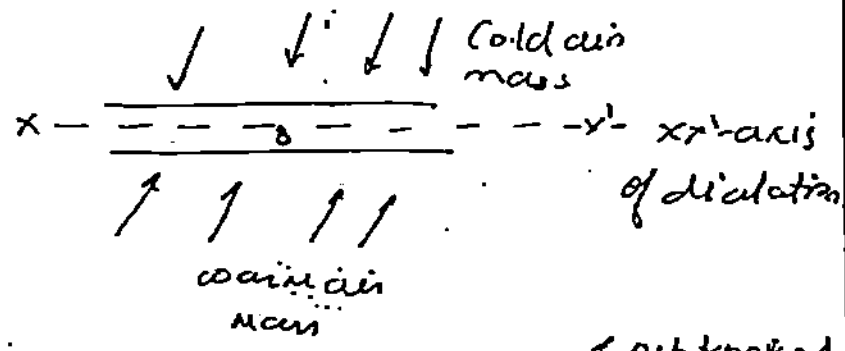
Remarks

4.5

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Q1. Extra-tropical Cyclones are a year round phenomenon appearing whenever the conditions suit the formation and growth of such systems. What are major reasons for the more frequent occurrence of extra-tropical Cyclones in the winter season? (12.5 Marks)

Extra tropical cyclones, also known as Temperate cyclones occur when two air masses having contrasting thermal properties converge.



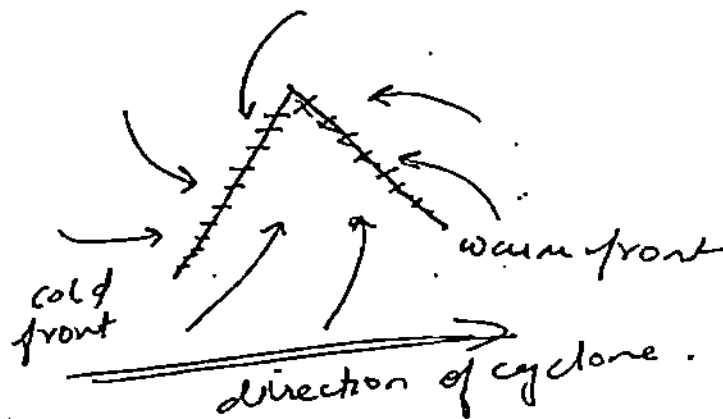
They occur near temperate latitudes of 35-60 in both hemispheres mostly at the point where warm westerlies & cold polar easterlies meet.

30:60

They although occurring throughout the year, are more frequent during winters because:

- The thermal contrast between the air masses is more during winters since the cold polar easterlies meet warmer oceanic air masses.

- They are mostly formed over sea surfaces, although can be formed on land. In winter, the sea surface temperatures are relatively more than cold polar air temperatures, creating ^{greater} thermal contrast needed.
- In winter, the strong polar easterlies invade the warm air territory more effectively, hence the front developed, develops kinks.



- In winter, the subtropical jet stream is stronger which drives the extra-tropical cyclone.

Hence extra-tropical cyclones occur more during winters, although they can occur in summers too at lower latitudes if suitable conditions exist.

(W)

Q2. Elucidate the statement - "In a sustainable energy security system, various modes complement each other". (125 Marks)

Sustainable energy security system primarily involves heavy use of renewable energy sources like solar, wind, tidal, biomass energy. Apart from it, it involves change in daily economic practices such as lower use of fossil fuel based cars, sustainable practices in agriculture.

In such a system various modes complement each other as can be seen from following examples:

eg: ① Solar energy can be installed at household level, hence distribution costs & losses can be eliminated. This not only cleaner energy is being produced, but it is also being used more efficiently.

eg: ② Coastal areas which do not have huge potential for biomass energy or solar energy have potential for tidal & wind energy. This energy modes are seen to complement each other.

for the definition of sustainable energy system refer here

eg. ③ Such complementarities are seen in snow bound mountains where geothermal energy can be used to make up for low/no potential for tidal/solar energy.

eg. ④ Efficient & sustainable agricultural practices like ^{more} use of organic fertilisers & low use of chemical ones, automatically generates demand for biomass energy since biogas production produces slurry as a good fertiliser. Hence sustainable practices & clean energy complement each other.

eg. ⑤ Incentives given to cleaner energy sources could automatically lead to research in such initiatives so that they become more affordable to ~~peo~~ Thus human economic behaviour & sustainable energy sources complement each other.

