




TEST -15

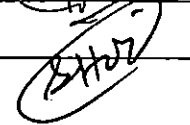
GEOGRAPHY & DISASTER MANAGEMENT

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. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.
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1. Invigilator Signature 

2. Invigilator Signature 

Name Pooja Ranawat

Roll No. 1733

Mobile No. 

Date 2/08/17

Signature P. Ranawat

8 2 8

REMARKS

GS SCORE
GS MAINS TEST, SERIES 2017

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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)

Ans. A disaster is any event that causes an unprecedented damage of life and property.

① Biological disasters are one category of disasters ^{by biological} caused mainly due to ill-health or disease organisms epidemics. The spread or infestation of certain type of bacteria or micro-organisms may lead to many individuals being at a risk of attack. This may even prove fatal.

② Work place and occupations at risk. One example can be the manufacturing industry especially small and medium scale - be it glass, silicon bead, textile - wool, prominent example - workers suffering from sorter's disease in a woollen industry, silicosis - diamond industry etc.

③ Thus, such places with unhygienic or unorganised working conditions may cause the outbreak among all the workers of that unit.

- lack of conceptual clarity

14/2

Remarks

- Refer hit -

④ Preventive and control measures :

- i) standard work safety measures
- ii) gloves, masks, other protective gear.
- iii) hygienic and safe units
- iv) standard operating procedure to be well-defined in case of such a disaster.

Thus, although biological disasters are hard to locate, there can be ample safety measures to prevent the spread, contact or spread-infestation of the disease.

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)

A2. The recent Asian Ministerial Conference on Disaster Risk Reduction was held in India with an aim to focus on community participation

① Disaster management is an important tool to avert natural or man-made crisis. The National Disaster Management Plan also focusses on 3 areas:

- a) Disaster Risk
- b) Disaster Risk Reduction
- c) Disaster Resilience
- d) Disaster Resilience and Recovery

relate these areas with role of community

② It has emphasized the translation of national plans into state and local action plans

③ The importance of community has also been highlighted - a) helps mobilise resources

b) & acts a network to redistribute as well as provide support

c) human emotions are better resolved and catered to in a group support system

d) enhanced co-operation and collaboration between communities helps to create an effective

need more specific points

29

Remarks

bulwark against disaster — be it team strategies, innovations etc.

eg:- The Bhuj earthquake saw many other people from all over the ~~country~~ country pouring in to help, recover and rebuild lives.

This, although government efforts to avert and manage disasters stands at prime place, the community participation based management will only make it more effective.

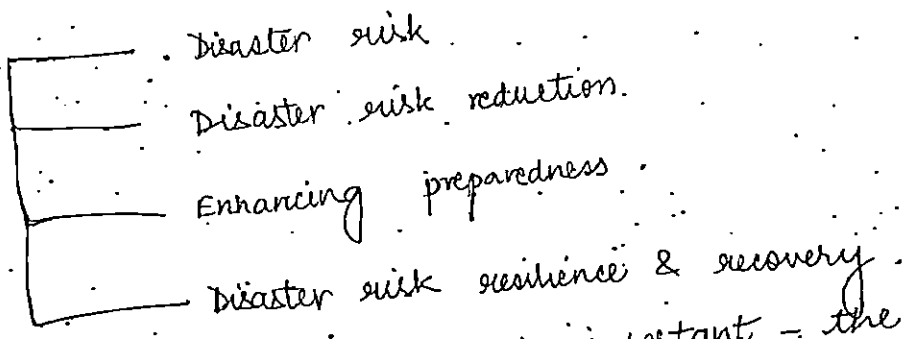
Remarks

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)

If que. starts with a statement elaborate it as entire

A3: India is the first country in the world to have formulated a National Disaster Management Plan.

- ① Disaster is any event which leads to significant loss and damage of life and property
- ② Keeping this in view, the Nation plan focusses on:



③ While Disaster management is important - the focus has now shifted to Disaster risk management.

