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GENERAL STUDIES (TEST CODE : 742)

Name of Candidate	Soumyajit Bhattacharya		
Medium Hindi/Eng.	English	Registration Number	13918
Center		Date	22/4/16

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	3.5
2	12.5	4
3	12.5	4.5
4	12.5	4.5
5	12.5	5
6	12.5	4.5
7	12.5	3.5
8	12.5	2
9	12.5	4
10	12.5	3.5
11	12.5	6
12	12.5	5
13	12.5	4
14	12.5	4.5
15	12.5	4
16	12.5	6
17	12.5	4.5
18	12.5	4.5
19	12.5	4
20	12.5	4.5

Total Marks Obtained:

86

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are TWENTY questions printed in HINDI and ENGLISH.
इसमें बीस प्रश्न हैं तथा हिन्दी और अंग्रेजी दोनों में छपे हैं।
3. All questions are compulsory.
सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
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. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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103, 1st Floor, B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi – 110009

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

Dear Soumyadip,

1.

— The conceptual clarity of the subject is

2.

evident from the answers. The content

3.

is satisfactory. It can be improved upon

4.

in certain questions by linking various aspects of the issues. Also supplement from magazines and internet.

5.

— The structure presentation of the answers is good. Keep attempting in a similar way.

6.

— Try to avoid generalised answers in certain questions. State specific points related to issues.

— Your attempt is good. Keep it up.

Good luck!

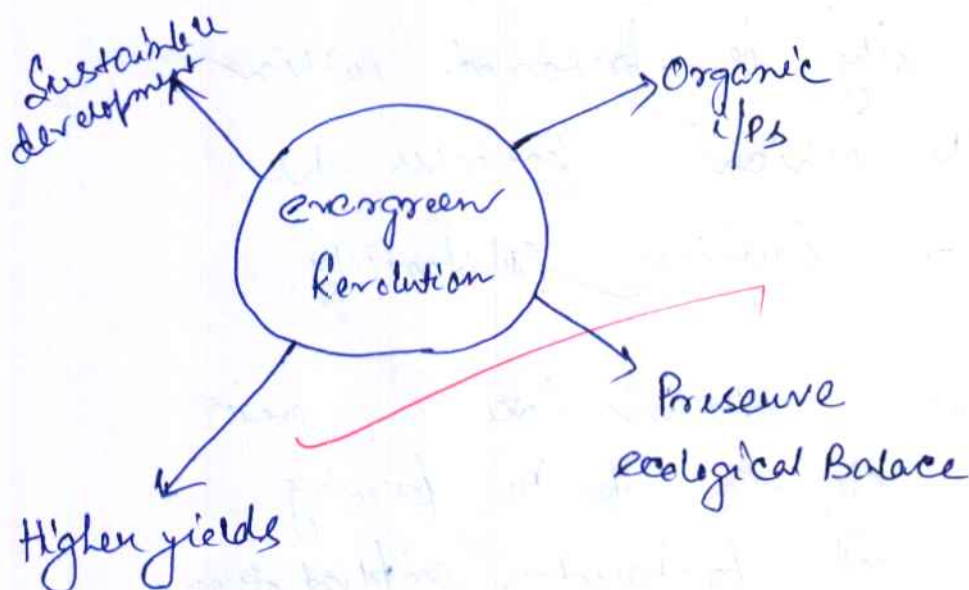
All the Best

All the questions are compulsory and carry 12.5 marks each.

1. Smallholder family farms with pro-nature, pro-poor and pro-women orientation can provide a boost to the evergreen revolution. Evaluate. Also, discuss the threats and challenges that family farms face.

छोटे जोत वाले फैमिली फार्म जो कि प्रकृति अनुकूल व गरीबों तथा महिलाओं हेतु सहायक होते हैं, सदाबहार क्रांति को बढ़ाव दे सकते हैं। मूल्यांकन कीजिए। साथ ही ऐसे फैमिली फार्मों द्वारा सामना किए जाने वाले खतरों और चुनौतियों पर चर्चा कीजिए।

evergreen revolution refers to the more sustainable, environment friendly agricultural procedures, with organic inputs, which will increase the yield substantially, at the same time will preserve the ecological balance.



Small holder family farms with
evergreen revolution.

Pro nature aspects! Small holders or
a family treats the nature or their
agricultural outputs, as a member
of their family, thus take much
care to balance the environmental
aspects.

pro poor! organic inputs such
as composting manures, organic pesticides
can easily be prepared within
family which decreases the
cost of farming substantially.

Pro Women! Women take a major
role in family farming
in seed preparation, seed plantation
and crop collection & harvesting

State
specific
policies
related to
conservation of
varieties of
seeds, cultural
diversity,
conservation
etc.

State
in
respect to

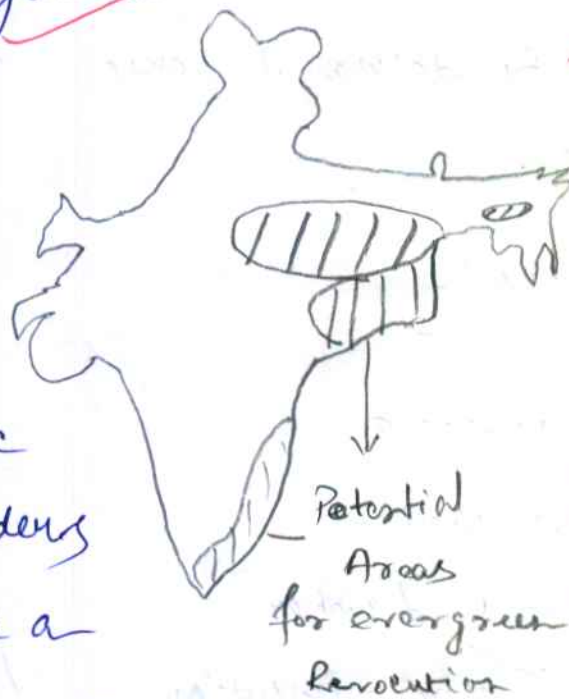
- Mixed
farming

- labour
oriented
intensive
agriculture
etc.