4.5

Q3. Discuss the important characteristic features of Mixed Farming. Why Mixed Farming is found mainly in the highly developed parts of the world? (12.5 Marks)

Mixed farming refers to a ~~farm~~ system in which cropping is carried along with allied activities like ~~animal husbandary~~, horticulture etc.

Following are its important characteristics:

- Source of income is diversified & not reliant on cropping alone.
- The various components i.e. cropping, horticulture etc are designed in such a way that they complement each other.
- Animal domestication & ^{their} commercial use goes hand in hand.
- Modern equipments are employed so that such activities can be looked after by less number of people.
- Mixed farming is based on research & development by farm labs & electric extension services.

Mixed farming is found in highly developed parts of the world because:

- The capital required for it huge + developing countries, being poor cannot afford such sum on a large scale.
- The food security needs of developing countries mean that subsistence agriculture dominates leaving less opportunity for mixed farming.
- Modern technologies + research + development needed to effectively carry out mixed farming is more available in developed world.
- The per capita land availability is very less in developing nation which is huge in developed world due to lower population pressure on land. Mixed farming requires large land availability.
- Mixed farming as a concept hasn't really reached in developing parts + people's apprehensions about it still remains, confining it to developed areas.

4.5

Q4. Explain how ocean currents help in establishing global heat balance. Also explain the relationship between ocean currents and habitability of the coastal areas. (12.5 Marks)

Ocean currents help in establishing global heat balance because equatorial warm waters are transferred towards the poles & polar cold waters are transferred towards the equator by ocean currents:

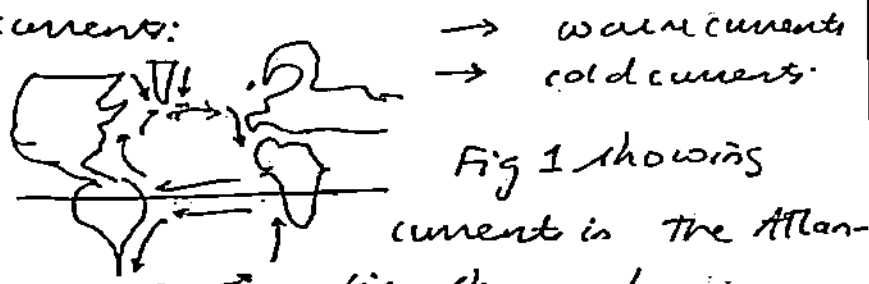


Fig 1: water move polewards eg: Gulf stream moves north, whereas cold Labrador current moves south

Thus ocean currents help in establishing global heat balance between by transferring heat from lower & higher latitudes except in North Indian Ocean which is landlocked from north.

Ocean currents also greatly influence coastal climate thus determine the habitability of coastal areas as can be seen from following examples:

• The West European coasts are kept warm by the warm North Atlantic Drift during winter, leading to a favourable climate. ~~popularity known as West European climate~~ & the region is highly populated.

• The cold Peruvian ^(Benguela) currents have a desiccating effect on ~~the~~ Western coasts of South America & Africa respectively, hence turning these areas into dry deserts. Naturally the population density is low in Atacama & Namib desert.

• The cold Labrador & warm Gulf stream currents meet at the Canadian coast at Newfoundland, making it a fishing zone. Naturally the population of these areas would increase due to economic activities.

4.5

Q5. Forest fires pose a threat not only to the forest wealth but also to the entire regime of fauna and flora seriously disturbing the bio-diversity.
Explain the man-made reasons for forest fires and ways for controlling it.

