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Test Code: 21074

FIAS - 2019 - GS 3D

ForumIAS  
MGPO06577

# ForumIAS

ACADEMY

## GENERAL STUDIES

Name Of Candidate

Anjali Sharma

Email Id.

Mobile No.

Roll No.

Date:

Time Allowed: Three Hours

Maximum Marks: 250

INDEX TABLE			INSTRUCTION	
Q. No.	Max. Marks	Marks Obtained	<ol style="list-style-type: none"><li>1. Do furnish the appropriate details in the answer sheet (viz. Name, Email, Roll No, Mobile).</li><li>2. There are TWENTY questions printed in ENGLISH.</li><li>3. All questions are compulsory.</li><li>4. The number of marks carried by a question/part is indicated against it.</li><li>5. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided.</li><li>6. Word limit in questions, if specified, should be adhered to.</li><li>7. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off.</li></ol>	
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<b>Remarks:</b>			<b>Start Time</b>   2:30	<b>End Time</b>   6:05
			<b>Mode Of Examination :</b>	Online <input checked="" type="checkbox"/> Offline <input type="checkbox"/>
			<b>ECN CODE:</b>	<b>Evaluation Date:</b>

ForumIAS, 2<sup>nd</sup> Floor, IAPL House, #19, Pusa Road, Opposite Metro Pillar 95-96, Karol Bagh, New Delhi- 110005 | Ph: 011-49878625/ 9821711605 | Email: student@forumias.academy



Parameters	Excellent	Very Good	Good	Average	Poor	Very Poor
Language						
Structure						
Presentation						
Handwriting						
Content						
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ADDITIONAL COMMENTS

Q.1) Describe it?

remains of ice.

VAR

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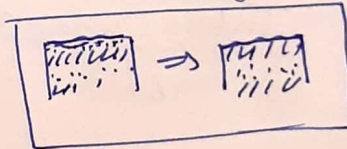
Call us: 0

Q.1) Describe various forms of soil erosion. What measures can be taken to prevent it? (10 Marks, 150 Words)

Soil erosion is the process of removal of top layer of the soil because of various agents, eg air, water and ice.

### VARIOUS FORMS OF SOIL EROSION :

1. Gully erosion - Erosion of deep layers of soil are forming of gullies. This is done by water.
2. Rill erosion - Narrow line of erosion
3. Sheet erosion - Erosion of entire surface from top uniformly.  
Agent is water.
4. Abrasion → Erosion by wind which causes landforms like deflation hollows etc. Such conditions occur in desert areas where there are very strong winds.



### MEASURES TO PREVENT :

1. Planting shelter belt - Trees are planted



along the boundary and their roots firmly held the soil preventing soil erosion

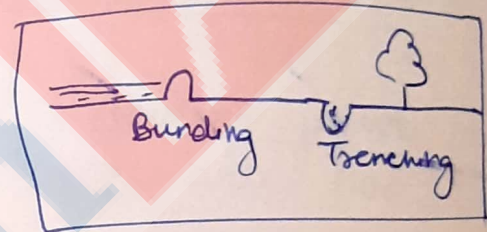
2. Contour bunding



Fig - Contour bunding

3. Terracing - can be done on mountain areas and steep slopes to prevent water erosion

3. Bunding and Trenching



4. Afforestation and Social forestry

5. Inter cropping in Agriculture - prevents soil erosion if done properly.

Soil erosion is a major problem today because of increasing desertification. Focus need to be strengthened to counter this. Awareness building programmes must be promoted.

Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	



Q.2) What do you mean by river rejuvenation? Also, mention landforms associated with it.

(10 Marks, 150 Words)

River Rejuvenation is the phenomenon of rejuvenating a river's fiery nature. The river regains its strength as in Youthful stage.

How IS RIVER REJUVENATED:

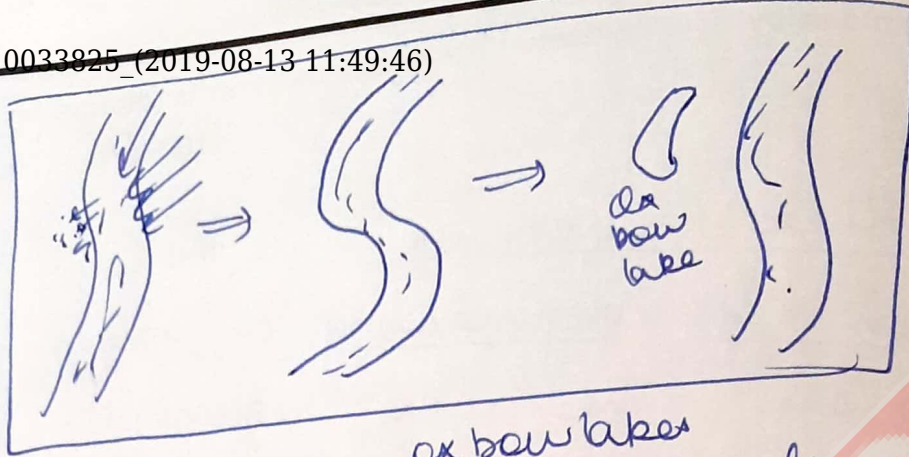
1. Upliftment Subsidence of land over the course of river - The river gets a renewed vigour because of forces of gravity
2. Decreasing sea levels - It also creates pressure difference and river rejuvenates

The mature stage of river further shifts forward, because of this -

LANDFORMS ASSOCIATED:

1. Meanders - The cutting of side banks sharpens and it forms meanders





2. Point bars and ox bow lakes and lagoons — also associated with meanders
3. Waterfalls — sudden point of fall of rivers
4. Deltas — New deltas are formed near the mouth of the river
5. River terraces — over old floodplains are formed

River Rejuvenation landforms help in understanding the geological history of that area.

