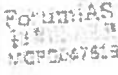


Test Code: 31056

RECEIVED
11 FEB 2020
ForumIAS
ACADEMY

FIAS - 2020 - GS16C/R

 <h1 style="margin: 0;">ForumIAS</h1> <h2 style="margin: 0;">ACADEMY</h2> <h3 style="margin: 0;">GENERAL STUDIES</h3>	
Name Of Candidate	<i>L. Ambica jain</i>
Email Id.	
Mobile No.	
Roll No.	
Date:	

Time Allowed: Three Hours

Maximum Marks: 250

INDEX TABLE			INSTRUCTION	
Q. No.	Max. Marks	Marks Obtained	<p>1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet.</p> <p>2. There are TWENTY questions printed in ENGLISH, all questions are compulsory.</p> <p>3. The number of marks carried by a question/part is indicated against it.</p> <p>4. 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.</p> <p>5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off.</p> <p><i>Any specific messages for ForumIAS Mentors/ Evaluators with respect to your copy? Write it here.</i></p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total Marks:				
Remarks:			Start Time 1:25pm	End Time 4:33pm
			Mode Of Examination : Online <input type="checkbox"/> Offline <input checked="" type="checkbox"/>	
			ECN CODE:	Evaluation Date:

Parameters	Excellent	Very Good	Good	Average	Poor	Very Poor
Language						
Structure						
Presentation						
Handwriting						
Content						
Attempt						

ADDITIONAL COMMENTS



Q.1) Ocean warming has caused coral reef depletion via bleaching as well as deadly outbreak of diseases. Examine. (10 Marks, 150 Words)

Climate change has its impact on the global temperature. With global warming there is a rise in ocean temperature. The average temperature of oceans have increased over a period of time.

Impact of Ocean warming

(i) Coral bleaching:

Corals which are calcareous organisms are home to several plankton and organisms. With the rise in temperature, these ~~coral~~ plankton gets affected, making their survival difficult. This results in coral bleaching.

Coral bleaching results in discoloration of corals as they lose the plankton.

This also impacts the food chain of oceans.

Fishes and other aquatic beings dependent on coral's plankton get affected. Thus ocean warming affects corals.

(ii) outbreak of diseases:

With increasing temperature, fishes in general produce toxic chemicals, unhealthy fats, which can prove to be fatal.

Several diseases within the aquatic ecosystem as well as ⁱⁿ those who depend on these foods, outbreak.

Thus ocean warming, along with glacial melt, rise in sea level, also poses the above mentioned threats, and requires greater attention to tackle it.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.2) Enumerate the factors which are responsible for the location of the cement industry in India. Also, explain why the cement industry is mainly concentrated along the Vindhyas range. (10 Marks, 150 Words)

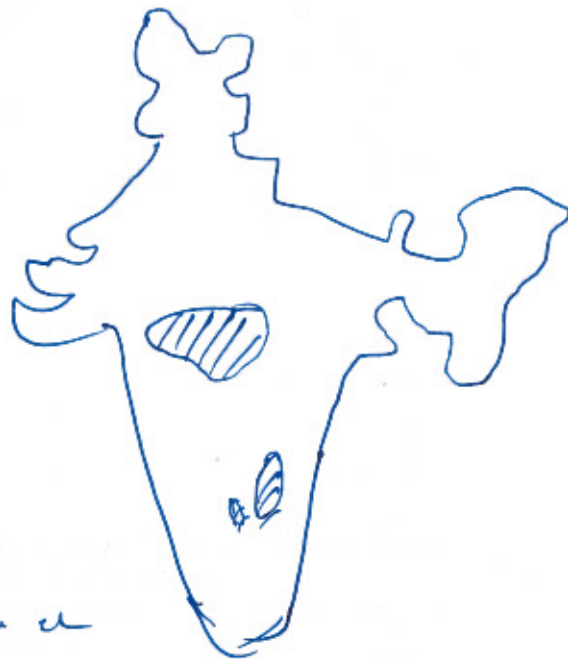
Cement industry is mainly dependent on raw material. It requires raw materials like limestone, etc.

Factors for its location

- (1) Raw material
- (2) Electricity
- (3) Labour force.

Cement industry in India:

Cement industry in India is largely located in windhayan ranges, along with in deccan peninsular region - of andhra, Tamil nadu &



Reasons:

(1) Vindhayan ranges have rich source of limestone and dolomite deposits

(2) availability of labour

(3) power from dams across river Narmada.

All these factors affects its location near to vindhayan region.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.3) How does the plate tectonics theory help in explaining the formation of Himalaya. (10 Marks, 150 Words)

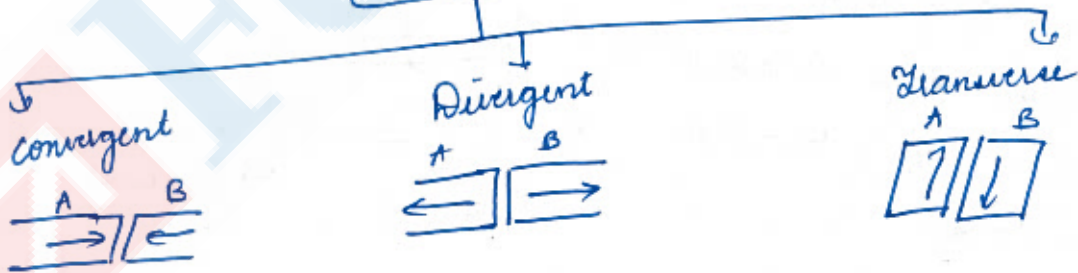
The theory of plate tectonics is an important contribution to understand the geographical structures and their location.