(12.5 Marks)

Forest fires disturb the bio-diversity because they ~~cause~~^{destroy} several vegetation species which are critical links in an ecosystem & many fauna derive their sustenance from them. Thus when a primary producer gets destroyed, the food web gets adversely affected & causes damage to ecosystem.

Following are some of the man-made causes of forest fires:

• Shifting cultivation:

Since patches of forest are burnt down for agricultural land, these man-induced fires sometimes go out of control & cause huge losses.

• Cigarette butts:

~~the~~ Burning cigarette & bidis are carelessly thrown away which provides a source for fires.

• Electricity & telephone cables:

Such cables passing through forest can cause fires due to inherent current flowing through them which provides ignition.

also certain
unsubstantiated
practices of
collecting forest
products
etc.

• Accidental causes:

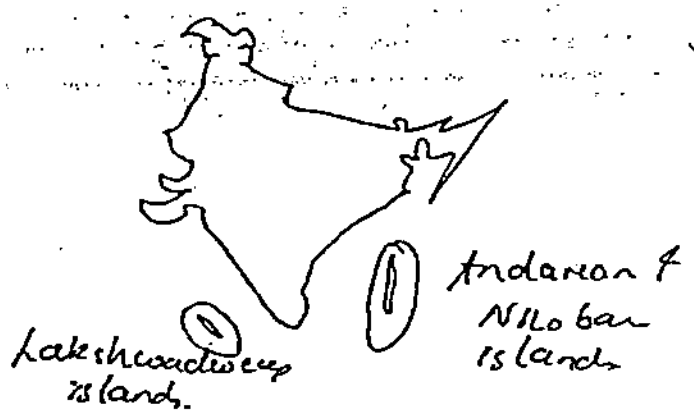
Firewood is a source of fuel ^{among} tribal communities. Such small fires can accidentally cause huge fires.

Following can be done to control it:

- The forest areas should be mapped through satellites, so that a real time picture is available.
- The locals should be sensitised about the protocols & procedures to be followed & awareness about reporting such fires should be increased so that it can be nipped in the bud.
- Fire prone areas can be identified to suitable extinguishing material (CO₂, water etc.) should be made available nearby.
- Building non-heat conducting bunds at regular intervals in forests so that fires remain confined to a specific area.

Ce-5

Q6. Discuss the economic and strategic significance of Indian islands. (12.5 Marks)



The Andaman & Nicobar Lakshadweep islands have following economic significance:

- They provide a vast exclusive economic zone (EEZ) to India in Indian ocean waters as per United Nations Convention on Law of the Sea (UNCLOS). Thus giving us ample sea marine resources.

- Andaman & Nicobar islands are densely forested giving India a huge forest resource.

- Lakshadweep islands are coral islands having scenic beauty. They attract tourists hence tourism industry gets a boost.

- these islands are a source of radioactive minerals. eg: Beach sands in Lakshadweep have thorium reserves.

Development of fishing

Following is their strategic significance

- Their unique location in the Indian ocean helps India keep a watch over activities in the seas nearby, ensuring maritime security
- These islands are suitable for Indian military bases, hence ensuring ^{that} Indian ocean remains under Indian sphere of influence.
- These islands help in easy contact with other Indian ocean littorals like Maldives, Seychells etc, thereby crucial in emergency situations. eg: Recent water crisis in Maldives was well handled by India.
- These islands expand the outermost range of India's inter-continental ballistic missiles by being ^{at} considerable distance from mainland.

Hence we must develop our island territories suitably through programmes like Island Area Development programme.

3

Q7. Minerals formed in geosynclines are the drivers of the global economy.
Elucidate. (12.5 Marks)

Minerals ^{are} formed in the geosynclines mainly during mountain building processes & during formation of ~~rift valleys~~. These minerals include essential drivers of global economy like coal which is formed due to subduction of tropical hardwood trees in ~~in~~ rift valleys.

eg: Gondwana coal found in India is found ^{near Mahanadi} in Damodar, Ranch, Wardha, rift valleys:

~ (rivers flow in through rift valleys)

•• - coal producing areas.



This is also seen in Europe.