Feedback ( For OFFICE use only )	
Structure	
Question Interpretation	Content



Q.3) What is apiculture? Explain its importance in agriculture and rural development.  
(10 Marks, 150 Words)

Apiculture is the practice of practising beekeeping. It involves production of honey and its associated products.

IMPORTANCE IN AGRICULTURE :

1. It is a type of allied agricultural activity. It can be practised along with agriculture
2. It is eco-friendly and sustainable — doesn't involve fertilizers, pesticides etc.
3. Can act as a shock absorber, if agriculture output is low in any year — additional and secure income.
4. The byproducts can be used in agriculture
5. The bees also help in pollination, which is in turn beneficial for improving agricultural productivity



## IMPORTANCE IN RURAL DEVELOPMENT

1. Alternative form of livelihood — Agriculture is already overburdened
2. Additional income for several households
3. No high skill required — apt for low skill individuals.
4. Nutritional security enhanced
5. Can spur a market for it — increasing demand for traditional indigenous products

Allied activities generate more income as compared to agriculture. Thus these need to be taken up on a large scale so as to meet the vision of doubling farmer's income by 2022

Feedback (For OFFICE use only)	
Structure	
Question Interpretation	Content
Total :	



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Q.4) Discuss the reasons for declining of farm productivity in India? Suggest suitable measures to arrest the same.

(10 Marks, 150 Words)

Farm productivity in India is among the lowest in India. Even countries like Saudi Arabia, Israel which have much lower fertility in land have much higher productivity.

### REASONS FOR DECLINING FARM PRODUCTIVITY

1. Large number of fragmented landholdings  
— According to Economic Survey 2018-19 the average number of landholdings in India is 149 mn with average area being 1.08 ha each  
↓  
No economies of scale  
↓  
Low productivity
2. Area under irrigation is very low, leaving 60% of farmers in rainfed areas vulnerable to the vagaries of monsoon
3. Inappropriate use of fertilizers and pesticides — Recommended ratio is 4:2:1

and actually used is

4. Poor quality of seeds is in place for this
5. Technology not available

— No proper policy

## MEASURES :

1. Soil Health Card should be distributed widely
2. Cooperative farming — to reap benefits of economies of scale
3. Banks for renting technological inputs
4. Seed banks
5. Promotion of drip and sprinkler irrigation techniques.
6. Allied activities like horticulture, dairy, apiculture etc should be leveraged

Almost 60% of the population is dependent on agriculture in India. Thus it needs to be on top priority in policy making

### Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	



Q.5) Discuss the importance of micro irrigation in enhancing water use efficiency in agriculture in India with special focus on dryland agriculture.

(10 Marks, 150 Words)

Water-use efficiency is in abysmal state in India. In irrigation, more than 80% is done by canals and tubewells which have very low efficiency.

IMPORTANCE OF MICRO-IRRIGATION

Micro Irrigation involves using highly efficient irrigation techniques in agriculture, for eg - ① Drip Irrigation - water is released in drops near the roots of crops

② Sprinkler irrigation - At several points, water in form of sprinkles is released. This is more efficient than flooding the entire area.

→ It helps in minimising the cost as less water has to be used, also less consumption of power.

→ It enhances productivity of the crop.



as water is distributed uniformly

→ It also has environmental benefits  
↳ groundwater is getting overexploited

**DRYLAND AGRICULTURE**: It is especially important in dryland agriculture as there is already less availability of water. Increasing water use efficiency would promote efficient allocation of water resource

For eg - Areas in dryland Rajasthan, Gujarat

↳ It would lead to increased income of the farmers

Pradhan Mantri Kishi Sichai Yojana (PMKSY) also has a component of 'Per drop more crop' which is increasing water use efficiency. This is a good step in this direction

Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	



Q.6) The food processing industry is affected by logistical challenges. How can contract farming provides a sustainable solution to this problem?

(10 Marks, 150 Words)

Food processing industry is the industry which involves processing, value addition, packaging etc of farm products.

## LOGISTICAL CHALLENGES :

1. Lack of cold storage infrastructure  
- Even if present, most of it is under informal structure.
2. Lack of technological inputs
3. Limited reach of Mandis  
- Mandis are more than 12 km away from farmgate and in North East even 50 km away  
This creates hindrance for farmers to even profit and even sell their produce
4. Insufficient storage infrastructure  
- This leads to distress sales

CONTRACT FARMING — It means a pre-agreement between the buying and selling party to trade agricultural produce

- (+)
- 1) It reduces the risk of the farmers. They are now assured of the income.
  - 2) It would enable food processing industries to invest in warehouses, cold storage etc.
  - 3) It ensures consistent supply of agricultural produce → better controls over factors of products.
  - 4) Better supply chain management.
  - 5) Enhanced private investment in agriculture.

Government through its Model APMC Act has taken right steps in this direction. Mandis should be within 5km reach for farmers to prevent distress sales.