Plate tectonics theory

According to this theory, the lithosphere of the earth floats on mantle and has been divided into 7 major plates and several minor plates.

Landforms are formed basing on 3 different movements of plates.

Plate movements



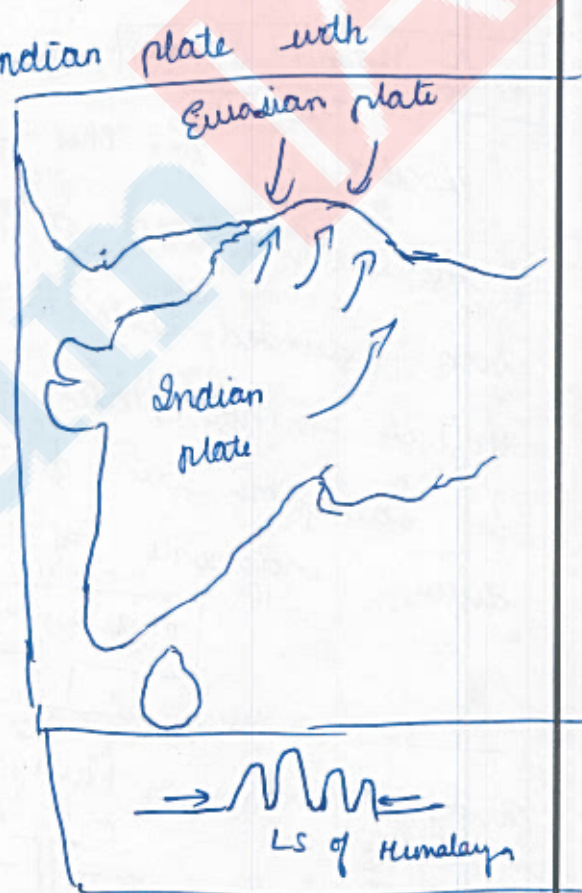
Convergent - when two plates converge
Divergent - when two plate move apart
Transform - when two plate slide against one another.

Plate tectonics & formation of Himalayas

Himalayas are young folded mountains, plate tectonics offers explanation for the formation of Himalayas.

- (1) They are located on the boundary of Indian and Eurasian plate.
- (2) Due to convergence of Indian plate with Eurasian plate, land folded.
- (3) Due to low density of crust, Himalayas emerged in the place of Tethys sea.
- (4) Even today Himalayas are emerging.
- (5) Evidence of sediments on Himalayas prove this folding.

Thus plate tectonics theory explains the formation of Himalayas.



Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.4) The fast rate of urbanization is leading to fundamental changes in land use patterns in India. Discuss. (10 Marks, 150 Words)

Urbanisation in India, in the recent times has ~~go~~ been growing at greater pace. This fast rate of urbanisation, often is an unplanned urbanisation and has its impact on land-use pattern.

Urbanisation and land use pattern

- (1) Rapid urbanisation - results in change in land-use pattern.
- (2) Increased land under human settlements.
- (3) Diversion of forest lands for settlements and commercial use.
- (4) Shift of land from agriculture to non-agricultural purposes.
- (5) Increased encroachment on river banks and flood plains.

- (1) Increased Urbanisation and Urban Sprawl.
- (2) Emergence of sub-urban centres, flowing from cities to rural areas.
- (3) Decline in agricultural land.
- (4) Occupation of community and fallow lands.

Thus, with urbanisation, the stress on land which is limited resource, increases and often ecological diversity in lands get affected.

To address this mismatch, there is a need for planned urbanisation.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.5) What do you understand by Geo-heritage? Bring out the reasons why Geo-heritage has been a neglected feature in the conservation landscape of India.

(10 Marks, 150 Words)

Geo-heritage are sites which have greater geographical values and have huge geological significance. They are important sources of minerals, have unique geological structures.

In India, Geological Survey of India (GSI) is the nodal agency that declares a site as Geological Geo-heritage site.

In the conservation efforts, Geo-heritage sites, unlike cultural heritage sites are often neglected.

Reasons for negligence

(i) These sites are usually rich in mineral resources

↳ caves in Andhra Pradesh - rich in dolomite, limestone.

- (ii) Have greater commercial value, thus are much prone to resource extraction.
 - (iii) Lack of awareness of on future effects of such excessive exploitation.
 - (iv) Poor management of sites
 - (v) Insufficient conservation mechanisms available to protect and preserve them.
- Because of above mentioned reasons, Geo-heritage sites are often neglected. There is need to increase the efforts of conservation of these sites for greater geological balance and sustainability.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.6) Discuss the concept of Polar Vortex and explain its impact on the Indian Climate. (10 Marks, 150 Words)

Polar Vortex

Polar vortex is the fast flowing circular cold winds at polar region, get deflected from its normal pattern and reaches down.

These are high winds above surface, which are colder, due to pressure difference and ~~pressure~~ ~~flow~~ ~~down~~ due to pressure gradient they flow down in lower latitudes.



Impact

- (1) Increased cold winds
- (2) Decline in temperature on landmasses
- (3) Increased snowfall.

Impact on Indian Climate

- (1) Decline in temperature in interiors.
- (2) Cold winds blow from central Asia.
- (3) Create cold wave like conditions in northern hemisphere.
- (4) Severe winter in northern India.

These are some impacts of solar vortex.