The geosyncline formed during Alpine orogeny led to minerals formation in Germany, France.

eg: Lorraine.

Moreover, geosynclines in North America are sources of minerals. eg: geosynclines formed

during orogenesis of Rockies have led to formation of minerals like copper, zinc, mineral oil in U.S. states such as Kansas, Texas, Nevada, ~~And~~ Oregon, Washington, Arkansas, etc. The copper belt runs parallel to Rockies suggesting geosynclinal origin.

Moreover marine geosynclines are rich sources of hydrocarbon resources. e.g. South China Sea has rich oil & gas resources since it has geosynclines formed due to Pacific plate subduction under the Eurasian plate.

The geosynclines found in South America during origin of Andes as Pacific Plate & South American plate converged led to mineral formation like copper, zinc in Peru, Columbia, oil in Venezuela, iron ore in Carajas, Brazil.

Hence minerals formed in geosynclines are essential for modern economics & hence drive global refunctioning.

Good

Q.5

Q8. Pulse cultivation in India has witnessed a shift from northern and eastern states to southern and central states. Give reasons for this and also suggest ways to increase pulse production in India in the light of increasing pulse prices. (12.5 Marks)

Pulses initially sown in northern & eastern parts of India have shifted due south because:

- Advent of Green Revolution meant northern areas started sowing more overcrowding crops like rice, wheat, sugarcane
- Availability of water meant that the water intensive crops were grown. Whereas low water consuming pulses were perfectly suited for drought prone peninsular India.
- Pulses can be grown on relatively less fertile soil, hence southern areas seemed more suitable since precious fertile land of the north was used for other grain crops to fulfil food security needs.
- The MSP for pulses hasn't grown in relation to other crops. Hence northern areas have discarded it. Southern areas close to seaports see the export potential of pulses.

Following can be done to improve pulse production:

- Increase MSP of pulses & decrease gap in MSP between them & rice, wheat so that farmers are incentivised to grow pulses.
- Increase expenditure on KTD & extension services so that productivity of pulses which is very low presently improves.
- Open up pulse export freely, so that farmers can fetch good prices & hence invest more in pulses.
- Provide direct cash transfer subsidy for critical inputs to poor farmers, especially in dryland areas.
- Pulses should be better managed. eg: stop hoarding & cartelling, effective storage infrastructure so that ~~are~~ available produce can be used & prices can be ascertained.

45

Q9. The discovery of the mid-oceanic ridges opened doors to not only plate motion but the age of the ocean floor and other geological phenomenon.
Elaborate. (12.5 Marks)

The discovery of mid-oceanic ridges had following significance:

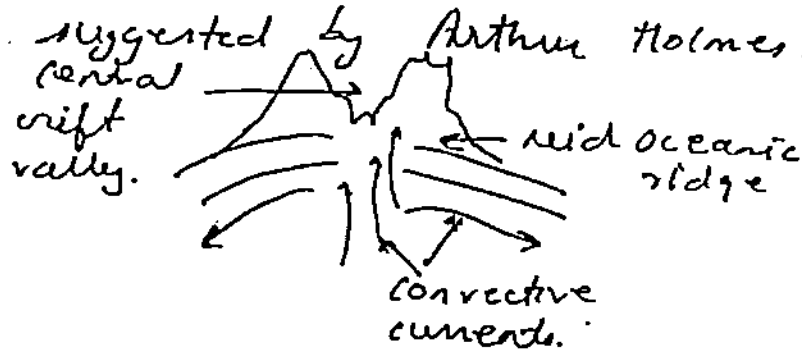
- It provided a firm basis for plate tectonics theory since Wegener's continental drift theory did not scientifically explain these ridges.

- But apart from it, it opened door to the age of the ocean floor because it was found that the ocean floor closest to the ridge was youngest & its age increased as one moved away from the mid oceanic ridge.

- Moreover it was found that the age of Atlantic sea floor was no more than Tertiary at any place.

- The mid oceanic ridge discovery also threw light on formation of central rift valley formation which clearly showed cracks on the surface suggesting great tensional forces are at work.