- It involves:
- a) building sustainable structures
 - b) curbing / restricting activities that de-stabilise the environment
 - c) Requisite land mapping and monitoring
 - d) Plan to build and create structures which

2 1/2
+ 1 1/2

Remarks - Pm lacks content

cause minimalist disturbance to the natural processes.

④ Therefore the emphasis here is to plan and implement any kind of development activity with a consideration of the environmental impact or hazard be it building transport infrastructure, new dams, river interlinking etc.

Thus, the new focus helps to address the malady than just cure the symptoms.

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)

A4. Forest fires are a major environmental hazard and need to be approached as a separate issue altogether.

Refer with for more appropriate Intro.

① Usually, forest fires are a result of two basic reasons:

- Natural
- Manmade

② The natural causes include the climatic and wind changes, while the man-made causes include the anthropogenic emissions. The kind of vegetation and plant life also have an impact on the possibility of forest fires.

write natural causes separately

③ One example is the chir pine trees in the hilly areas of Kashmir, Himachal, Uttarakhand. The twigs - needle like when fall off to the ground tend to ignite fire.

④ Impact:
Forest fires have an impact on the geology as well as social geography of the region.

- loss of crops,
- loss of cattle.

24

Remarks

- instability in the environment.
- pollution due to fire.

⑤ A limited amount of fire is however considered beneficial for the natural rejuvenation of the forests.

⑥ Thus, forest fires can be tackled through effective strategies like monitoring the cause, prevention mechanisms, early warning in case of nearby human settlements etc.

elaborate
more as
specifically
asked

Remarks

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

A5. Disaster management is the key to maintaining the sustainability and efficiency of any ecosystem which is naturally or due to human activities prone to disaster.

① The advancements in science and technology is the effective way of making the management more efficient and adaptable.

② Today, science has advanced in various fields:

a) technology upgradation platforms

b) earthquake / fireproof building material

c) early warning systems with more accuracy.

d) creating effective communication mediums in event of disaster with no telephonic avenue

eg:- community radio -

e) location accuracy - GPS systems with enhanced

human detection features in case of people trapped in debris.

③ Thus, the above strategies show the use of the advanced scientific and technological innovations to help curb disaster or undertake efficient management in case of one.

2+1

Refer
link

Remarks

= elaborate more to add multiple aspect in
Ans. eg. future possibility

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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)

A6. Water is an important component of daily life - its conservation and wise use is the topic of many headlines today.

① India is currently facing a severe water crunch with many parts of the country reeling under water stress, scarcity and frequent episodes of drought and famine.

② There are also studies which show that nearly 40% of the underground water tables are severely stressed while 60% are moderately stressed.

③ At such a juncture, there is a need for effective strategies to conserve and preserve the water available for use.

This would need

{	conservation
	augmentation
	efficient utilisation

④ Water needs to be used judiciously - be it domestic or commercial sectors - through micro watershed development, micro-sprinkler, drip irrigation.

Give sub-heading
eg. need for

3+

Remarks

⑤ The augmentation can be done through additional rainwater harvesting, watershed development, recharge of underground water tables etc.

⑥ The Government's Draft National Water Policy promotes allocative efficiency use of water and treating it as an economic good.

Thus, water can be conserved through multiple innovative ways which include traditional methods like khadins, johads, surang etc.

Remarks.

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

A7.

Industry forms the backbone of any economy. The automobile industry is one such component of Indian industry.

① The automobile industry mainly deals in the production and sale of commercial & domestic transport vehicles.

② Factors behind growth and present location :

i) Developed markets - especially city areas.
eg :- Jalandhar, Chinchwad - Pune :- are developing automobile hubs.

ii) Connectivity infrastructure for transport of equipments, spare parts and other machinery.

iii) the resource and industrial development of the region is also important.

iv) Power infrastructure

③ Thus, automobile industries are not located in rural but usually urban areas where they can find better growth prospects by connectivity to markets and in some cases export potential.