Feedback (For OFFICE use only)

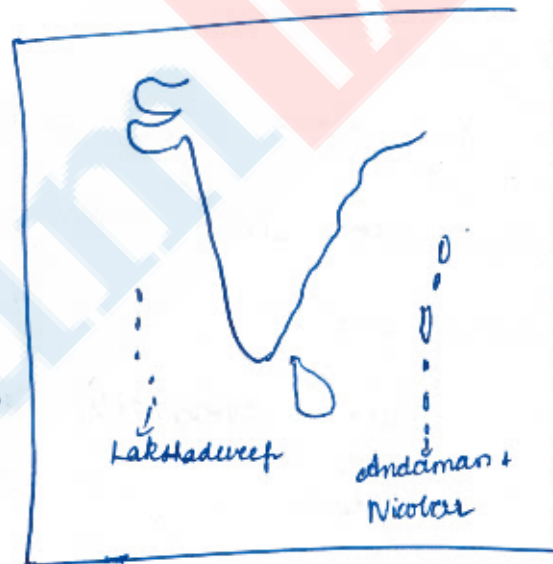
Structure		Content	
Question Interpretation		Total :	



Q.7) Discuss the difference in the process of formation of Lakshadweep and Andaman & Nicobar Island of India. (10 Marks, 150 Words)

Lakshadweep and Andaman & Nicobar Islands are two important sets of islands located on western and Eastern coasts respectively.

The process of formation of these islands differ from one another as a result their nature vary.



Difference in process of formation

(1) Formation of Lakshadweep Islands:

Lakshadweep Islands are mainly coral islands and are formed due to the coral reefs.

They are result of sediment accumulation in coral reef and then rising.

They are characterised by atolls, reefs, and consists of calcareous deposits and sediments.

Formation of Andaman & Nicobar Islands:

Andaman and Nicobar Islands are terrestrial, ~~hard~~ surface Islands. They are believed to be the extension of ^{large} Alkan yoma & Pegu yoma of Myanmar.

They have hard surface. In fact Andaman and Nicobar Island consists of active volcano and peak (saddle peak).

Thus geologically the formation of Lakshadweep and Andaman & Nicobar Islands vary.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.8) Describe the concept of upwelling. Illustrate the causes and regions of upwelling and their socio-economic impact. (10 Marks, 150 Words)

Upwelling can be defined as the process through which the rich minerals ~~are~~ from Earth's mantle come to Earth's surface.

Causes of upwelling

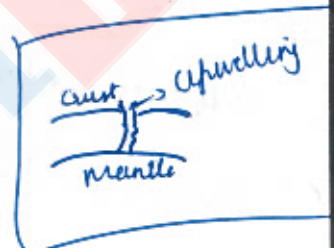
(1) Upwelling mainly is a result of convectional currents that flow from mantle towards crust.

(2) They are also resulted when excessive heat from mantle is released towards Earth's surface.

Geysers, springs, upwellings at ~~the~~ oceanic bottoms are some forms of upwellings.

Regions of upwellings:

- (i) Yellowstone park - USA - (Geysers)
- (ii) ~~Cape~~ ~~and~~ springs - In India - MP (Maukams)
- etc



Impact of upwelling:

(i) Social: Upwelling regions form the places of settlement. They are sources of livelihood for cold and temperate regions.
- help in food production, etc.

(ii) Economic ~~and~~ impact:

- (a) Provide rich mineral sources
- (b) help in electricity generation.
- (c) source of livelihood.
- (d) aesthetic value.

Thus upwelling has both social and Economic value.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.9) What is apiculture? Explain its importance in agriculture and rural development. (10 Marks, 150 Words)

Apiculture can be defined as Bee-farming where bees are grown in farming lands to collect and produce honey.

Importance of apiculture

Apiculture has significance in agricultural and rural development.

(i) In Agriculture:

- (a) It is an allied activity along with agriculture.
- (b) Helps in pollination and agricultural production.
- (c) Helps increase farmer's income
- (d) Diversification of risk in times of crop failure.
- (e) Can be done in parallel with agriculture.

(i) On Rural development:

- (a) Help generate employment, as many are dependent on agriculture.
- (b) Reduce stress on land
- (c) Increase rural economic productivity.
- (d) Reduces stress on urban centres and check out-migration.

Thus agriculture has great potential in rural development and also it helps in conserving the species which are threatened due to ecological ~~loss~~ degradation.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	



Q.10) What do you understand by temperature inversion? Discuss various types of inversions. (10 Marks, 150 Words)

Temperature Inversion can be defined as a phenomena where with increased altitude, the temperature increases. i.e, it goes against the normal lapse rate (decline in temperature with increase in altitude - $6.5^{\circ}\text{C}/1000\text{m}$).

Temperature inversion is the reversal of normal lapse rate.

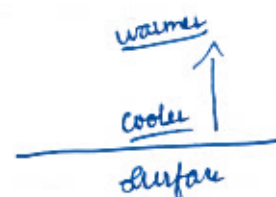
Types of inversions

Temperature inversion can take place in different regions. The type are:

(i) Cold winter nights:

When the surface gets ~~cooled~~ cooled faster and with clear sky without surface winds, the temperature on the surface is much cooler than above.

It is because in winter, Earth's



Surface receives less heat and gets cooled quickly.

(ii) In polar regions.

When the amount of heat received is less, and warm air mass reaching polar region, the air above is warmer than the air over the surface.