- The above inference provided evidence for convictional currents underneath the crust as suggested by Arthur Holmes.



- Mid oceanic ridges discoveries also led to development of explanation for paleomagnetism anomalies seen on ocean floor rocks. Thus it completed the jigsaw puzzle as to why there were alternate bands of rocks on ocean floor having opposite magnetic orientation.
- Mid oceanic ridges thus along with explaining sea floor spreading through plate tectonics explained other geological & magnetic phenomena.

4

Q10. Do you agree that a coordinated system of transport plays an important role in the sustained economic growth of a country? Substantiate with examples. (12.5 Marks)

Co-ordinated system of transport certainly does play an important role in the sustained economic growth of a country because:

- A good transport system ensures easy mobility of the population which is essential so that they can better contribute to the economic activities. eg: Cities can be planned to develop commercial spaces in the centre & residential areas on the outskirts so a good transportation would ensure low travel times, meaning more productive hours & hence more growth.

- Co-ordinated system of transport increases the efficiency of goods & services produced in the country. eg: If railways & roadways complement each other, then country's logistics becomes efficient. This was not seen in coal producing areas, hence coal was imported in India despite having domestic production.

eg ③ Coordinated road & rail network also means appropriate means of transport independent upon weight & distance. Non-coordinated approach means less choices available which lessens efficiency. Efficiency is a key determinant of sustained economic growth.

eg ④ If railways adequately complement port infrastructure, exports increase & cost of imports decrease. Thereby positively impacting economic growth. Recent Sagarmala project is a step in this direction.

eg ⑤ Coordinated transport system also leads to sustained economic growth because of backward & forward linkages these sectors have on other sectors of the economy. For instance, railways have a multiplier effect of 5.

Hence, we must develop our infrastructure capacities through public spending & providing incentives to private sector. eg: tax free bonds etc.

Q11. Establish the relation between water resources of India with social issues related to it that need to be addressed. (12.5 Marks)

Water resources, especially in rural areas like wells, canals, tubewells are connected with social issues.

The control over such resources is determined by the caste system wherein the higher castes control them whereas lower castes are dependent for water on the mercy of higher castes.

Apart from the caste issue, the distribution of public water resources too is uneven in rural India because of factors like illiteracy, absolute poverty & historic disadvantages.

The above factors are further accentuated by the fact that India is a monsoon dependent country & sources like groundwater form a bulk of water availability, especially in dryland areas which are spread across northwestern parts & peninsular interiors.

This leads to conflicts & social tension. This particular issue of conflicts over water has been accentuated in recent years because the lower castes & underprivileged have become more aware about their rights. Given the positive reinforcement & welfare policies adopted by various governments towards them since independence.

Another issue is inter-state river water disputes. eg. Cauvery, Mullaperiyar disputes. Such issues have remained largely difficult to resolve given various sensitivities for domestic constituencies.

Thus, it becomes important to follow water management to reduce social issues through techniques like rainwater harvesting, basin management, watershed management etc.

5

Q12. Explain the variety and value of tourist resources of India. (125 Marks)

India being a mega diverse nation has ample tourist resources spread across various sectors. Following is the variety & the value of such tourist resources:

• Religious tourist resource:

India is the place of origin of 4 major religions. Hence religious tourism has ample scope. eg: Sikh religious place in Nanded, Buddhist places in Gaya & other parts of Bihar, Hindu tourist places in Uttarakhand.

Their value is really high because they've been exploited by the economy & it supports allied economic activities. eg: flower shops.

• Medical tourist resource:

India's status as a destination for affordable medical services has earned this resource.

Its value is on the rise, with huge potential provided adequate infrastructure is made available.

• Nature tourism resource:

Himalayas in the north, about 7516 km of coastline, ample rivers, deserts, national parks & sanctuaries

mean plenty of nature tourism in India. Its value is particularly high since it attracts foreign tourists on a large scale.

• Adventure sports tourism: resource

This is in a recent stage of development & this resource hasn't been fully exploited. Yet states like Kerala, Uttarakhand have taken a lead in this aspect. eg: Paragliding, bungee jumping, trekking etc.