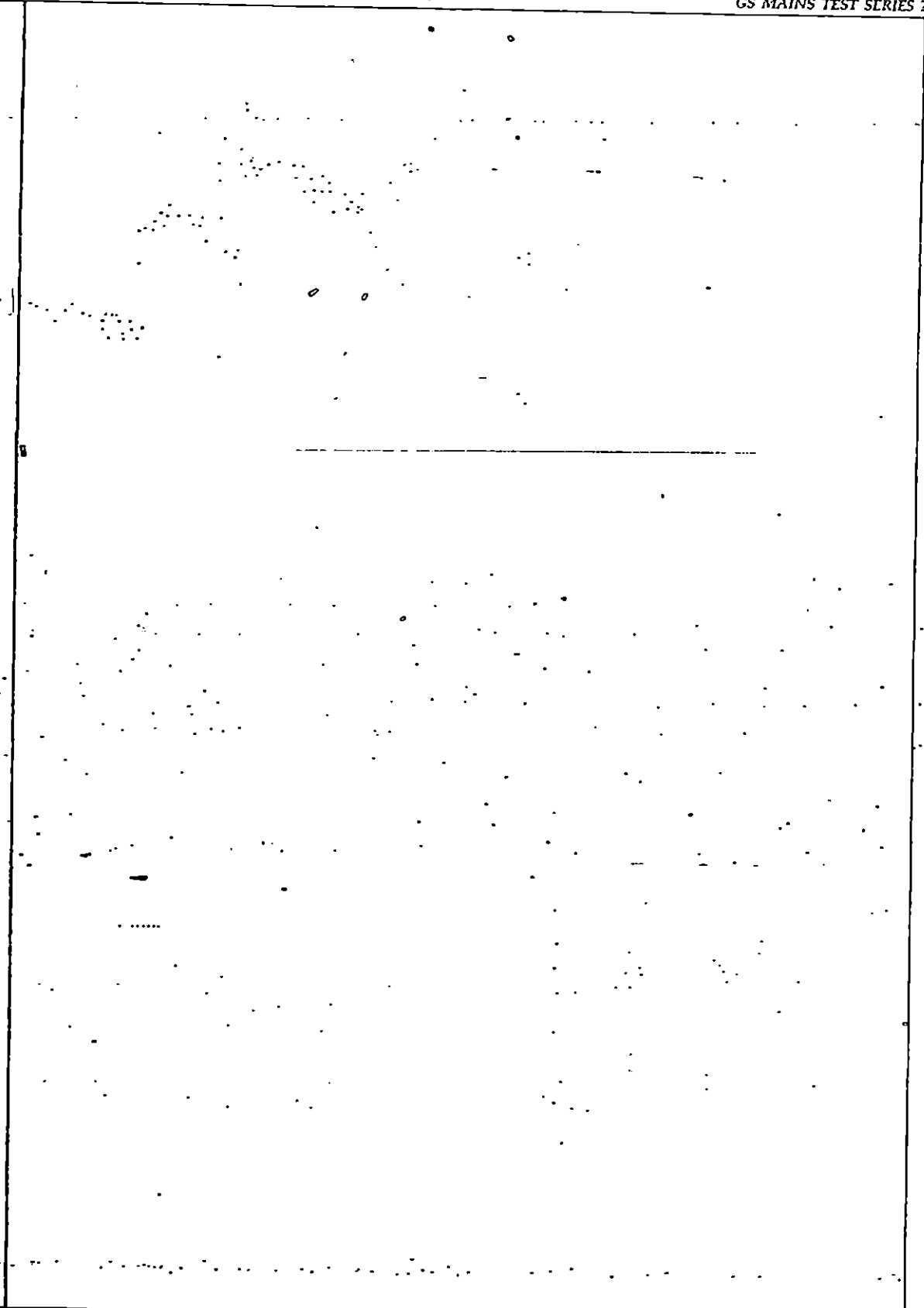
(Refer List)