Feedback (For OFFICE use only)

Structure		
Question Interpretation		Content
		Total :



Q.7) Pulses has been a major focus of the government with regard to crop production. Explain the factors affecting cropping pattern in India. Elaborate the importance of pulse production.

(10 Marks, 150 Words)

Pulses are the biggest source of protein for vegetarian diet. Over the past years, there has been various issues over pulse production in India.

### FACTORS AFFECTING CROPPING PATTERN

#### I Physical Factors

Eg soil type, Rainfall, landforms etc

- In NE India → Plantation cropping pattern because of hilly factors
- In Rajasthan & Gujarat → coarse cereals because of dryland agriculture

#### II Historical Factors

- Eg British policies shifted cropping pattern from subsistence to commercial, food to nonfood crops

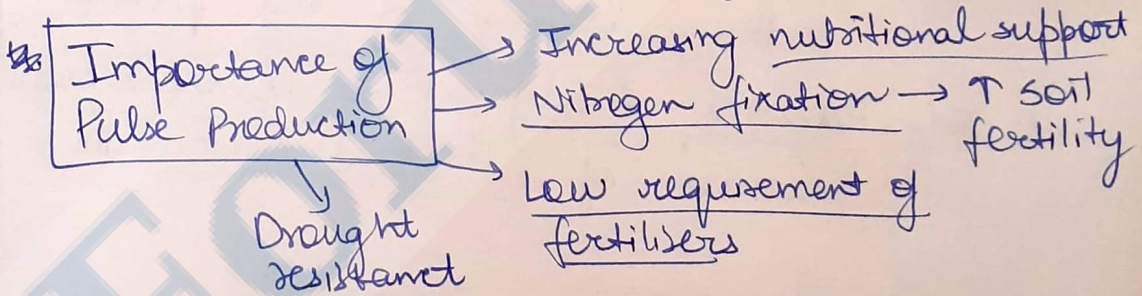
Eg Tea, coffee in Southern India

- Development of canals etc in Punjab lead to Green Revolution being conducted there → intensive cropping pattern



(III) Economic factors

1. MSP Regime → turned cropping pattern to cereal centric, especially wheat and rice in place of coarse grains
2. Consumption pattern - Consumer behaviour is changing. Because of rising income levels → demand for high quality products
3. Farm size - Smaller farm sizes often lead to subsistence farming



The cropping pattern in India should move towards sustainability as the risks of climate change are hovering

Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	





Q.8) In spite of new technologies making their way into agriculture some factors still hold back their adoption. Comment.

(10 Marks, 150 Words)

Agriculture is still mainly practised using traditional practices in India. But lately, new technologies are coming to the fore

SOME OF THEM INCLUDE:

1. Soil Sensors → These can detect the required amount of manure, fertilisers and water  
↳ can lead to efficient use of resources and environmental friendly as well
2. Biotechnology — eg GIM crops which resist pest attacks are more productive
3. Cooling technologies — can deliver fresh fruits to the home.

4. Mechanisation - Eg Modern tractors, thrashing machines etc

LIMITATIONS:

1. Perpetuation of Inequality - Eg - Mechanisation is still very expensive and small and marginal farmers cannot afford that
2. Investment - Agriculture gets low investment from private sector
3. Extension services - Inadequate reach to remote areas, lack of awareness
4. Credit availability - Because of farm loan waivers, banks hold back credits to small farmers.

Awareness programmes must be conducted through mediums like television so that farmers can reap the benefits of technology

Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	



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Q.9) Ocean warming has caused coral reef depletion via bleaching as well as deadly outbreak of diseases. Examine.

(10 Marks, 150 Words)

Ocean warming is a consequence of climate change which is a major concern worldwide.

It has the most disastrous effect for coral reefs, the rainforest of the oceans as they require optimum conditions for thriving.

IPCC Report has predicted that all the coral reefs would be bleached in 100 years if temperature rises by 2°C.

### Mechanism :

Coral reefs require shallow waters, around 27°C temperature and no disturbances

↓  
Ocean warming it leads to elevated temperatures ⇒ This forces corals,



ie. tiny polyps to expel zooxanthellae,  
 an organism which has symbiotic  
 relationship with coral polyp and gives  
 it its characteristic colour

↓

The expulsion of zooxanthellae renders  
 corals colourless and this is what  
 is called bleaching

Also, it increases the disease  
outbreaks as corals now become more  
vulnerable

**MEASURES** → Decreasing pollution,  
 reducing CO<sub>2</sub> and other GHG emissions,  
technological interventions to make corals  
 resistant to effects of climate change.

The key is to address the causes  
 and not symptoms. Awareness must be  
 spread regarding importance of coral reefs  
 to ecosystem.

Feedback (For OFFICE use only)		
Structure		
Question Interpretation		Content
		<b>Total :</b>



Q.10) Explain the concept of Inter Tropical Convergence Zone. How does this phenomenon affect the Indian monsoon?  
(10 Marks, 150 Words)

Inter Tropical Convergence Zone is a low pressure zone over the Earth's thermal equator.



Fig - world map & ITCZ

ITCZ is the area where the sun is directly overhead the Earth. The direct rays of sun lead to high convective activity and thus formation of clouds and vigorous thunderstorms. It is the area of maximum rainfall.