Problems faced by small farmers:

- i) Lack of ~~knowledges~~ and awareness
- ii) Lack of ~~incentivisation~~ from govt.
- iii) Lower yield of ~~domestically produced seeds~~
- iv) Lower result from organic manures & ~~pesticides~~.
- v) Proper ~~implementation, sensitisation~~ programmes from ~~government~~.

India has a high potential for having success in organic farming. Small holders can thus take a major part in ~~Evergreen~~ revolution.



→ State about the lack of empowerment of women who hold a number of family farms.
→ Lack of connectivity with markets etc

3.5

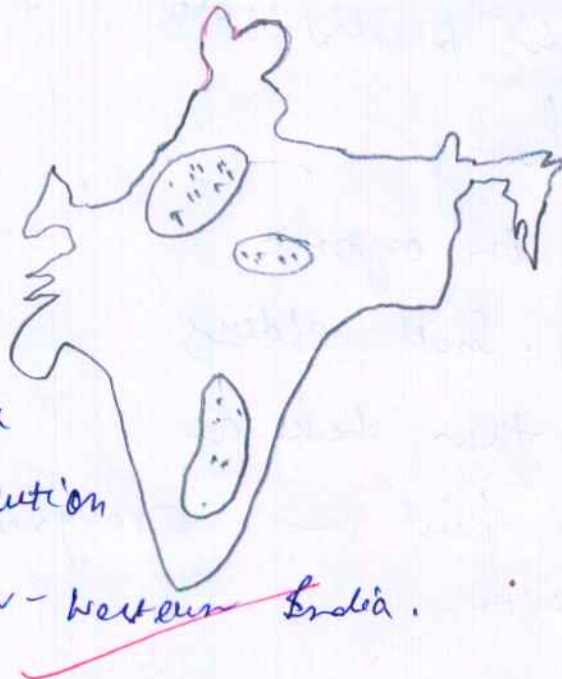
2. Examine the reasons for depleting groundwater levels and acute groundwater stress in some regions of India. What measures should be taken to check groundwater exploitation and ensure recharge of aquifers in water stressed areas?

भारत के कुछ क्षेत्रों में भूजल स्तर के घटने और भूजल पर अत्यधिक दबाव के कारणों का परीक्षण कीजिए। भूजल के दोहन को कम करने तथा जल संकट ग्रस्त क्षेत्रों में जलभृतों (जलभरों) का पुनर्भरण सुनिश्चित करने हेतु क्या उपाय किए जाने चाहिए ?

The groundwater levels and acute groundwater stresses are prominent in Northwestern India (Haryana, Punjab, Western UP) interior of Deccan Plateau and Bundelkhand area of central India.

Reasons :-

- i) - excessive withdrawal of groundwater for green revolution belt of North-Western India.



- i) Wastewater for various industrial belt of national capital region and adjacent areas.
- ii) Lack of proper recharge of ground water.
- iii) Lack of rain water harvesting procedures.

→ State the reasons
like excessive
consumption.

Measures to be taken:

- i) Prevent excessive use of chemical fertilizers, high breed seeds, so that water consumption in agriculture can be decreased.
- ii) Promote organic farming.
- iii) Promote drought resistance

varieties.

vi) Rain water harvesting

vii) Check dams to prevent
run away

viii) Afforestation to ensure recharge

Thus an holistic approach
is the need of the hour to
prevent the ground water exploitation
at the same time ensure the
recharge of aquifers.

(4)

Also
→ State the
Conservation
of natural
water
bodies like
Lakes, Wetlands, etc

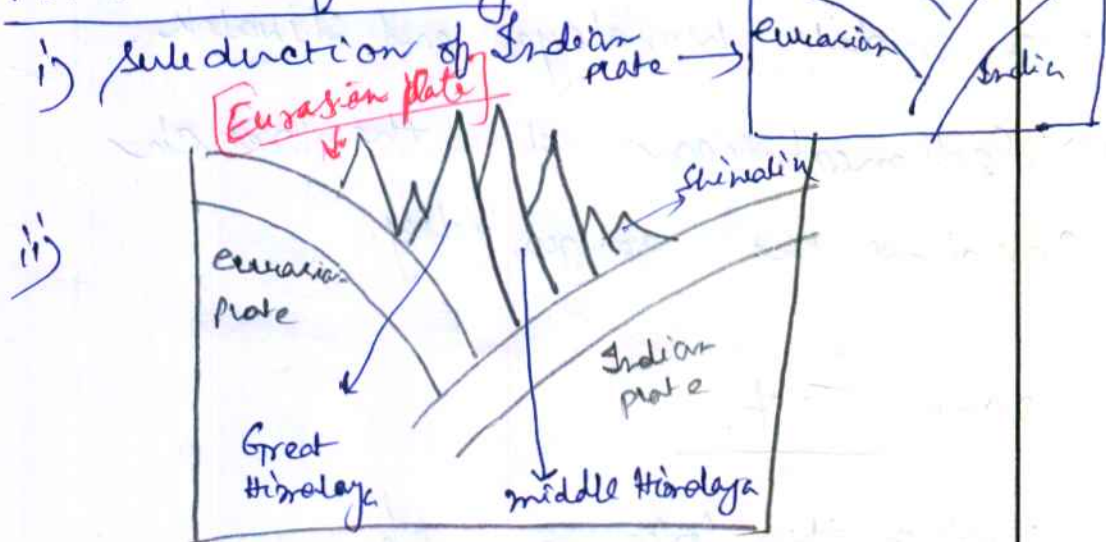
→ Also
mention the
water
conservation
in urban
environment
etc

3. How does the plate tectonics theory help explain the formation of Himalayas and Deccan Traps?

प्लेट विवर्तिनी सिद्धांत किन प्रकार हिमालय और दक्कन ट्रैप्स के निर्माण की व्याख्या करता है ?

Plate tectonic theory, pronounced by Morgan shattered the myth of non-drifters and at the same time explain the formation of various mountains and plateaus, such as Himalayas and Deccan trap.