Key questions (mined)
Raw Mat.
Export
Rail comd

11/2/17

Remarks

- draw Map -



Remarks

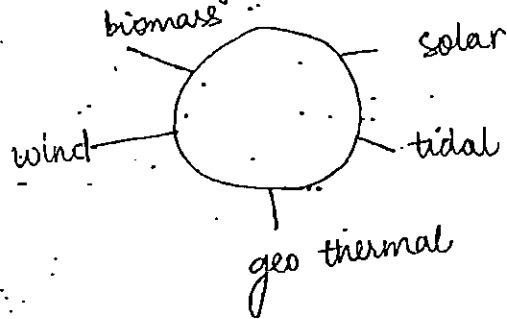
Q8. Renewable energy is emerging as anchor of Indian economic development. What is the spatial distribution of renewable energy resources in India? What efforts have been made to augment these resources? (12.5 Marks)

Ans 8. Renewable energy is touted as the solution to the flustering energy crisis of the environment friendly world.

① The Indian Government has made dedicated efforts to increase the renewable energy mix to:

- to reduce environmental pollution
- to reduce dependance on coal imports
- incorporate efficient development strategies

② Renewable energy constitutes the



③ Various regions of the country have varied potential for example,

- TN - Madurai - wind power
- coasts of Andhra Pradesh, Gujarat - tidal-power

- show Map for

3/11

Remarks

- give subheading -
- Or. need more content.

• Bhuj, Gujarat,
Rajasthan - solar power.

• Manikaran, HP,
Ladakh - geo-thermal

④ The distribution at many other places remains under-utilised and under-exploited.

⑤ The government has fixed the targets for Renewable energy - especially solar power to 1,00,000 MW by 2022. → Mega Solar Power Plants

⑥ The other include adoption of the National Action Plan on Climate Change (NAPCC) with 8 missions - including Solar, Green India etc.

Thus, renewable energy adoption can not only prove as an environment friendly approach to development but also cut costs for public.

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)

A9. Urbanisation is the new upcoming phenomenon with nearly 30 million ^{more} expected to shift to urban areas in the next 10 years.

① Urbanisation and urban planning

The increasing pressure on urban areas with greater population, resource crunch and pressure on land has led to greater focus on urban planning approaches which are not detrimental to the environment.

② Reasons for Environmental concerns

- increasing population leads to creation of concrete jungles

- immense pressure on resources leads to interference with nature - resulting in climate change scenarios

- incidences of man-animal conflicts

- haphazard development - formation of gated communities

③ Thus, urbanisation without adequate planning can spoil the demographics of the area

Remarks

and become a threat to human health as well as environment.

④ Steps to make it ecofriendly:

⇒ Creating buffer zones around natural and forest habits.

⇒ Finding out the causes of unfiltered urbanisation

⇒ Using eco friendly fuels - biofuels, carbon neutral fuels to save the environment from excess pollution.

⇒ Creating such laws and strict monitoring of these laws which mandate no interference with natural processes or restricted activities that may disturb the ecosystem.

thus, urbanisation can be environment-friendly if human - animal - nature approach are merged into one.

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)

Ans.

Energy security ^{define → Ref in lit} is the provision of such sustainable sources of energy which can sustain livelihoods.

① It is an important concern today in the changing environment with increasing population energy demands and consequent resource crunch.

② India has traditionally relied on coal-based thermal power plants for its energy production. The other contributors are hydropower, nuclear etc.

③ However with the changing scenario, there is a shift to greater inclusion of renewable energy sources in the energy basket.

④ The government should continue to develop and exploit the tidal, geothermal, biomass and most importantly the solar power potential of the country.

→ National solar Mission - target - 1,00,000 MW by 2022

17 2 1/2

Remarks - Instead of writing continuous point give subheading with change of subpart of que.