• Archaeological tourist resource:

Given India's rich history with various cultures intermingling, historic monuments have been constructed all along. eg: Qutub Minar, ~~the~~ Taj Mahal, Victoria Terminus etc. Its value is high given they are state sponsored.

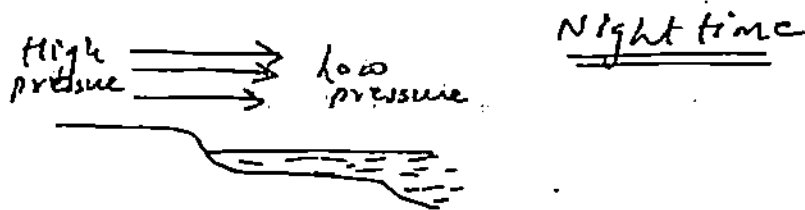
India thus needs to exploit its tourist resource by creating conducive conditions like easier visa, tourist safety, infrastructure construction to drive economic growth.

45

Q13. What do you understand by land breezes and sea breezes? Discuss how these breezes modify the urban coastal environment?

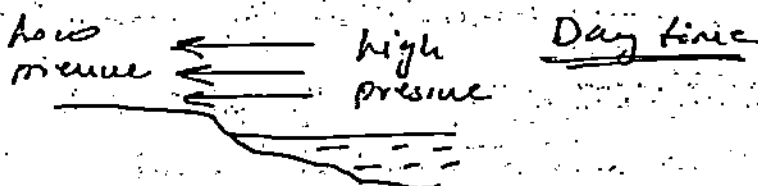
(12.5 Marks)

Land Breeze refers to the daily local wind in coastal areas flowing from land towards the sea.



land breeze flows because at night the land radiates out heat more quickly than water hence cools quickly. As a result land develops slightly higher pressure than adjacent water (sea) winds flow towards the sea.

Sea breeze is just the reverse, wherein winds flow towards the land from sea during daytime.



During daytime, the land gets heated at a faster pace than sea, hence rising hot air develops a low pressure on land whereas winds start blowing in from relatively higher pressure sea surface.

monsoon flow
it is a
slightly local
phenomenon
with local winds
50 km of
coast line

These local winds modify the urban coastal environment in following way:

• Sea breeze:

Since these winds are onshore, they bring in moisture & hence increase the relative humidity. Hence there are chances of light precipitation.

Moreover these breezes increase particulate matter content because they carry with them sea salt particles.

These winds bring respite from hot temperatures during summers.

• Land breeze:

Since these winds are offshore, they reduce the moisture content, reducing relative humidity & increasing dryness.

These chances of precipitation reduce. Moreover the particulate matter content reduces, partly purifying the air.

The impact of urban heat island magnifies the phenomenon

(1)

Q14. The success of Soil Health Card scheme depends on rationalisation of fertilizer subsidies. Discuss. (12.5 Marks)

Soil health card scheme brought about to improve soil health across various agro climatic regions by reporting of soil samples & suggestions of fertilizers to be used & crops to be grown to optimally utilise soil resource.

However the success of this scheme depends upon rationalisation of fertilizer subsidy because:

- In India, the prices of urea are much below other N:P:K fertilizers like ~~Potassium~~ Di-Phosphate, Muriate of Potash, because the subsidy for the latter fertilizers is nutrient based, ~~there~~ but not for urea.
- Moreover, prices of urea haven't been increased much since 2002 creating huge gap. Hence urea is indiscriminately used skewing up the N:P:K ratio. eg: NPK of 42:20:1 is seen in Punjab whereas ideal is 1:2:1

As a result, the ~~pr~~ rationalisation exercise should give equal incentives to urea & other fertilisers so that the ultimate choice of the fertilizer to be used by farmer depends upon actual needs of the soil & crop not upon the price differential.

Moreover this soil health card's scheme's success depends upon proper soil sample collection, testing & making farmer aware of the results in a timely manner.