(iii) Inversion in valleys:

Temperature inversion also takes place in valleys which are not exposed to sun. Thus temperature inversion, goes against the principle of normal lapse rate and results in cooler surface than air above it.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

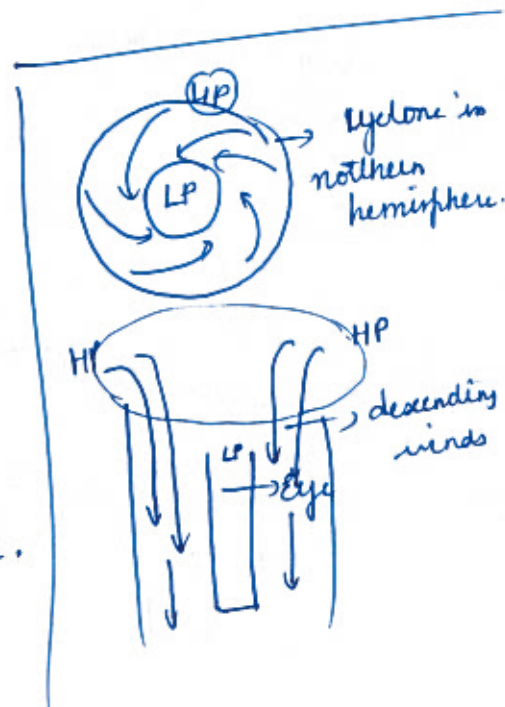
Q.11) Discuss the conditions required for the formation of a tropical cyclone. How is a bomb cyclone different from a normal cyclone? (15 Marks, 250 Words)

Tropical cyclones occur in Tropics, away from equator. They occur on the ocean surface and requires following conditions.

Conditions

- (1) Warm ocean surface
- (2) Vast ocean land mass
- (3) Low pressure on ~~earth~~ ocean surface
- (4) High pressure gradient.
- (5) absence of upper winds, ~~at~~ above sea surface.
- (6) Coriolis force.

Tropical cyclones occur in the months of October, November when the landmass in Northern hemisphere is relatively cooler. It creates High pressure on



land-mass and low pressure on Ocean surface

Due to this pressure gradient, wind moves from high pressure to low pressure and draws moisture from ocean surface.

When it hits coast it results in landslide and sudden outburst of heavy rainfall.

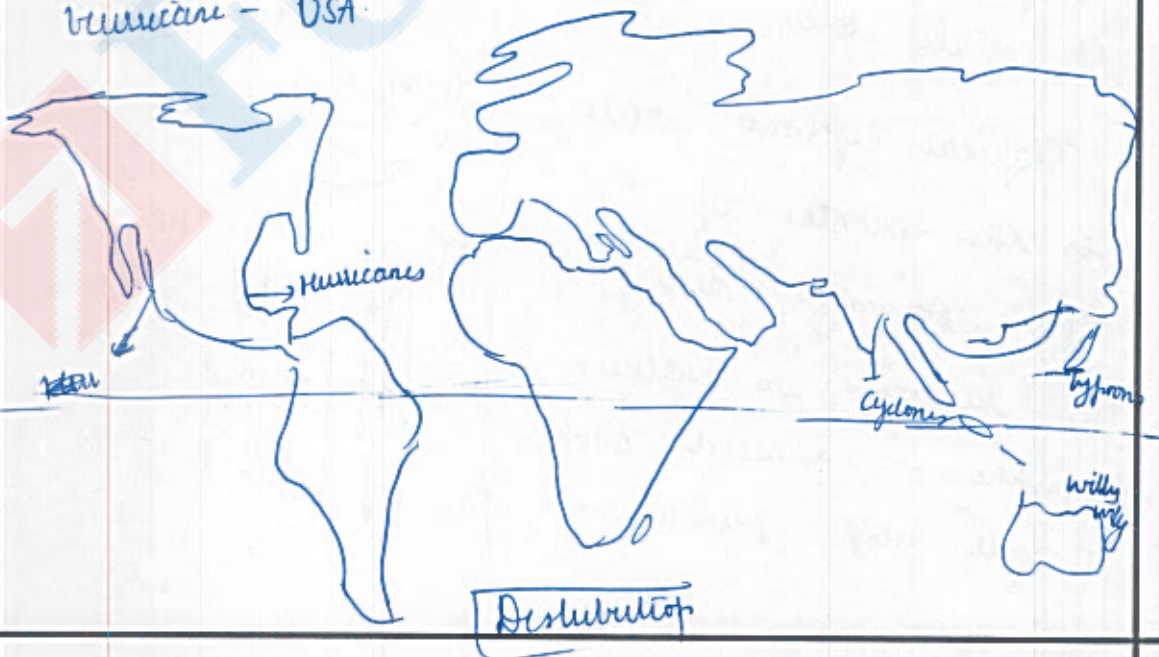
Tropical cyclones are called varied in various parts.

Typhoons - East of China coast, Japan

Cyclones - Indian coast

Willy Willy - Australia

Hurricanes - USA



Difference between Bomb cyclone and normal cyclones :

Bomb cyclone: It is of much intense speed and velocity.

- largely occurs in USA coast
- causes huge damage.

Normal cyclone :

- Circular in shape
- With speed of 200-300 km/hr.
- causes devastation and landfall on coast.

Tropical cyclones unlike temperate occur only on sea surface and are anti-clockwise in northern hemisphere and clockwise in southern hemisphere.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.12) Explain how local winds are different from planetary winds, giving examples, highlight the role of local winds in influencing climate, agriculture and livelihood in various regions. (15 Marks, 250 Words)

Winds are important agents in geography. Based on their characteristics, their duration, location & extent they are classified into different types such as:

- (1) Planetary wind
- (2) Seasonal winds
- (3) Local winds.

Planetary winds	Local Winds
<ol style="list-style-type: none"> (1) also known as permanent winds. (2) Blows throughout the earth, year long. (3) Influenced by pressure belts formed on earth. (4) Their direction is influenced by Coriolis force. (5) Mainly 3 types → Trade winds, westerlies, Easterlies. 	<ol style="list-style-type: none"> (1) They are not permanent (2) Blow in limited geographies. (3) Influenced by local climatic conditions. (4) Direction influenced by land features. (5) There are several local winds. - chinook, Kalbarisakhi etc.