⑤ The Government has taken various initiatives :

a) International solar Alliance - of tropical region solar rich countries @ international level.

b) National Action Plan on Climate change - 8 missions - including Solar, Green, mission.

c) Repurchase obligations - net metering in case of solar.

d) promotion of hybrid & electric vehicles.

Thus, energy security can only be attained by a judicious combine of renewable & non-renewable sources with sustainable planning.

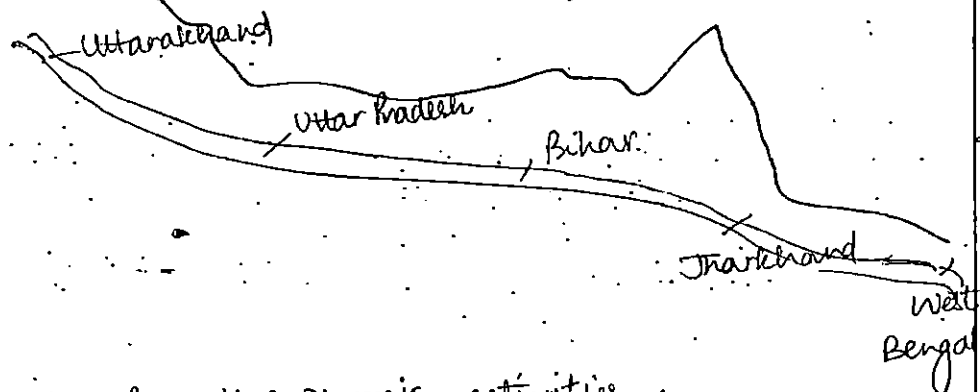
Remarks

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)

Ans.

The sacredness of the River Ganga is the subject of majority books on Indian culture. being best country in world

① stretching for roughly 2400 km starting from the Gangotri Glacier, it traverses 5 states to drain into the Bay of Bengal.



② Threat of anthropogenic activities :

- ① Open defecation - along the river banks
- ② Bathing & pollution - domestic use
- ③ Pollution due to industrial effluents.
eg:- tanneries in Kanpur.
- ④ ashes, cremation at bathing ghats of river
- ⑤ pollution due to sewerage, waste water plants tricking chemicals into the river.

3 1/2 + 1/2

Remarks

③ The Namami Gange mission plans to purify the river from such activities:

Steps that can be taken are:

a) Strict implementation of laws, rules, pollution norms - by CPCB etc

b) Regular monitoring and pollution level check mechanism.

c) Using biofilter mechanisms to clean up the waste in rivers - biodegradation etc.

d) Enhance collaboration with IIT's, scientific institutions to provide innovative solutions to the problems of water pollution and removal.

Thus, the river can be purified and made free of pollutants by collective collaboration of state and civil society.

Remarks

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)

A12. One of the significant sources of available freshwater on the earth is the underground aquifers.

① It is reported that the underground water table is 40% - severely polluted and 60% - moderately polluted.

② Thus, India is facing a problem on two fronts: contamination of existing water and depletion of groundwater potential.

③ Groundwater is mainly used:

- for agriculture

- industrial/commercial purposes, etc.

With the regions of Maharashtra and Karnataka facing drought, there were reports of farmers digging borewells illegally in an attempt to secure water.

④ Management of ground water resources - With the country reeling under severe water scarcity, it is essential to prevent the contamination due to leaching, excessive

Remarks

conclude ^{with} measures of Gw. in this direction

3 1/2 + 1/2

salination and recharge the depleted potential for sustainable use in future.

i) use of watershed management approach, rainwater harvesting — to recharge the aquifers.

ii) traditional methods like surangs, khadins, johads etc.

⑤ Measures can also be taken to stop the illegal extraction from borewells, stricter implementation of laws etc.

Thus, groundwater needs to be conserved as potential security in case of water scarcity and water crisis years.

Remarks

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)

A13. The Government has renewed its focus on ports in keeping in mind the existing pressure on former modes of transport.