The rationalisation can be done by increasing urea price gradually ~~since it is a politically sensitive move.~~ As MSPs can be ~~less~~ proportionately increased keeping in mind food inflation. Moreover direct cash transfers should be introduced to ~~check~~ better target subsidy & prevent misuse on a large scale which disturbs soil health.

45

Q15. India's long coastline has potential for major contribution in development of the country. Elaborate. (12.5 Marks)

India has a coastline of about 7516 km & it has potential for major contribution in development of country because:

• Food resource: & employment

Fishing as an economic activity not only provides meaningful employment to people in coastal areas, but also is a good source of proteins & fatty vitamins. The fact that recent food inflation (2011-13) was driven by demand for protein foods justifies exploitation of this resource.

• Trade

Coastlines, especially the submerged western one is a natural site for harbours & ports. As a result they can facilitate import of essentials & we can maximise our exports earning foreign exchange. Moreover increased trade also raises per capita incomes within the economy. eg: Trade to S.E Asia, Europe

• Industrial development:

Being nearer to ports, industries

develop near coastal areas to facilitate easy supply of raw materials. These industries are drivers of economic growth because of their backward & forward linkages & employment generation.

• Strategic Importance:

Especially from island territories of Andaman & Lakshadweep islands helps us keep an influence over north Indian ocean, indirectly beneficial for country's development.

Hence we must make sight efforts to develop our coastlines by investing in infrastructure eg: Sagarmala project. Also capacities of local population should be increased by providing better fishing equipment at lower rates, industries should be incentivised by easing the business process to fully exploit our coastal resources.

4.5

Q16. Unscientific exploitation of resources is more hazardous than over-exploitation of resources. Critically analyse. (12.5 Marks)

Over exploitation of resources is hazardous in the sense that it is not sustainable, disturbs intergenerational parity, & endangers the environment.

However unscientific exploitation of resources is more hazardous than over-exploitation in following sense:

- It reduces the efficiency of exploitation. Thus depletes the resource at a faster rate.
- It harms environment in more ways than one because of insensitivity for impacts of exploitation. eg: mining disrupts underground habitats of animals.
- It harms the local communities adversely. eg: health impacts of unscientific coal mining
- ② Displacement of mining areas are not planned adequately.
- Unscientific mining also impacts far away areas. eg: polluting a river affects far away places on the downstream.

However to say that unscientific exploitation is totally more hazardous than over exploitation is not correct because over exploitation too has its vices as mentioned earlier. Moreover it has the potential to create social conflicts & tensions because the resource bearing lands are owned by tribal people eg: Tribal areas of Jharkhand, Odisha, Chhatisgarh are rich in natural resources. This factor is accentuated by the fact that there exists a severe asymmetry of power between locals & miners.

Hence both over exploitation & unscientific exploitation are hazardous, none more than other & should be avoided to achieve sustainable growth.

Q.5

Q17. Unlike other natural disasters, human beings play an important role in the genesis as well as spreading of floods. In the light of above statement, bring out the major differences in nature of floods occurring in the western and eastern part of the country. (12.5 Marks)

The floods in the eastern part of the country (Bihar, Assam) are a result of mighty Himalayan rivers which overflow during the monsoon. These rivers frequently change their course because of sediment deposition & hence floods ensue. The human factor here is that adequate precautions have not been taken to effectively manage the flood water despite it being a yearly phenomenon. Moreover human settlements near river banks accentuate the damage done by floods.
eg: Brahmaputra overflowing in monsoon months.

However the floods in western part of the nation (Uttarakhand, Jammu & Kashmir, Mumbai (coastal Maharashtra & parts of Rajasthan) are more due to human factors than natural factors in the sense

That they are a result of unplanned urbanisation & flowing environmental norms. eg: ① Recent Jammu floods were a result of increased siltation of Jhelum due to illegal sand mining. ② Moreover the floods in Uttarakhand in 2013 were more due to unplanned construction of hydroelectricity projects on sensitive mountain slopes.

③ Mumbai floods were due to poor city infrastructure & exposed the municipal corporations weaker when faced with heavy rain.