## EFFECT ON INDIAN MONSOON:

1. In June, i.e. summer season, Sun shines vertically over the Tropic of Cancer and the ITCZ shifts northwards. This leads to formation of thermal low over Indian northern plains.
2. The Ferrel cell gets formed. The trade winds of southern hemisphere cross the equator and turn eastwards because of Coriolis force. It becomes the Southwest Monsoon.
3. In winter, the ITCZ moves to Tropic of Capricorn and so the reversal of winds from the Northeast to southwest takes place → This forms Northeast monsoons.

This is how ITCZ theory explains Indian monsoons

Feedback (For OFFICE use only)

Structure		Content
Question Interpretation		<b>Total :</b>



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anything)

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**Q.11)** Explain with evidence how continental drift theory explained the shifting of world continents over the earth's surface. Also highlight its limitations.

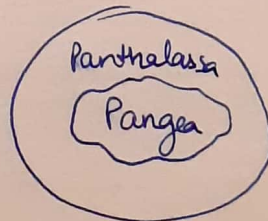
(15 Marks, 250 Words)

Continental drift theory was put forward by Alfred Wegner in 1912. It explained the distribution of continents around the world and its evolution.

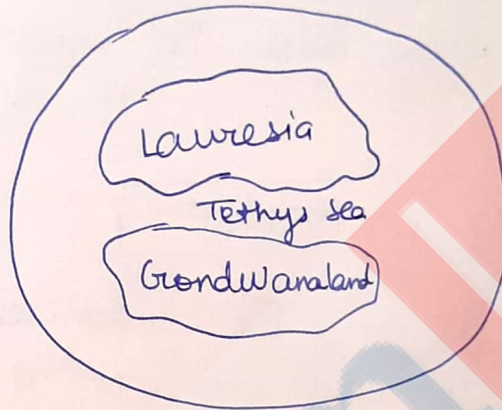
## REASONS AND EVIDENCES :

1. Jig saw fit — The coastlines of the continents east and west of Pacific ocean fit completely with each other
2. Similarity in fossils along the continents separated by ocean
3. Placer deposits , Gold veins etc.

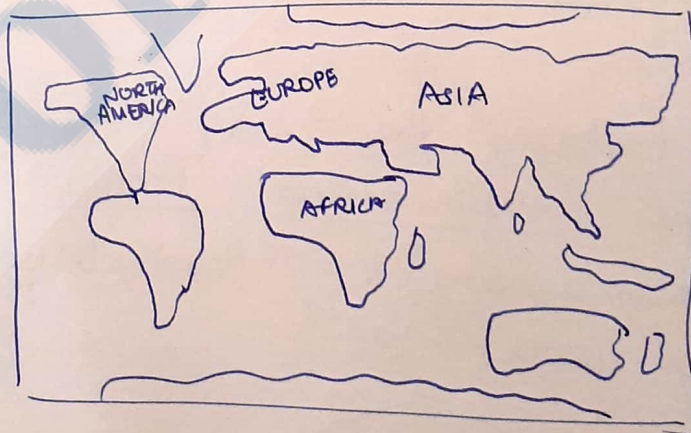
Wegner prepared the theory that there was only one supercontinent 'Pangea' and ocean surrounding it 'Panthalassa' some 200 mn years ago.



Then because of the tidal force and polar fleeing force, the continent broke up. The parts then moved equatorwards and westward.



These 2 subparts Laurasia and Gondwanaland further split up into what we see today as the 7 continents.





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## LIMITATIONS :

1. The 2 forces that Wegner gave as a cause are not strong enough to displace the continents.
2. The evidences are not also up to the mark. For eg- Not all the continents fit together perfectly
3. Later theories like Herry Hess - Sea Floor spreading theory and Plate's tectonics theory explain it much better.

Despite the limitations, the Continental drift theory was a landmark as it for the first time explained the mechanism of shifting of continents.

### Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	

Q.12) Why is there a demand for a separate time zone in our country? Discuss its pros and cons. Also, explain how it is different from daylight saving.  
(15 Marks, 250 Words)

India has only one time zone for the vast longitudinal difference of 30° approximately. It is at IST  $82^{\circ}30'$  from the Greenwich Meridian.

### DEMAND FOR SEPARATE TIME ZONE:

- The North East Areas of India lie very far from the IST line and hence this creates problems.
- The sunlight hours get less and it impacts productivity of the people.
- Many other countries also have multiple time zones. Thus India can have two time zones as well.

### PROS

- Biological clock would sync with working hours → ↑ Productivity
- Ease of living
- Energy would be saved which is spent on lightning.



→ USA has 7 time zones and all things still function smoothly and more efficiently.

→ North East people would not suffer because of the mainstream politics

## CONS

→ This might create structural problems like scheduling of trains, offices in centre and thus official communication

→ The energy saved would not be very significant

→ Might result into accidents or other situations like this because the infrastructure is not efficient to cope up with this

→ It also might create and feed separatist tendency already present in North East India.

## DAYLIGHT SAVING TIME :

It is the technique of saving daylight time by changing the time of your clock as per the season, i.e. shifting it one hour early in summers and then normal in winters.

It is done to enhance productivity of the population and at the same time save energy. It is practised in countries like Germany, France etc.

Thus for the problem of two time zones, innovative solutions must be thought of. One solution put forward is that the IST line should be shifted forward by 30 minutes

The approach needs to be pragmatic, accomodative and balanced on issues like this.

### Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	



Q.13) Discuss the conditions required for the formation of a tropical cyclone. How is a bomb cyclone different from a normal cyclone? (15 Marks, 250 Words)

Tropical cyclones are low pressure areas which are marked by high disturbance and are very often catastrophic.