Local winds are the non-permanent geographically limited winds, which flow locally. They are impacted by local conditions. At the same time, local winds have their impact on the places they blow.

(i) Influence on climate:

Local winds have influence on the climatic conditions. For example: - Chinook - local wind that blows over Rockies mountain in North America, also known as snow-eater. On the lee-ward side, they create moderate winter climate.

Loo - that blows in Northern India during summers, increase the temperature.

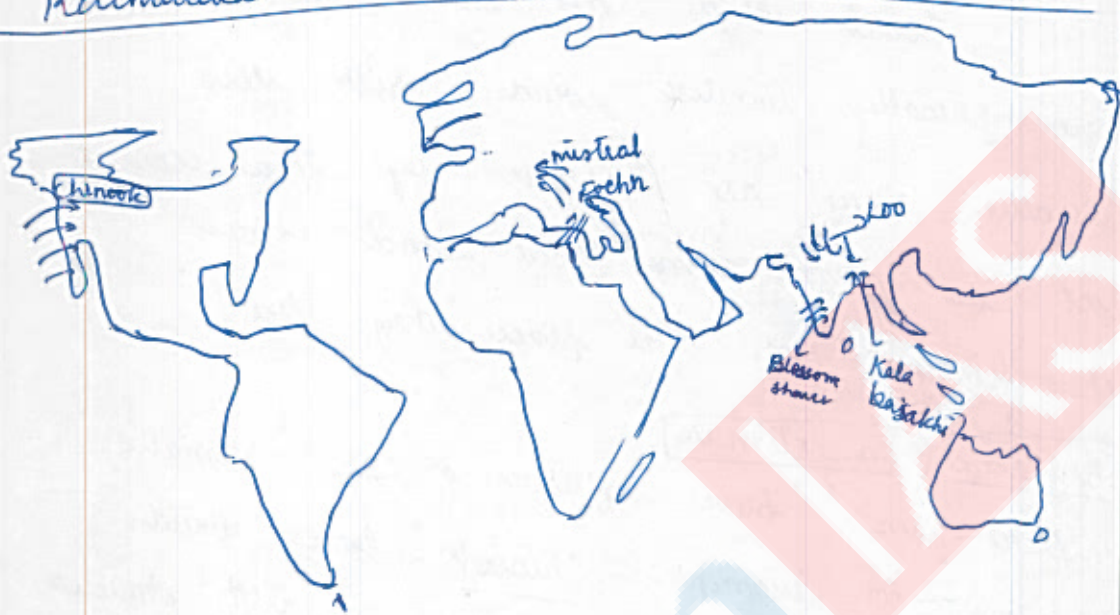
(ii) Influence on Agriculture

Some local winds are important in agricultural production.

For example:

Local winds like mango showers - important for ripening of mangoes,
Cherry Blossom - for coffee plants in

Karnataka



Influence on Livelihood

Local winds also impact livelihood. It helps in scaling agriculture, at time it damages lives, due to heat waves (Loo), sands from Sahara etc. Local living conditions are influenced by these winds.

Thus local winds, limited in geographies have several impacts on various phases of lives.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.13) Discuss the mechanism of monsoon in Indian Subcontinent. Assess its ecological, economic and social impact. (15 Marks, 250 Words)

Monsoons are the seasonal winds that blow over the Indian sub-continent. They are important as they bring about 97% of India's rainfall.

Indian monsoon happens in 2 phases:

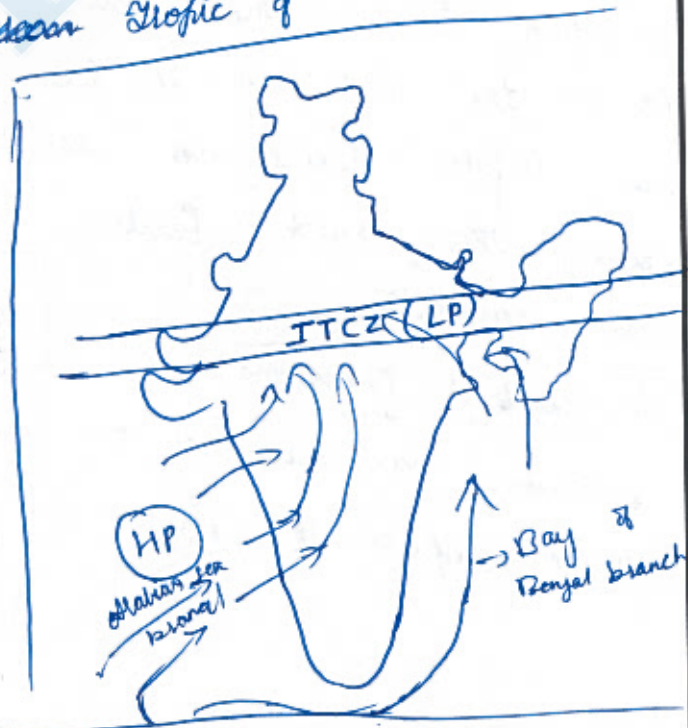
- (i) South-west monsoon
- (ii) North-East / Retreating monsoon.

Mechanism of Indian monsoons

(1) Indian monsoons are a result of shifting Inter tropical convergence zone from Equator towards ~~monsoon~~ Tropic of Cancer ($23\frac{1}{2}^{\circ}N$)

(2) This creates low pressure on the Indian landmass

(3) The relatively cold ocean surface is the region of high pressure.