Thus it can be seen that in floods humans play an important role in general spread due to unplanned urbanisation, non-enforcement of laws & not taking preventive measures.

405

Q18. Describe the factors that have contributed to the increase in cotton cultivation in Punjab despite the unfavorable soil and climatic conditions. (12.5 Marks)

Cotton generally is grown in warm tropical areas & in Black soil as in Deccan plateau. Punjab lies in subtropical part of the country & has alluvial soil not very suitable for cotton. Despite these factors, it has been a major producer of cotton because of following reasons:

• Availability of water:

Irrigation water is available from Himalayan rivers (Satluj, Beas) & projects like Bhakra Nangal Dam.

• Availability of fertilizers:

Post green revolution, the incomes of farmers have increased, hence affordability of fertilizers has increased.

• Demand for cotton textiles:

Punjab is surrounded by ~~urban~~ urban continuum in Haryana, Delhi areas where cotton is needed for cotton textile mills.

• Use of High Yield Variety Seeds:

This has enabled increase in production in Punjab.

• Availability of labour:

Cotton production is labour intensive. This labour is made available ^{large scale} ~~large~~ migration of people from Bihar & UP towards Punjab following the Green Revolution since 1960s.

• Government support:

This is seen through MSP policy. Moreover cotton is more remunerative than some food crops. Thus a variety of institutional, infrastructural & physical factors have contributed to increase in cotton cultivation in Punjab despite unfavourable soil & climatic conditions.

enterprising
nature of
farmers in
Punjab.

6

Q19. Intra-state and inter-state migration in India is compulsive in nature.
Discuss. (12.5 Marks)

Intra state migration in India is compulsive because:

- Women generally ~~constitute~~ migrate under this category ^{after} ~~for~~ marriage. Thus social customs force this migration.

- There are huge intra state economic disparities in India. eg) Western Maharashtra is much developed than Marathwada & Vidarbha.

- South-eastern Gujarat is developed than Kutch & north Gujarat. Hence people migrate for economic opportunities.

- State boundaries are merely not administrative boundaries, but are also linguistic boundaries. Thus linguistic compulsions force employment seekers to migrate within the state itself.

- Physical environmental conditions are also a cause of migration.

- eg) People from hills migrate towards plains in Assam.

Inter state migration is compulsive in India because:

- Huge inter regional disparities exist - ~~eg~~ Southern India is more developed than north, thus migrants seeking ~~for~~ economic opportunities are forced to migrate.
- Educational needs force inter state migrations since quality institutions are spread across the country & competition is intense.
eg: IITs & NITs.
- In India rural-urban migration is mainly ~~towards metropolitan~~ ^{traditional} cities. Here & metropolitan cities across more migrants offering neighbouring state people to migrate. eg: Kolkata attracts migrants from Bihar, Assam, UP, Odisha, Jharkhand.

These migrations in within India are compulsive in nature but ^{increased} mobility & globalisation are reducing this compulsive nature.

Q

Q20. India has registered a decline in barren and wasteland, culturable wasteland, area under pastures and net area sown in recent years. Explain the causes and also enlist the environmental impacts of this decline. (12.5 Marks)

Following are the causes of decline of barren, wasteland, culturable wasteland, area under pastures & net sown area:

- Increasing urbanization: Industrialisation has meant such areas are being encroached upon due to paucity of land.
- Rural-urban migration & consequent lesser workforce being dependent on agriculture has meant decrease in net sown area.
- Area under pastures are subjected to increased grazing & consequent degradation. Such lands end up as industrial areas.

Following are the environmental impacts of this decline.

- Land degradation is a primary consequence due to overgrazing.

- The increase in urban land use has led to increase in air pollution due to vehicular traffic & industrialisation, which has also contributed to water pollution through release of effluents untreated.
- Decline in cultivable wasteland area means not enough land is allowed to recomp its fertility, hence such land ~~degrades~~ ^{degradation} & soil pollution is increasing.

Hence we must arrest this slide through regulated & planned urbanisation. Moreover suitable government land use policy should be implemented on ground by administration. Strict enforcement of laws is necessary.