### CONDITIONS REQUIRED FOR FORMATION:

1. High temperature is required — Around  $27^{\circ}\text{C}$  so that evaporation is faster
2. Large water area — preferably oceans and seas — as it requires latent heat of condensation
3. Coriolis force — For the cyclone to develop — Thus tropical cyclones are not found at equator because of absence of Coriolis force there.
4. Calm conditions — There should be no strong currents which could hamper the upwelling process

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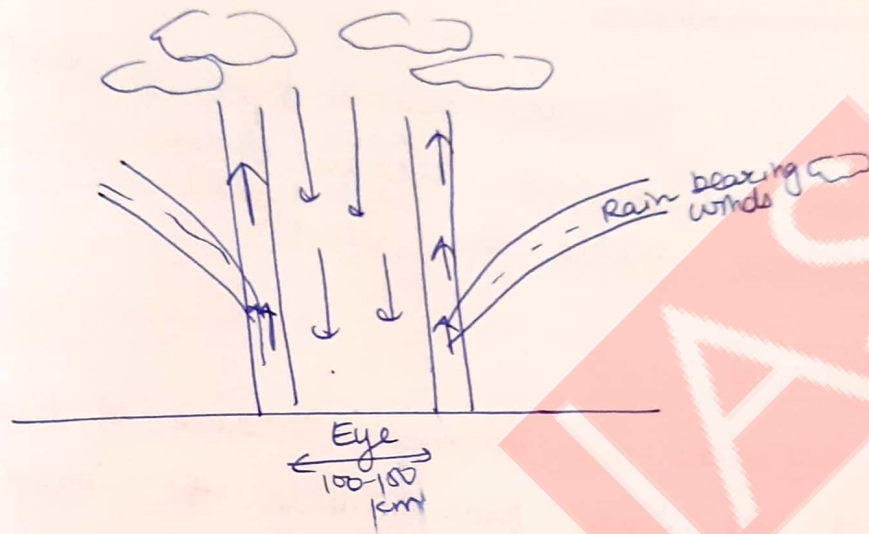
- 5. Low wind shear - The wind would otherwise lower the latent heat situation
- 6. No obstruction of land surface  
- Cyclone dissipates as soon as it crosses land because latent heat of condensation is cut off

## BOMB CYCLONE VS NORMAL CYCLONE

Bomb cyclone is one that is very powerful and creates a havoc situation. It falls like a bomb on the earth

Normal cyclone may or may not be disastrous





Recently because of climate change the frequency and intensity of cyclones has increased. There are many instances of recurving of cyclones after crossing  $20^\circ$  latitude and even before. Thus, it is the need of the hour to remain more alert and more prepared for such kinds of disasters.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

**Q.14)** Explain the origin and types of volcanoes. Also, explain various landforms associated with volcanoes. (15 Marks, 250 Words)

Volcanoes are a type of landform which are formed because of the tectonic processes inside the Earth.

### ORIGIN :

Volcanoes are formed because of outpouring of hot lava from inside the earth from the layer between crust and mantle called aesthenosphere.

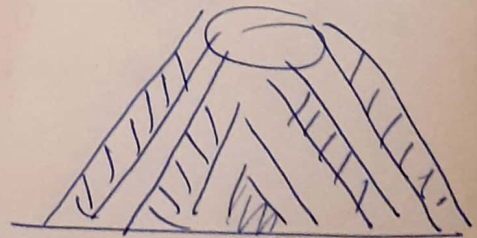
The landforms associated with it are intrusive i.e. inside the earth and extrusive i.e. outside the earth.

### TYPES OF VOLCANOES :

#### 1. Composite Volcano

These are made of successive layers of magma.

These are one of the highest  
Eg Mt Etna, Mt Shambali





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## 2. Caldera :

These volcanoes are very explosive and even burst on themselves

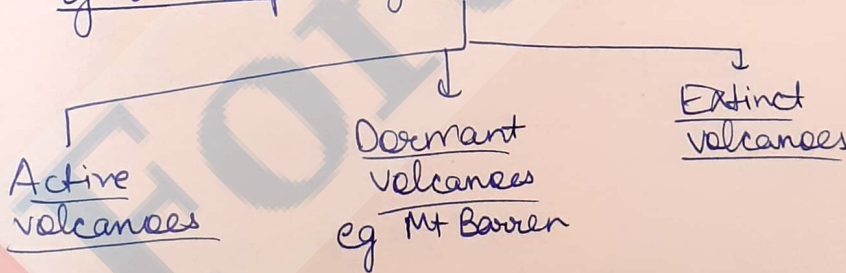


## 3. Crater volcanoes

4.

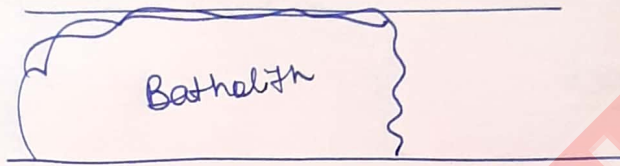
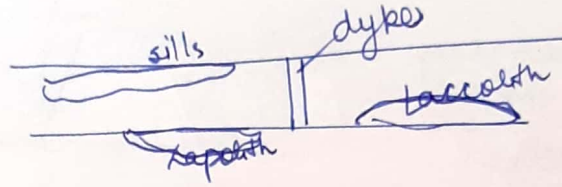
— These are very fluid and cover great lengths of area

Volcanoes can also be classified on basis of its explosivity situation i.e.