- ① The flagship Sagarmala project is a project for port development, port modernisation and increasing port connectivity to facilitate trade.
- ② It focusses on creating such port infrastructure which helps to increase export capacity and facilitate international trade.
- ③ Thus, port development will not only serve the needs of trade but will also help in overall development of the region around it - due to infused flow of capital, greater trade profits, efficient infrastructure creates connectivity with other industrial centres of the country and so on.
- ④ Thus, the project envisages a change from point to point service delivery to a hub and spoke model - creating clusters of economic growth.

2 1/2 + 1/2

Remarks - More specific points required

- ⑤ The Sagarmala project with increased
- capacity of ports
 - creation of port infrastructure
 - development and modernisation of existing ports
- will help - the industrial sector of the country immensely.

Thus, with a newer mode of inland water transport and reduced cost of maintainance, this project has significant benefits for the country.

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)

Ans. ^{overlooked} Social forestry is simply defined as the land use management and planning with public participation to reduce pressure on existing forests. - Agro-forestry
- Panch.
- Urban

- ① This term was first seen in the report of National Commission on Agriculture;
- ② It is an innovative concept where afforestation is done on publicly maintained land to avoid pressure on existing forest land.
- ③ Thus, it provides the following benefits:
 - a) conservation of land for productive use
 - b) prevention of env. environmental imbalance
 - c) creating a harmonious mix of land utilised for development and land replaced to balance the natural cycle.
 - d) the people participation is an important component of this project.
- ④ India currently has a forest cover of approximately 23%. The pressures of urbanisation have led to land degradation.

Remarks

- Read que. carefully before start to write

2/2/17

desertification and creation of infertile land patches.

⑤. At such a moment, social forestry as a voluntary initiative can help to reduce the above impact and help in creating a sustainable green cover.

Thus, adoption of social forestry with more vigour and its promotion can help reduce impact of unsustainable anthropocentric development.

Remarks

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

A15. The climate of a place is significantly impacted by the type of air masses developing over that region.

① Air mass is usually a region of air which develops over a place due to difference in temperature and moisture conditions.

② These masses may develop in any region - plain areas, hilly areas etc. The development in hilly areas - may lead to temperature inversion at night.

③ Types of air masses:

i) Stationary

ii) Occluded

iii) Polar front

Type of Front

④ These air masses may be hot air or comprising of cold air. When the two air masses meet, either of the three fronts is formed.

⑤ Influence world climate:

These air masses have a pattern of

No conceptual clarity

25/12

Remarks

movement all over the globe.

- ⑥ They respond to changes in temperature, humidity and moisture and form the temperature of that region accordingly.

Thus, as the name suggests, air masses move and influence the temperature of a place significantly.

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)

A16. Sundarbans in West Bengal is known for the largest mangrove cover in the world.

- ① India is blessed with such mangrove vegetation particularly:
- Sundarbans, Chilika - West Bengal, Odisha
 - Pichavaram, Tamil Nadu
 - Andaman and Gujarat
 - other coastal regions - Karwar etc.

② The factors responsible are:

- saline water
- mud free, nutrient rich water
- shallow depths
- warm water due to inflow of fresh water into Bay of Bengal region

③ The climate - moderate in these regions with sufficient sunlight further helps in the growth of mangrove vegetation.

④ The mangroves act as effective bulwarks against natural calamities, tsunami etc. They act as a barrier and provide

Two sentences should come in hand - other

Refer

2+2

Remarks -

- There should be a logical flow in writing

effective protection.

- ⑤ At the same time, mangroves are known for their water purifying capacity with specialised roots called pneumatophores.
- ⑥ They also serve as sites for migrant birds and enrich the wetland habitat by promoting nutrient recycling of water.

However, in recent years, the mangrove cover has reduced due to increased anthropogenic activities. Effective strategies need to be put in place for restoring these mangroves.

Remarks

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

overlooked - Refer link
 A17. Climate change has an important role to play in the pattern of El Nino and its effect on Monsoon.