Formation of Himalaya



As the Indian plate is having oceanic portion is denser, it is subducted below the Eurasian

plates.

i) first volcanic arcs are produced along the arcs sector

ii) Accretionary prisms are created, which due to

further upliftment create tectonic arcs, which are greater Himalaya.

iii) Remaining Accretionary prisms are middle Himalaya and Shivalik.

iv) Sedimentation at the trench created the Ganges valley.

Deccan Trap:

After the breaking of Pangaea the ~~continent~~ Indian

State the
sediments
squeezed
deposited in
the valleys
see which
folded into
Himalayan
systems.

plates, started to move northward. During its northward drift it passes through hotspot volcanoes, present in the equatorial regions. Lava from these hotspot volcanoes come out through the volcanic plug and created deccan plateau.

Thus both the formation of Himalaya & deccan plateau can easily be explained with Plate tectonic theory.

4.5

State the
reasoning of
Basaltic lava
which is less
viscous &
therefore spreads
more.

4. Though the Paris Agreement reached at the 2015 United Nations Climate Change Conference is being called as a historic turning point, it is also being criticized on many grounds. In this context, discuss the outcomes of the Paris Agreement.

संयुक्त राष्ट्र जलवायु परिवर्तन सम्मेलन-2015 के दौरान संपन्न "पेरिस समझौते" को यद्यपि एक क्रांतिकारी परिवर्तन माना जा रहा है तथापि कई आधारों पर इसकी आलोचना भी की जा रही है। इस संदर्भ में पेरिस समझौते के नतीजों (आउटकम) पर चर्चा कीजिए।

Paris agreement was reached in COP-21 of the United Nations climate change conference in December, 2015. The outcomes can be briefly discussed as follows -

1) Each country will ~~not~~ follow its INDC (Intended Nationally declared contribution) to ~~not~~ reduce the carbon emission.

2) Temperature of the earth will ~~not~~ be tried to be

maintained within 1.5°C of the pre-industrial ~~revolution~~ level.

ii) Green climate fund will be properly ~~implemented~~ to develop green technologies in developing and under developed nations.

iii) Green technologies will be promoted.

But at the same time it is criticized in many aspects:

i) the intention of developed countries to ~~higher~~ burden on developing countries.

ii) Lack of proper ~~implementation~~ of ~~common~~ but differentiated responsibility.

Also state the International ~~ally~~ ~~transferred~~ Mitigation outcome (ITMO) enhanced version of CDM.

Also state the progress related to transparency.

Dilemma of the principle of historic responsibility.

iii) the provisions are not adequate to keep temperature rise within 1.5°C .

iv) lack of discussion regarding sea level changes and problem of small island countries.

4-5
Good
Thus though the climate agreement in Paris is a historic deal towards preserve our Earth, but at the same time we should keep in mind the notion of climate justice to preserve the ecology of our habitat.

5. Explain the factors that have led to sugar prices hitting a six-year low at the spot market. Also, give an account of the measures that are required to revive the sugar industry.

स्पॉट मार्केट में चीनी की कीमतों के छह वर्षों के दौरान अपने न्यूनतम स्तर पर पहुँचने के लिए उत्तरदायी कारकों की व्याख्या कीजिए। साथ ही, चीनी उद्योग को पुनर्जीवित करने के लिए आवश्यक उपायों का वर्णन करें।

Various committees have been formed including Rangarajan committee for reviewing the sugar industry sector. But still it is suffering from many ills, the result of which led to a sugar price hitting a six-year low at spot market -

- i) Increase production of cane sugar in low India.
- ii) Lower demand at global and domestic purchase.
- iii) Higher subsidisation.

Explain this point in context of State Advisory price mechanism CACP.

→ Also factors like reduced international price

→ Dumping from international market due to lowered prices

Measures that are required to be taken to revive the sugar industry:-

i) mandatory blending of ethanol in petrol to higher up the production and at the same time compensate the losses.

ii) Direct subsidy transfer to citizen by the government.

iii) Ban on sugar export temporarily.

iv) Remove all governmental controls on sugar industry

v) Allowing industry to sell sugar in market rate.

think it to the
Minimum distance criteria
& Farmer should be allowed to trade with any mill etc.

Thus, a proper
~~implementation~~ of these process
 by government, industrial houses
 and all other stakeholders will
 help in ~~reviving~~ sugar industry.

5

The presentation of the
 answer is good.

6. According to the Indian Fertiliser Scenario 2014, the use of urea in India has increased by more than 50 per cent since 2000. How does human intervention turn nitrogen from a nutrient to a pollutant? Discuss the impacts of nitrogen pollution on environment and human health. Also, explain how nitrogen pollution can be managed.

भारतीय उर्वरक परिदृश्य 2014 के अनुसार, भारत में यूरिया का उपयोग सन् 2000 के बाद 50 प्रतिशत से अधिक बढ़ गया है। मानवीय हस्तक्षेप किस प्रकार नाइट्रोजन को एक पोषक तत्व से प्रदूषक के रूप में परिवर्तित कर देता है? पर्यावरण और मानव स्वास्थ्य पर नाइट्रोजन प्रदूषण के प्रभावों की चर्चा कीजिए। साथ ही, व्याख्या कीजिए कि नाइट्रोजन प्रदूषण का प्रबंधन किस प्रकार किया जा सकता है?

Nitrogen is one of the major ~~element~~ (N, P, K) of plant growth. But excessive use of urea as a fertilizer turned Nitrogen from a nutrient to pollutant —

i) Nitrogen in water logged condition creates ammonia, which is hard to smell.

ii) Excessive use results in acidity of the ~~soil~~, and soil become less productive and ultimately ~~of no use~~.

ii) Ammonia pollution in drinking water.

Impacts of Nitrogen Pollution on Environment and Human Health.

i) Nitrogen acidifies the soil thus destroying the ecological balance, as in acidic

environment the bacteria thrive well rather than fungus or algae.

→ Leads to nutrient disorders & increased toxicity in plants.

ii) Causes various human health hazards due to ammonia.