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## INTRUSIVE LANDFORMS



Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	

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write anything)

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anything in this Area)

Q.15) What factors govern global distribution of rainfall? Explain how rainfall variation impacts human activities and vegetation in an area. (15 Marks, 250 Words)

Rainfall is a very important aspect of human civilisation. Its distribution over the earth determines the livelihood, culture, activities etc of the people

### Global distribution of rainfall

→ varies from as low as 10 cm in 2 years at some places to more than at places like Cherrapunji in India

### FACTORS THAT GOVERN :

1. Temperature of that area → Temp. determines the rate of evaporation, and hence cloud formation
2. Latitude of the area  
→ Tropics and polar areas have rainfall and snowfall respectively
3. Area under tree cover — Forests get a large share of rainfall

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4. Stability and instability of the atmosphere — Unstable airmass cause rainfall
5. Distribution of land and water area  
— More the water area more the rainfall  
Eg: southern hemisphere receives more rainfall

## IMPACTS ON HUMAN ACTIVITIES:

1. Productivity of population  
— It enhances if the rainfall is adequate and equitably distributed
2. High rainfall → flood situations  
Low rainfall → Drought → DISASTERS

These two things can happen simultaneously in 2 parts of the country

3. Livelihood → depends of on rainfall  
Eg India — Agricultural country  
Africa → Nomadic majority









Q.16) What factors are responsible for geographical localization of automobile industries? Also identify major automobile clusters in the world and in India.  
(15 Marks, 250 Words)

Automobile industries contribute largely in the manufacturing sector, especially in India. These are the industries that produce and assemble parts of automobiles and the automobiles as well.

### FACTORS FOR GEOGRAPHICAL LOCALISATION

1. Raw material orientation  
— Automobile industries need proximity to areas with steel production, rubber industry, glass industry etc.
2. Skilled labour — Labour having expertise in assembling is required. Also, engineers to design are also required.
3. Market proximity — Automobile is majorly a weight gaining industry, hence it needs proximity to market.

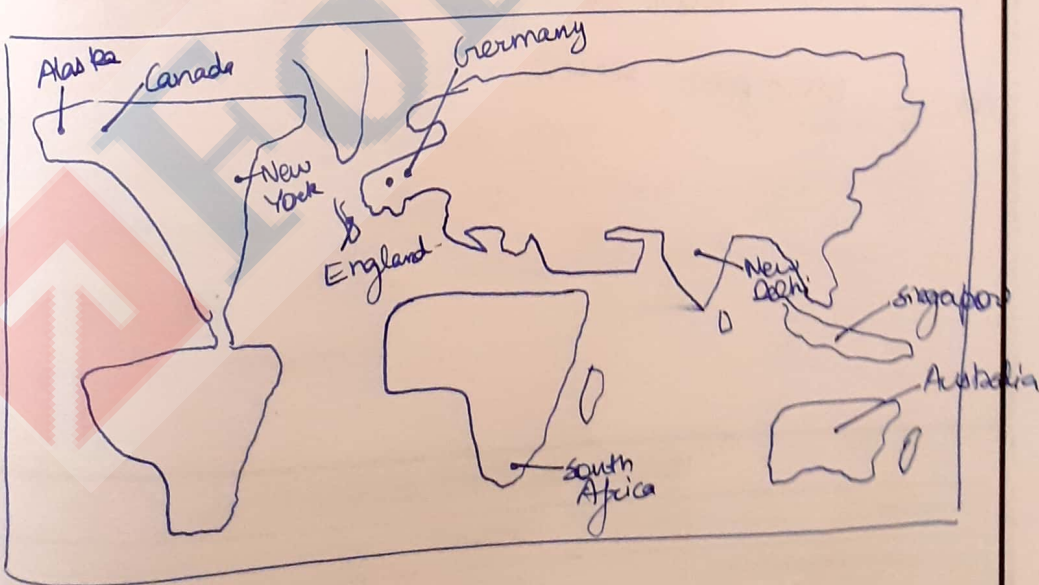


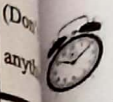
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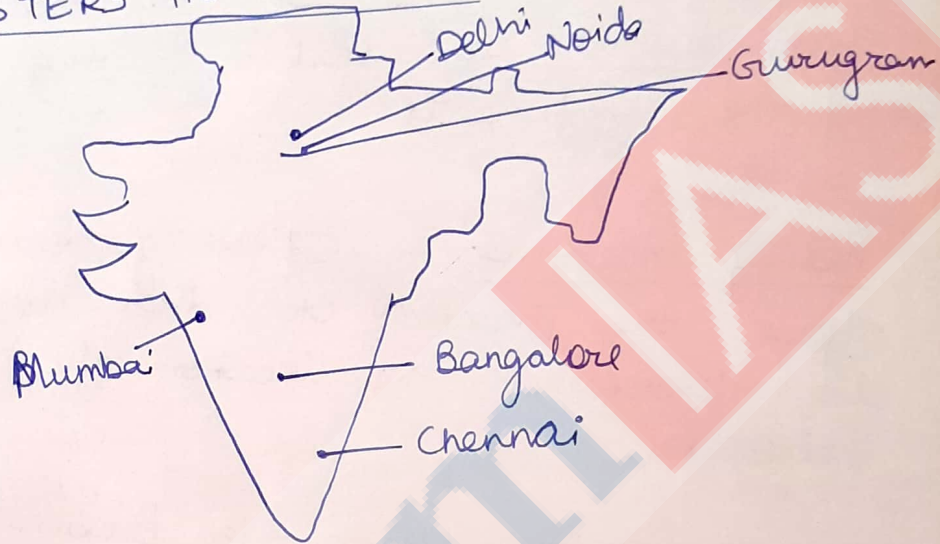
4. Suitable climate - Pleasant weather conditions are required. Too hot and humid can lead to rusting of the components
5. Policy incentives - If the government offers tax incentives etc, then it also determines the location of industries.
6. Conglomeration effect - is proximity to industrial areas is beneficial.