(4) From here the trade winds (easterlies) blow towards the Inter Tropical Convergence Zones.

(5) Due to the impact of Coriolis force, after crossing Equator, these south East trade winds move towards right, becoming south-West wind.

(6) These winds get divided into 2 branches.

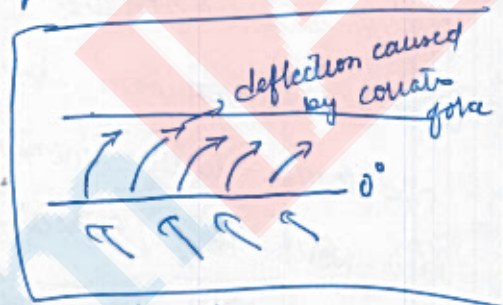
- Arabian sea
- Bay of Bengal sea

causing rainfall on Indian landmass.

These two branches converge at the foot hills of Himalayas in central part.

(7) When ITCZ shifts towards Equator, the HP on the landmass or low pressure on Ocean surface result in retreating rainfall.

During this period - Eastern coast, Tamil nadu receives rainfall.



Impact of Monsoons

Monsoons have impact on diverse aspects of life.



(i) Ecological impact: Due to heavy rainfall, it helps in vegetation, growth. Western ghats which receive highest amount of rainfall, is a bio-diversity hotspot. North East hills too are rich in bio-diversity due to great amount of rainfall they receive.

(ii) Economic impact: India, where large population is dependent on agriculture, monsoons have greater economic value. As agriculture is rainfed predominantly, timely arrival of monsoon has greater economic impact.

(iii) Social impact: Monsoon has greater social impact areas where rainfall is good are developed. Rain shadow regions with scant rainfall are backward. Thus monsoon has greater impact on diverse walks of lives. Delayed or fluctuating monsoons has negative impact on Indian economy.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.14) What are the factors affecting the location of industries? Discuss in the context of the location of the Pharmaceutical Industry in India.

(15 Marks, 250 Words)

Industries are drivers of growth. The location of industries is contingent on several factors. The ideal place for location of industries depends on the following factors.

Factors

- (1) Near to the raw material
- (2) Supply of power
- (3) Availability of labour
- (4) Nearness to market
- (5) Availability of better transportation facilities. - Railways, roadways ports.
- (6) Near to River/ water bodies.

Based on the nature of industry one or more of the above factors affect Industrial location.

§ - labour-intensive industry - near the place where labour is easily available.

Location of Pharmaceutical Industry in India:

Pharmaceutical Industry is an important industry in India. India is a large producer of generic medicine. factors affecting its location.

(i) It requires skilled labour

(ii) Pharma industries are also located near availability of raw material -

Himalayan foothills -
§ extracts from forest.



(iii) Away from river bodies - to prevent their discharges into ~~the~~ water bodies.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.15) Explain the factors responsible for commercial fishing more developed in North Europe and North America as compared to Asia. Also, discuss why fishing is more developed along the western coast than on the Eastern coast of India?

(15 Marks, 250 Words)

Commercial fishing, i.e., ~~fish~~ Extraction of fishes for commercial purposes on large scale, through improved techniques and mechanisation is more predominant in North Europe and North America than in Asia.

Factors of such variations:

- (1) Asia - located in tropical zones, have diverse fishes in less number - It is not commercially viable.
- (2) North America, North Europe - predominantly temperate zones - have large number of single variety fishes - commercially more viable.
- (3) Asian countries lack sufficient technology required for commercial fishing - lack of deep sea fishing boats, mechanised trawlers, nets etc
- (4) Northern Europe & American Countries possess sufficient technology and equipment.

(5) Convergence of warm of cold currents near North American and North European coasts - (Grand Bank - New foundland - convergence of Labrador current and New foundland current).
 produces plankton - suitable condition for fish growth.

(6) Development of processing industries in North America and Europe.

These following reasons, have resulted in more advanced commercial fishing in Northern Europe and Northern America than in Asia.

Fishing in India

Within India, fish production is greater in inland waters than marine. In the coastal & marine fishing, the western coast produces $\frac{2}{3}$ of marine fishes.

The western coastal fishing is more developed than the Eastern coast of India due to several reasons.

Reasons

- (1) longer coastline on western side.
- (2) much inundated coast in west - helps growth of plankton and fish growth.
- (3) larger continental shelf at Malabar coast helping fish growth
- (4) Brackish waters/lagoons of Kerala, major places of fish growth.
- (5) Eastern coast - less inundated, not much viable for fish growth.
- (6) large scale - development of fishes industries in western side.



These factors collectively are responsible for development of western coast than Eastern. Of west, Malabar coast is of greater significance in fish production.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.16) Despite the implementation of various programmes for cleaning of our major rivers by the government, riverine pollution continues unabated in India. Explain by giving reasons. (15 Marks, 250 Words)

River pollution has been a point of major concern in India, with several rivers, being polluted, making the flow poor and water unfit for consumption.

Programmes for cleaning rivers

To address River pollution, several programs have been formed in recent past.

Programme like - (i) Namami Ganga, - to clean

Ganga,

(ii) Ganga Action Plan

(iii) National River Conservation Authority which looks after 30 odd rivers and their conservation.

Despite these programmes the river pollution still continues to remain.

Reasons:

- (i) Discharge of toxic industrial wastes
eg: Fertilisers & Kanpur on Ganga coast.
- (ii) River diversion
- (iii) Untreated sewage discharge.
- (iv) poor river management - reducing river flow.
- (v) Unregulated river banks
- (vi) poor implementation of laws
- (vii) lack of holistic & approach towards river conservation.
- (viii) Unregulated location of industries.