→ State in detail the effect on human health

iii) Nitrogen accumulation in human cell hampers in cell's growth.

like Blue Body Syndrome etc.

Nitrogen Pollution can be managed
by!

i) Using gypsum to neutralise
the acidity of the soil.

ii) flushing the soil regularly
to removed ammonia.

iii) Crop rotation

iv) Use of leguminous plants

v) Prevent discharge of agricultural
waters in the storage meant
for drinking.

Though nitrogen pollution
seems to be a menace of the
day, but proper regulatory
procedures will definitely check
the situation.

Also state
methods
like
precision
farming.
Use of
organic
fertilisers
etc

4.5

7. Coral reefs are the most biologically diverse and economically valuable ecosystems on earth. Elaborate. Discuss the factors responsible for the decline of coral reefs across the world. Also, list some measures that have been taken for their preservation.

प्रवाल भित्तियाँ पृथ्वी पर जैविक रूप से सर्वाधिक विविधतापूर्ण और आर्थिक रूप से मूल्यवान पारिस्थितिक तंत्र हैं। सविस्तार व्याख्या कीजिए। विश्व में प्रवाल भित्तियों की कमी के लिए उत्तरदायी कारकों की चर्चा कीजिए। साथ ही, उनके संरक्षण हेतु किए गए कुछ उपायों को सूचीबद्ध कीजिए।

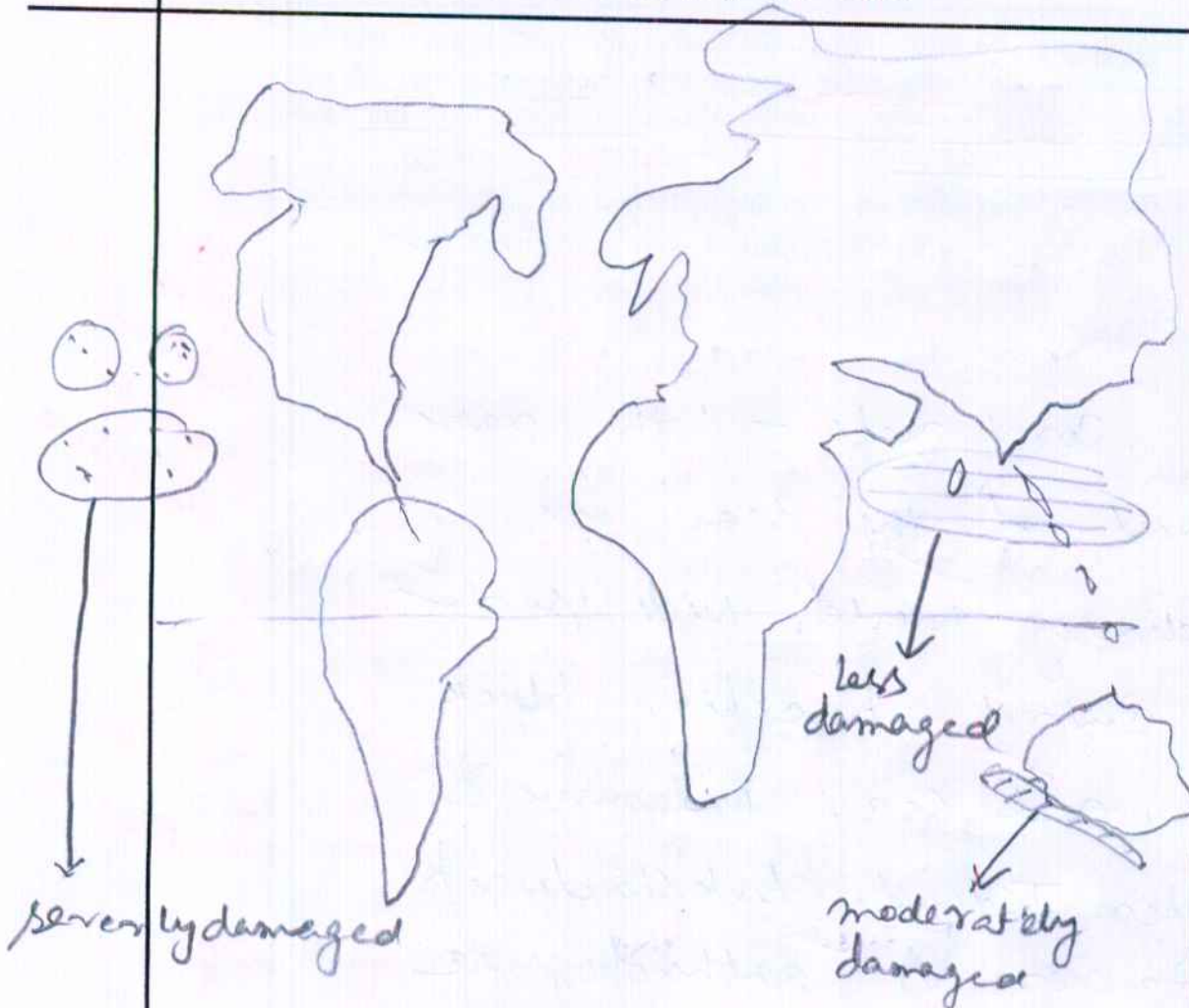
Coral reefs - 'the rain forest of the sea' are declining world wide such as central pacific, black sea, red sea, Andaman & Nicobar Island, Lakshadweep due to various anthropogenic and natural reasons -

→ Due to change in sea water temperature. IPCC 4th report has suggested that sea water temperature has already been increased by 1°C.

→ State the biological & economic significance

↳ Lay down Calcium carbonate

↳ source of food for millions etc.



ii) Marine pollution due to petroleum leakages, industrial throwaway etc.

iii) Drilling in sea beds for various mining activities

iv) global warming.

v) Various natural calamities such as volcanism, Tsunamis, Earthquakes etc.

vii) Various diseases such as black dog.

viii) Other anthropogenic factors such as recreation facility, choral tourism etc.

measures taken for preservation

i) Ban on mining activity in the regions of choral reef.

ii) Global agreement on keeping the increase in temperature of the sea.

iii) Creation of new choral reefs.

iv) Ban on tourism activity on severely affected sites.