## CLUSTERS IN THE WORLD





## CLUSTERS IN INDIA



Automobile industry in India is very crucial as it employs many. Over the years it has emerged as a Champion sector.

### Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		Total :	



Q.17) Agricultural Export Policy, 2018 emphasises on diversification of exports by products and destination. Assess the benefits and challenges in implementation of this policy.

(Don't Write anything in this Area)

Agricultural Export Policy, 2018 focusses on two things - first doubling farmers income by 2022 and second doubling agricultural exports by 2022

## FEATURES

1. Streamlining of export policy  
— Making comprehensive export policy for India and making it stable
2. Fighting Sanitary and Phytosanitary measures — framing a holistic response and accepting no more than WTO norms
3. Reforms in APMC Act — Removal of perishables from APMC Act, streamlining Mandi fee and increasing accessibility of the mandis
4. No restriction on exports for certain items — Eg Organic products

5. Developing agricultural export zones (AEZ), agri start up fund.
6. Constructing Mega food parks, state of the art testing laboratories and integrated cold chains

### BENEFITS OF IMPLEMENTATION:

1. It will help in increasing farmers income
2. Making exports competitive → ↑ agricultural growth → ↑ share in GDP
3. It can diversify our exports basket — inclusion of value added products
4. Maximise India's share in world agriculture — which is currently only 2%.
5. Bring economies of scale in agriculture sector in India



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## Challenges :

1. Due to MSP regime, India's agricultural products are already dear in the domestic market.
2. The target of \$60bn by 2022 looks very ambitious as most of our export basket has inelastic products like meat, marine products, rice etc.
3. If can hurt local consumers and India has consumer-bias in its agricultural policy — whenever there is inflation → India puts restriction on exports

Indian agricultural export policy needs to find out innovative methods of promoting indigenous products to outside world. 'Brand India' should be developed on these lines

Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	

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**Q.18)** Discuss the role of dairying in boosting the national nutritional security and agricultural income. Also, discuss the challenges faced by this sector and measures to address the same. (15 Marks, 250 Words)

Dairy is a very crucial sector for India. Historically and culturally, India is regarded as an economy centred on dairy. There are references in Rig Veda.

## ROLE OF DAIRYING

### National Nutritional Security

- Milk is the major source of nutrition in India as major population is vegetarian and even non vegetarian population is not regular in consuming meat products
- Higher rate of stunting and malnutrition could be addressed

### Agricultural Income

- It can help achieve the aim of doubling farmers income by 2022
- More inclusive sector
  - ↓
  - >60% Women participation
- It is labour intensive. This generates more employment



## CHALLENGES FACED:

1. Cooperative structure → Not democratic  
There is usurping of power by large farmers
2. Quality of the products — It is not very up to the mark. Majority is under informal channels  
It creates hindrances in our exports to America and the EU
3. Competition by Australia and New Zealand — where the quality regime is much superior
4. Productivity of the cattles — Productivity is one third of other countries.  
Especially the male semen is poor
5. Diseases outbreaks — like foot and mouth diseases → lack of veterinary care



MEASURES:

1. Focus on Quality — by standardising the procedure and laying out norms
2. Availability of veterinary care — Adequate and timely help can help in assuring income and produce
3. Technological interventions — High breeding cattles can be used
4. Tax incentives by the government, as it is the only agricultural sector which gives as high as 2/3rd return to the farmers
5. Encouraging private players
6. Improving & democratizing cooperative structure

Dairy sector in India is very inclusive and hence its development would reap multiple benefits.

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Structure		Content	
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Q.19) Defining blue revolution, explain the problems and strategies for pisciculture development in India.  
(15 Marks, 250 Words)

(Don't Write anything in this Area)

Blue revolution is the increasing efficiency and production of marine products eg fishes, oysters etc.

It was started by the Government of India during the IIIrd FYP i.e. 1985-1990 and Fish Farmers Development Agency was constituted.

Lately there have been emerging problems for pisciculture. As per FAO report → most of the areas are overexploited in the South Asian region.

### PROBLEMS:

1. Poor infrastructure — The items are perishable and hence lack of adequate infrastructure like cold storage decreases productivity drastically.