These are some of the reasons for continued pollution.

Measures:

There is a need to undertake holistic approach towards river development & 'Nirmal Ghat' - Swachh dhara - Aarohi dhara'

- (ii) Regulation on industrial location
- (iii) Rules on pollution discharge
- (iv) Better waste management mechanism.
- (v) Strict implementation of laws and regulations.
- (vi) Protection from illegal encroachments and employment of modern technology, assistance from international bodies - of Thames model.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.17) Explain with evidence, how continental drift theory explained the shifting of world continents over the earth's surface. Also, highlight its limitations.

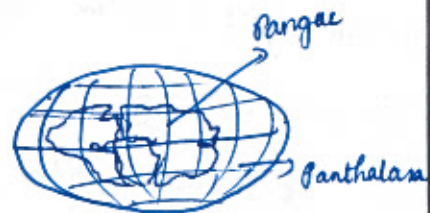
(15 Marks, 250 Words)

Continental Drift theory was proposed by Alfred Wegener in 1912. This theory provided explanation for the present position of continents and oceans.

Propositions

(i) According to this theory, the Earth consisted of one single land mass called 'Pangaea' and one single ocean called Panthalassa.

(ii) The Pangaea was further divided into 2 landmasses
 (a) Laurasia



(b) Gondwana.

by the sea called Tethys sea.

(iii) According to this theory, the continents have drifted from their earlier position to the current position.

(iv) Thus the current day oceans and continents are result of this drift of

Continents -

Evidences

There have been several evidences put forward to substantiate this theory -

(i) The jigsaw fit of continents located far apart. The boundaries with each other.

of Brazilian coast and Ivory coast



(ii) Distribution of fossils on

the coast.

of the gold placer deposits on Brazilian & African coast.

(iii) Carboniferous deposits found in India, Africa and Australia. (Also the till deposits).

(iv) Same age of rock and similar rock structure found on coasts.

These evidences substantiated the proposition that continents of current day were once together, and have drifted over a period of time.

Limitations:

This theory was an important break through to understand Earth's landforms.

However, it had its own set of limitations.

- (1) It failed to explain the reason for such drift.

- (2) The explanation of volcanic flow and drift fell short.

The mechanism behind such drift remained unexplained.

However later the Plate tectonics theory filled the vacuum and could explain why and how the continental landmass drifted.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.18) Insensitivity towards ecology of the Western Ghats is making the Southern States vulnerable to floods and landslides. What measures are required to arrest the widespread ecological devastation that the fragile Western Ghats are facing?

(15 Marks, 250 Words)

The recent devastating floods of Kerala, followed by landslides and mudflows reflects the insensitive attitude adopted towards ecologically sensitive zones such as Western ghats.

States of Maharashtra, Karnataka, Kerala had to face the brunt of excessive flooding and landslides, Over the period of time their vulnerability the grown.

Reasons for increased vulnerability

- (i) Damage to the eco-system of western ghats.
- (ii) Increased human encroachment in these areas
- (iii) Increased deforestation
- (iv) Undercutting of mountain ranges.

(v) Illegal tourist activities and violation of norms.

(vi) Mining and quarrying beyond permitted limits.

(vii) Increased agricultural practices.

(viii) Neglect of report by expert committee under Madhav Gadgil which provided recommendations for conservation of western ghats.

All these are some of the factors which have resulted in increased flooding and landslides.

Measures

To conserve the ecological fragile regions like western ghats, the following measures are to be adopted.

(i) Strict implementation of Gadgil committee recommendations -

(a) Demarcation of Ecologically sensitive zones, where human interference should be limited.

(b) Restricted construction in these zones.

- (ii) Regulation of mining activities.
- (iii) Strict vigilance on illegal tourist activities.
- (iv) Maintaining rich biodiversity.
- (v) Prevention of diversion of land from forest to other activities.
- (vi) Prevent deforestation and measure towards afforestation.
- (vii) Involving local community in conservation efforts.

Western ghats, which are biosphere hotspot have rich endemic species. There has already been huge damage inflicted on them. Their conservation is important to preserve rich biodiversity and also protect human settlements from facing floods and landslides.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.19) Explain the origin and types of volcanoes. Also, explain various landforms associated with volcanoes. (15 Marks, 250 Words)

A volcano is a vent or opening through which the molten rock material comes out over the Earth's surface in the form of lava.

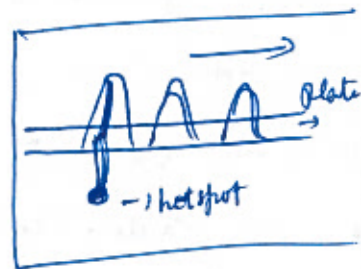
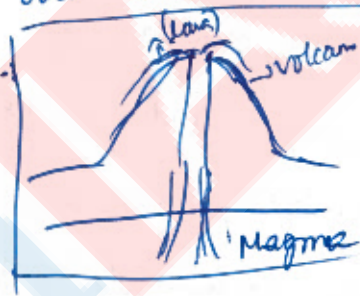
Origin of Volcanoes

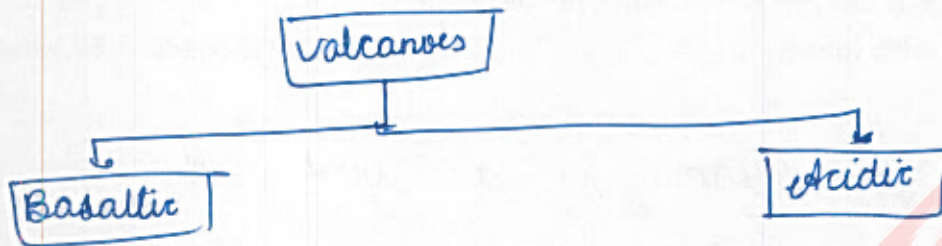
Volcanoes are result of venting of magma, when excessive heat under Earth's crust reaches earth's surface.