35

Also state the specific measures taken like

↳ LOICZ,

↳ notified coastal zone regulation zones

etc.

8. Despite wide use and acceptance, Environment Impact Assessment (EIA) has certain shortcomings as a tool for minimising environmental effects of development proposals. Discuss. How is Strategic Environment Assessment (SEA) an improvement over EIA?

व्यापक उपयोग एवं स्वीकार्यता के बाद भी, विकास प्रस्तावों से जनित पर्यावरणीय प्रभावों को कम करने के उपकरण के रूप में पर्यावरण प्रभाव आकलन (ई.आई.ए.) में कुछ कमियाँ हैं। चर्चा कीजिए। ई.आई.ए. की तुलना में रणनीतिक पर्यावरण आकलन (एस.इ.ए.) किस प्रकार अग्रवर्ती है?

Environment Impact

Assessment (EIA) is the procedure of measuring the impacts of any socio-economic or industrial project on the environment and ecology of the area in which the project is planned in near and far future. Though for last few decades EIA is the major tool for preserving the balance between socio-economic growth and

- environment but ~~certainly~~ it has ~~to~~ some short comings -
- i) Lack of ~~engagement~~ of local people.
 - ii) The sentiment of local tribes, inhabitants ~~are~~ rarely considered
 - iii) Engagement of experts who are not ~~aware~~ of the area and its native ~~environment~~.
 - iv) '~~one size fits all~~' approach for most of the ~~projects~~.
 - v) Bypassing the Panchayat and other PR I institutions.
 - vi) Lack of proper politico-bureaucratic ~~desire~~ to complement the suggestions.

State that the EIA come late in the decision making process. → Lack of objective assessment in EIA. → Lack of a broader perspective.

vii) only paperwork and very few
actual field works.

Strategic Environment Impact Assessment
is certainly an improvement over
EIA

ii) It follows different approach
for different projects considering
the total socio-cultural and
ecological environment.

iii) Participation of grassroots
people.

iv) It keep in mind the
requirement of both ends,
thus try to strike out
a balance between the
economic needs and
environmental preservation

Ya have not
understood the
difference between
EIA & SEA in its
entirety.
Read the topic &
understand the
difference.

State that it is
proactive
& sustainability
driven
while EIA
is largely
reactive.

SEA
does not
replace EIA
but
incorporates
it in
decision
making
process
etc

9

9. Enumerate the features of "Namami Gange" programme. How does it differ from the previous programmes taken to clean the River Ganga?

"नमामि गंगे" कार्यक्रम की विशेषताएँ बताइए। गंगा नदी को स्वच्छ बनाने के लिए चलाये गए पूर्ववर्ती कार्यक्रमों से यह किस प्रकार भिन्न है?

'Namami Gange' is the ambitious ~~project~~ programme, initiated by Ministry of water and Ganga rejuvenation of Government of India to clean the holy river Ganga and other polluted rivers of the country.

i) It engages the local Panchayati Raj institutions, municipalities thus creating an approach of membership among all stakeholders.

ii) creation of executive body under the chairmanship of Prime Minister with membership

of chief ministers of the states
through which Ganga flows.

ii) Collaboration with various
foreign countries and taking
the best methods. For eg-
methods applied for cleaning
river Tames will be followed
in some sections of Ganga,
which are heavily polluted.

iii) Considering all the polluted
rivers under the ambit of
programme thus giving it
a holistic look.

It differs from the previous
programmes in certain
aspects

i) Engagement of local community.

Also the
of Ganga
specific
River
Regulating
zone
→ Territorial
army Ganga
eco task
force
→ setting
up of
GAC
etc

ii) Engagement of PRI and municipalities.

iii) ~~foreign collaborations~~

in the money allocated to the programme is ~~large~~ and substantially greater than the previous programme.

Most importantly the seriousness and attitude of the political and bureaucratic class and enthusiasm of common public around the programme, makes it unique from the previous programme will pave the way of success.

foreign collaborations will also featured in earlier programmes

State the involvement of various ministries
Central govt bearing 100% expense etc

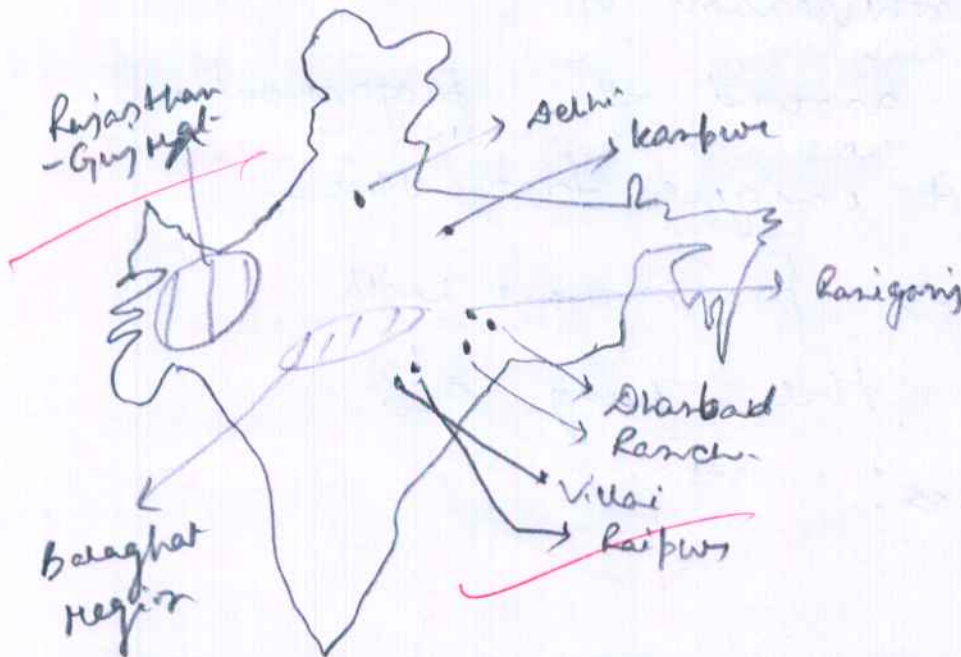
4

10. Give an account of the distribution of cement industry in India and the factors that affect its location. Also trace the growth of cement industry in India.