① El-Nino is traditionally seen as a phenomenon of upwelling of water and emergence of warm currents over the eastern Pacific - Peruvian coast.

② These warm waters create a low pressure eastern Pacific region with a high pressure western Pacific.

③ The change in pressure and temperature thus leads to a situation of high rainfall along the Peruvian coast, and droughts in Australia, India and floods in China.

④ The El-Nino thus has a negative impact on the monsoon dependant Indian region.

In economic terms,
 - this has a major impact on the agriculture sector with a 10% dependant population
 - the low harvest and crop losses compound to create demand-supply mismatches and

- draw diagram to explain

1/2 + 2/2 + 0

Remarks

therefore food inflation in the country.

- the price imbalance might also lead to glitches in the export market.
- the financial burden on the Government to compensate for crop loss, provide the minimum support price and provide additional waivers - leads to fiscal deficit expansion.

Thus, El-Nino has an impact not only on the geography but also the socio-economic profile of the country.

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)

A18. (The Indian government has recently signed an exploration contract to extract polymetallic nodules from the sea)

① The increasing demand of resources and the sectoral crunch led to this approach of a Blue economy - harnessing the potential of marine resources. Therefore

② Marine resources comprise all the precious materials obtained from the seas and oceans. These include a long range - from salt, beads and oysters to deep sea polymetallic nodules.

③ India has emphasized on the creation of a Blue economy - with focus on aquaculture, deep sea fishing as well as ornamental fishing.

④ There is an attempt to develop alternative industries relating to utilisation of marine resources and their use in other allied sectors.

Good point but not related to the ques.

2 1/2

Remarks

- Ans is short -

India has the benefit of sea on all three sides with a long coastline of 7517 km. Thus, developing marine resources and their extraction is the next big step to supplementing agriculture industry and its sustainability.

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)

A19. India is blessed with rich topographical and resource endowed features.

- ① The North Alluvial plains comprise 43% of the area of the country.
- ② These plains are rich in soil fertility, have immense supply of perennial sources of water, rich silt deposited as alluvium brought by the 3 major rivers — Ganga, Brahmaputra and Indus.

- ③ Thus, with favourable geological features, this region of Uttar Pradesh, Bihar, West Bengal, parts of Madhya Pradesh are rich in agriculture & have few mines.

- ④ The Plateau region comprises the area lower than the plains — a triangular landmass — Deccan plateau & Meghalaya plateau region.

The plateau regions — Amarkantak - Bilaspur - Malwa - Katni, Durg, Bastar - Chandrapur, Chh' Chitradurga - Bellary belts etc — rich

3/12

Remarks

- draw Map -

in minerals like coal, aluminium, bauxite,
iron-ore, nickel etc.

Thus, the plain and plateau region
account for the significant resource rich region
with major contribution to exports.

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)

A20: Indian Agriculture is primarily monsoon dependant with an involvement of nearly 70% of the population.

① The development of Agro-based industries - (like pickle, flour, jam, cotton, woolen etc) primarily based on agro-products is an alternative to the pressure on agriculture currently.

② Problems:

- ① lack of infrastructure
- ② capital crunch
- ③ inefficient connectivity and lines of transport
- ④ no proper storage and distribution infrastructure
- ⑤ lack of marketing of produce
- ⑥ under-utilised export potential

③ The agriculture sector is already suffering from disguised unemployment. Thus, a shift of labour to the food-processing side will neither impact agriculture.

1 mark
1 mark
related
Ans

3/12/17

Remarks

productivity nor create an additional burden.

④ It will however provide sustainable livelihood opportunities to the people and may contribute to development of this sector.

⇒ The Government has not taken measures like the creation of Mega Food Parks to promote a cluster based development.

⇒ The recent SAMPADA scheme on food processing is also an attempt to revive productivity.

Thus, if given adequate focus with infusion of requisite capital, this industry has a capacity to create jobs for the many unskilled labourers and improve the economical growth rate of India.

Remarks