- (i) They can be located either on margins of plates - (divergent & convergent)
- (ii) or at hotspots, where magma flows out after regular intervals. (e.g. Hawaii Island)

Types of volcanoes

Volcanoes are classified based on their material and flow, i.e., the speed of movement of lava.





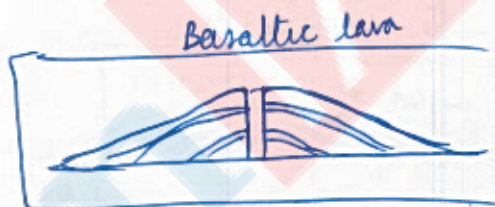
(i) Basaltic volcanoes

(a) Also known as shield volcanoes, they are less viscous and flows freely.

(b) They are less explosive and consists of small crystals

(c) The lava travels for longer distance.

(d) They are rich in granite rocks.
eg. Deccan lava flows.



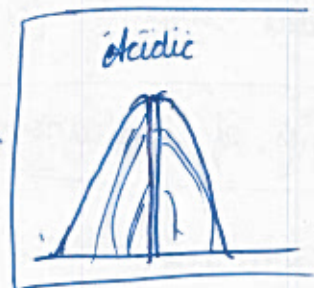
(ii) Acidic :

Acidic volcanoes have more viscous lava and does not flow for longer distance.

They are explosive as lava blocks at the crater, due to ~~the~~ viscosity.

They form conical land forms with steep slope.

It consists of large crystals.



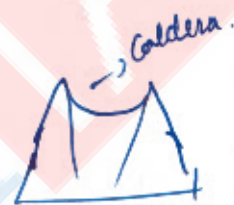
Volcanic landforms:

(i) Crater - depressions formed during lava flow from where lava comes out



(ii) Caldera:

When the crater collapses due to explosion and expands, it is called Caldrea



(iii) Caldrea lake:

When caldrea collects water and forms lake such lake is called Caldrea lake.



These are some of the land forms formed by volcanoes.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

Q.20) How does sand mining affect the Hydraulic structure in the country? What measures can be taken to mitigate these effects? (15 Marks, 250 Words)

Sand mining which is prevalent on Coastal and flood plain has an impact on the hydraulic structure of the country.

Sands along the coasts are extracted and from dry river beds in construction and other activities.

Impact on Hydraulic Structure

- (1) Sands help in seepage of water from surface to ground water.
- (2) They help better retainment of water.
- (3) In the absence of sufficient sand rivers overflow due to demand water carrying capacity.

(4) It affects ground water recharge and decline in ground water levels.

(5) It changes the river course and river flow.

(6) Encroachment in river beds, flood plains affects the river ecosystem.

(7) It can result in flashfloods and submergence.

Unregulated sand mining poses threat to rivers, river ecosystem and needs to be regulated.

Measures:

(1) Strict regulation on sand mining

(2) Address the loopholes in law and curb illegal mining.

(3) Restrict settlements along flood plains.

(4) Construct embankments

(5) Allow better recharge of water.

(6) Demarcation of zones along river course.

These measures can help mitigate the effects of sand mining.

Feedback (For OFFICE use only)

Structure		Content	
Question Interpretation		Total :	

ForumIAS

Mentor Feedback Questions

- 1
- 2
- 3
- 4
- 5

Test Goal

- 1
- 2
- 3

Outcomes

- 1
- 2
- 3

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

*Subject to change without prior notice.

For any suggestions and/or grievances regarding evaluation, please mail to :
asif@forumias.academy

IMPORTANT : We've made some changes to MGP

Dear Friends, We have brought some changes to you send your copies to us.

1. **Upload your copies on the academy portal itself.** Now you **no longer need to submit your copies by email to us.** You can login to your account and just upload your copy on your academy.forumias.com portal. Read more at <http://support.forumias.com/how-do-i-send-my-attempted-mgp-copies-to-forumias-academy/> or Google "forumias how to upload mgp copies".

2. **Please compress your files.** If you are going to submit copies online, and we need to quickly download them, please use a compressor like PDF compressor to ensure that you file size is within the range of 7-10MB. This will help us hasten your copies. We recommend using the free windows software. Available here : <https://www.pdfcompressor.net/>

3. **Support :** We have streamlines support for MGP / MGP copy Delay / Mentor Calls. You do not need to any longer send us emails for support. You can raise a ticket with respect to any issues that you are facing, and we will resolve your issue within 3 working days. You can raise a ticket at <http://academy.forumias.com/mytickets> . In case your issues are not addressed, you can email us at student@forumias.academy

*** It is advisable to raise a ticket after the copy has been evaluated**

4. You can see all the good copies of your Tests at

MGP 2019 : <http://blog.forumias.com/goodcopies2019>

MGP 2020 : <http://blog.forumias.com/goodcopies2020>

5. Help us help you by doing these (1) Use your real name when you create an account on <http://academy.forumias.com> (2) Update your real name by visiting <http://one.forumias.com> (3) Raise only one ticket for all your needs at <http://academy.forumias.com/mytickets> . Re-open old tickets even for new issues.

ForumIAS

ForumIAS, 2nd Floor, IAPL House, 19, PUSA Road, Karol Bagh, New Delhi.