भारत में सीमेंट उद्योग के वितरण और इसकी अवस्थिति को प्रभावित करने वाले कारकों का विवरण दें। साथ ही, भारत में सीमेंट उद्योग की वृद्धि की रूपरेखा भी प्रस्तुत कीजिए।

Cement Industry, in India is one of the major industry of Western Gujrat, Rajasthan, Madhya Pradesh and Chattisgarh of Central India and Chotanagpur plateau.

Distribution:



- i) Western India - Rajasthan
and Gujrat
- ii) Northern India - Delhi, NCR,
Fatidalead, Kanpur, Ambala.
- iii) Central India - Balaghat Rajge,
Jabalpur, Raipur and Villni
of Chattisgarh.
- iv) Eastern India :- Raniganj, Asansol,
Bokaro, Ranchi, Dhanbad
of Chotanagpur plateau.
- v) Southern India - Chennai, Kochi.

Factors affecting location of Cement Industry

- i) Availability of raw material -
Raw material of
the industry mainly dolomite

is available in Balaghat region of Central India, western Rajasthan, fly ash is plentifully available in chottanagpur plateau.

(ii) Market: Huge market in Maharashtra, Gujarat, Kolkata and surrounding regions and Delhi NCR.

(iii) Water - Availability from Narmada, Gomodar, Yamuna.

(iv) Cheap labour from Bihar, Bengal, UP, MP, Chhattisgarh.

(v) Capital from the industrialists of Kolkata, Chennai, Mumbai, Delhi.

Also state a history of growth of Cement Industry from 1914 in portbandar through various changes to the present times

State that it is mainly a heavy material oriented industry.

Also state the availability of

↳ Coal deposits
↳ Power supply

↳ Heavy transportation costs etc

3.5

11. Explain the differences between fold and block mountains, with examples.

वलित पर्वत और भ्रंशोत्थ (ब्लॉक) पर्वतों के बीच उदाहरण के साथ अंतर स्पष्ट कीजिए।

i) Fold mountains are ~~not~~ formed due to ~~tectonic~~ activities, on the other hand the block mountains are ~~formed~~ due to displacement of major portion of rock system substantially.

ii) In case of fold mountains the plate movement has a major role to play.

For. eg. i) Himalaya was created due to collision of Eurasian plate and Indian plate.

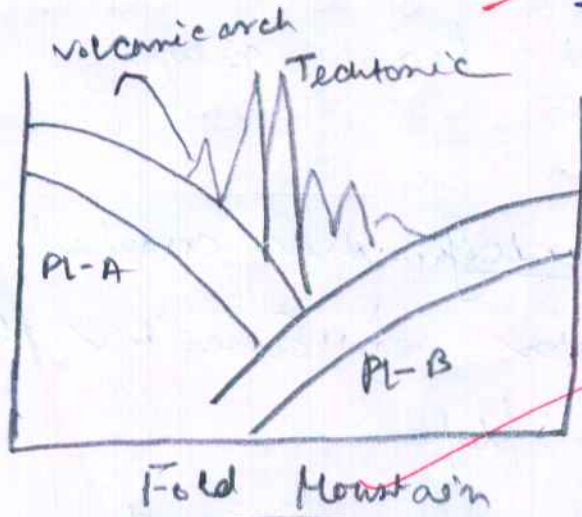
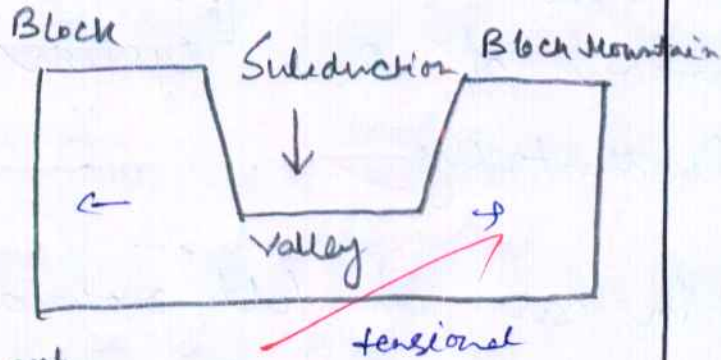
ii) Rockies due to Nazca and South American plates

In case of block

mountains, plate movement has
no significant role.

For eg - Black forest of
France and Germany.

State that
fault develops in
Earth's
crust by
either
compression or tension
experienced by it.



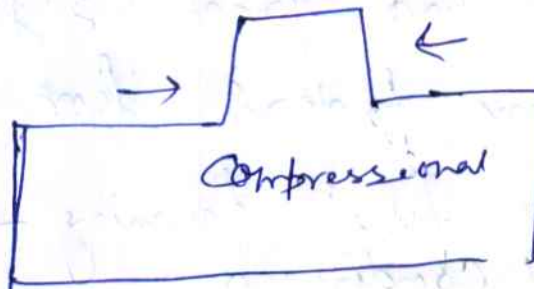
(ii) volcanism is generally associated
with fold mountain.

For e.g - Volcanism in Rockies

volcanism is not generally associated with ~~with~~ block mountain

iv) Fold mountains are mainly built due to compressional force.

Block mountains may be built due to compressional as well as tensional.



There is a subsidence or upliftment of keystone in case of block mountain.

No such keystone is found in fold mountains, rather it is a gradual phenomena.

→ Also state the difference based on different type of elevations.

6 well elucidated & presented. Keep it up.

12. How do physical environment and proximity to the market affect the location of fruit-farming in temperate regions.

भौतिक पर्यावरण और बाजार की निकटता शीतोष्ण कटिबंधीय क्षेत्रों में फलों की खेती को किस प्रकार प्रभावित करती है?