2. Equipments not available - like fishing nets, fishing gears etc.
3. Disputes with neighbouring countries - for eg Sri Lankan disputes regarding fishing near Tamil Nadu
4. Diseases outbreaks - Eg Formalin evidences in West Bengal
5. Absence of proper standardisation and laboratories
6. Geographical factors - Being a tropical country, the quality of fish and diversity of fish is not very rich. Also hot and humid climate increases chances of degradation

### STRATEGIES:

India is world's 2nd largest fish producer. It can do following things to reap maximum benefits;

- 1) Fish Intra & Aquaculture Development



(Don't Write anything in this Area)

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(Don't Write anything in this Area)

Fund (FIADF) - constituted by government should be utilized effectively

2) Adopting recommendations of Meenakumari Committee - Technology transfer and linkage development

3) Infrastructure for quality seed and seed  
- Govt has established 'Breed Bank' for this purpose

4) Mobile laboratories - for fish health checks etc

5) Eco friendly aquaculture - for sustainable development

Schemes like SAMPADA, Mission Fingerling etc are right step in the direction

Feedback (For OFFICE use only)

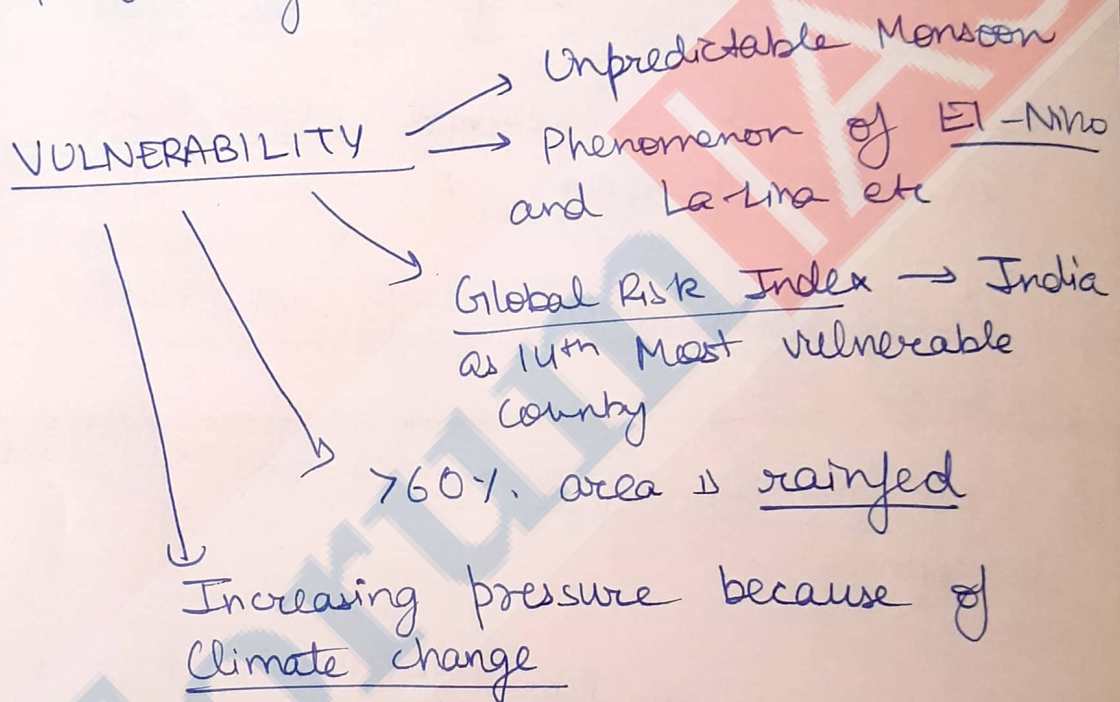
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**Q.20)** Given the vulnerability of Indian agriculture to the vagaries of nature, discuss how far, the Government policies have ameliorated farm distress in recent times. Also, suggest measures to address this issue in the long term. (15 Marks, 250 Words)

Indian agriculture employs more than 60% of the population and its vulnerability thus poses vulnerability to whole of our country and economy



## GOVT POLICIES TO AMELIORATE

↳ Policies like PMKSY, PMFBY, PM-AASHA ~~etc~~, PM-KISAN etc

1. PM Krishi Sinchayi Yojana — provides



for improving on irrigation front. It has 2 components

Har Khet Ko Pani

↓  
assuring water availability to each farm.

The remote areas would be provided with standalone facilities

↓  
Per Crop Drop  
More Crop

i.e. increasing water use efficiency by using techniques like Drip irrigation, Sprinkler irrigation

2. PMFBY → for insurance support, extended recently for various other pest attacks, post harvest also.

3. PM-AASHA → assured income support by procuring through multiple options — Pulses, copra, oilseeds are included

4. PM-KISAN → assured income support of ₹ 6000 / year

## MEASURES FOR LONG TERM:

1. Contract farming — to avoid distress sales



2. High quality seeds — using biotechnology interventions
3. Increasing insurance penetration and overcoming the loopholes in PMFBY
4. Irrigation — to all the areas using integrated techniques and which are suitable for that area
5. Drought resistant crop varieties should be developed
6. Diversification of income by boosting allied activities like horticulture, dairy, pisciculture, apiculture etc

India is a majorly agrarian economy and hence it should be ready for climate change shocks by focusing on sustainability.

Feedback ( For OFFICE use only )

Structure		Content	
Question Interpretation		<b>Total :</b>	



(Don't Write anything in)

## Mentor Feedback Questions

1 .....

2 .....

3 .....

4 .....

5 .....

## Test Goal

1 .....

2 .....

3 .....

## Outcomes

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## Marking Scheme

Marks	Good	Average	Below Average
10 Marker	3.75 – 5.0	3.0 – 3.5	< 3.0
15 Marker	5.75 – 7.0	4.0 – 5.5	< 4.0

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