The temperate region of the world mainly the region surrounding the Mediterranean Sea, California valley of USA, Tasmania has great physical and human factors for developing fruit farming -
Physical Conditions

i) The available sunshine throughout the summer is best for ripening the fruits.

ii) the little showers in winter and spring help in harvesting

Also state the large landmass available.

ii) frost free 200 days help
in cultivation of fruits.

iii) Any environment makes the
fruits juicy.

Human and market factors

i) Market in BENELUX country
of Europe, California valley
in case of USA, Australia
& New Zealand in case of
Tasmania.

ii) Great demand all over the
Europe and World due to
best qualities

iii) Demand of grapes for wine
making industry in France,
Portugal, Germany.

iv) Use of modern scientific

State that
the ripening
season is aided
by dry weather
conditions.

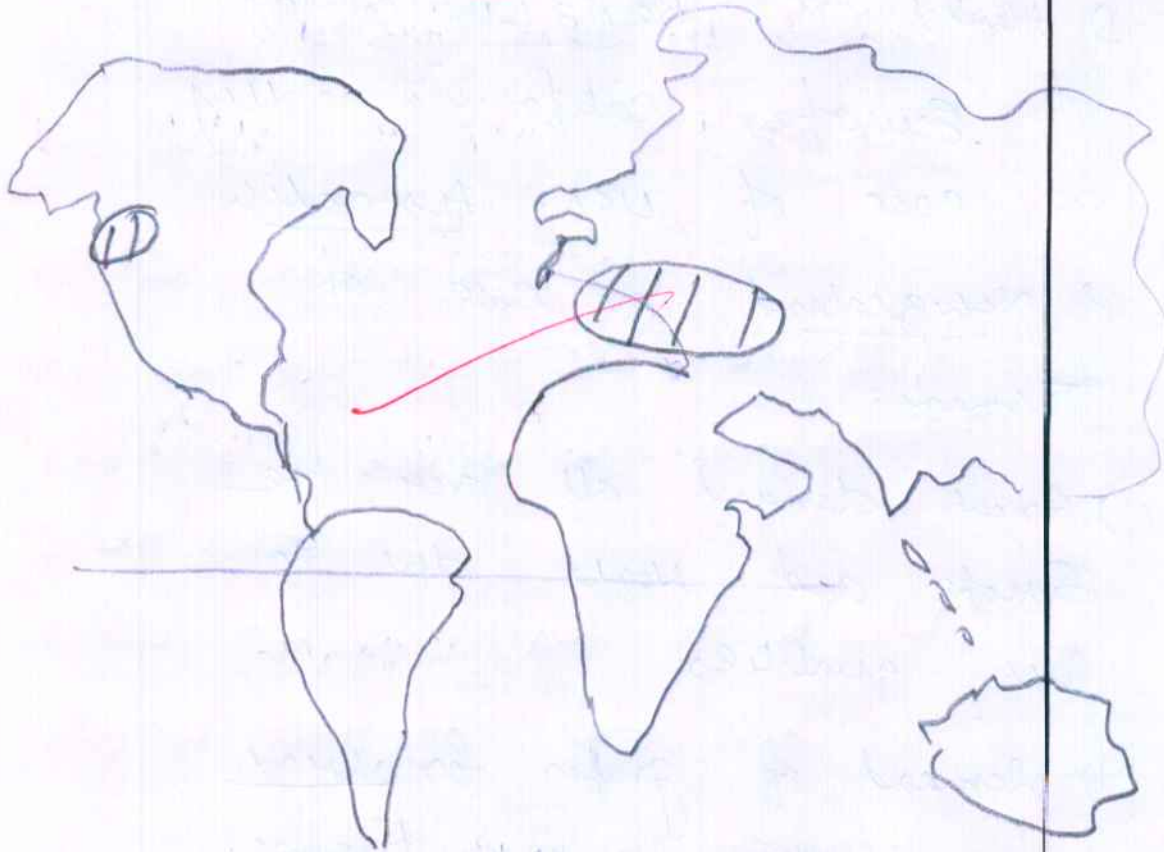
Also state
the
factors like
↳ Purchasing
power
↳ Road
processing
etc

technologies.

v) Development of Truck farming

for speedy processing

vi) Development of agro-industry
and processing industries



⑪ → fruit farming

13. Plantation agriculture is a highly specialized form of commercial agriculture limited to tropical and sub-tropical regions. Illustrate.

उष्ण और उपोष्ण-कटिबंधीय क्षेत्रों तक सीमित रोपण (बागानी) कृषि, वाणिज्यिक कृषि का अत्यधिक विशिष्ट रूप है। व्याख्या कीजिए।

Plantation agriculture was practiced in ancient China, Brazil but the specialized and commercial plantation agriculture was started in tropical and subtropical regions mainly due to Colonialism.

Tea was started as a plantation agriculture in Himalayan foothill of India, Myanmar and hilly regions of Sri Lanka by Britishers. Many such example such as Coffee in Brazil, Rubber in Indonesia

South East Asia
Also state the way it is highly specialised in nature
↳ Sophistication & scientific process
↳ specialisation of high crop etc.

and Java can be given.

ii) Tropical and subtropical regions have plenty of sunshine for developing plantation agriculture.

iii) Rainfall of 150-200 cm available in this region.

iv) Commercialization was mainly due to colonialism.

For. eg. Rubber in Java, Indonesia.

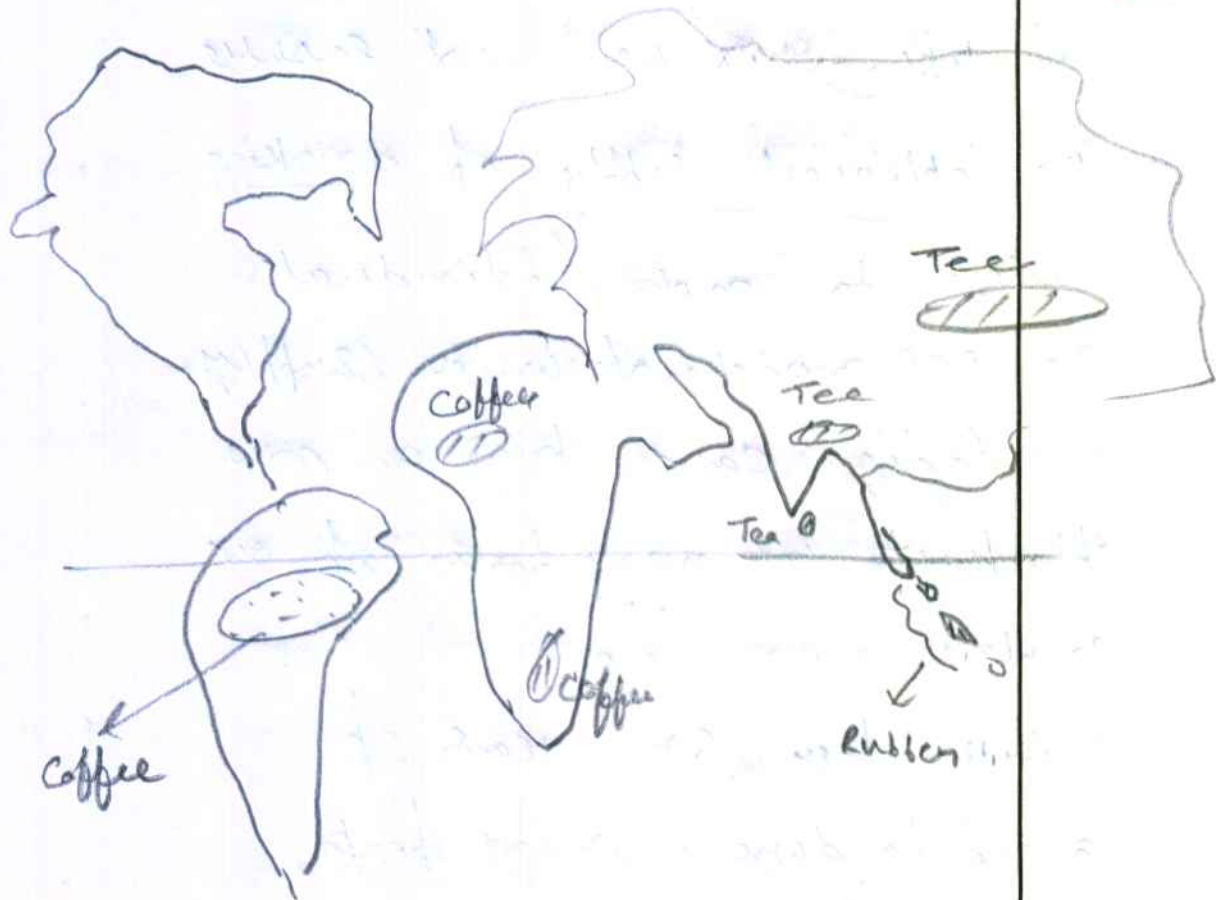
→ the commercialization and capital brought by the Europeans, further growing due to geographical intertia.

State your answer by mentioning the factors related to

↳ Cheap labour
↳ Skills
↳ Processing
etc.

vii) high demand of Indian tea,
Brazilia & ethiopian coffee,
Indonesian Rubber helped in
further specialisation of the
plantation industry.

4



14. Water should be treated as an economic commodity whose full costs must be recovered from users, so as to ensure efficiency in service provision. In this context, discuss the viability of PPP model of water supply and management in India. Also, highlight the challenges that can arise in implementing the same.

जल को एक ऐसी आर्थिक वस्तु माना जाना चाहिए जिसकी पूरी कीमत उपभोक्ताओं से वसूल की जानी अनिवार्य हो ताकि कुशलतापूर्वक सेवा प्रदान करना सुनिश्चित किया जा सके। इस संदर्भ में, भारत में जल आपूर्ति और प्रबंधन हेतु पी.पी.पी. मॉडल की व्यवहार्यता पर चर्चा कीजिए साथ ही, उन चुनौतियों पर विशिष्ट रूप से प्रकाश डालिए जो इसके कार्यान्वयन के दौरान उत्पन्न हो सकती हैं?

Water is the another name of life. ~~they~~ we must ensure the efficient supply of drinking water to each individual. The PPP model of water supply in India, can bring a new opportunity in many parts of our country.

It is still after 68 years of independence, many parts of central India, Western India is affected from

- severe shortage of water.
- i) Drinking water supply is still unavailable in many rural areas and inadequately available in urban areas.
- ii) Water filtration is a costly process and must be there for making portable water.
- iii) The economic condition of government is still insufficient to supply adequate water to each area of the country.
- iv) Considering the infrastructure and investment required, PPP can be a viable process.
- v) Private companies has the technologies which can be combined with public infrastructure.

Also link
the various
aspects to
↳ service
delivery
efficiency
↳ skill sets

Challenges :-

i) The cost of the water from PPP project will not be affordable for the poor people.

ii) Water - the life line can not be denied, due to lack of money.

iii) Profit making approach of private companies.

iv) Delay in PPP project.

Thus, considering PPP model is a viable solution, but at the same time government must ensure free and clean

drinking water for every

poor people of this country as

a fundamental right under

Article - 21.

4.5

Also state the issues like
↳ Lack of information of existing infrastructure is poor
↳ Need of massive investments which might not give appropriate returns etc

15. Climate of India not only has regional variations but is also characterized by climatic unity. Substantiate with examples.

भारत की जलवायु में न केवल क्षेत्रीय विविधताएँ हैं बल्कि इसमें जलवायु-विषयक एकता की विशेषता भी है। उदाहरण सहित पुष्टि कीजिए।

India, has the unique land
where we can observe the
arctic climate in lofty Himalayas,
monsoonal climate in mainland,
equatorial climate in Andaman &
Nicobar Island, desert climate
in Western Rajasthan and
to some extent mediterranean
climate in coastal Tamil Nadu.
The climatic unity

Depending upon the regional
variations of Indian climate
can be described as follows -

— in the lofty peaks of Himalay,
of J&K, Darjeeling district of

West Bengal, Assam, Arunachal Pradesh
has mountainous climate, resembling
cool-temperate climate. The

climatic unity also gives rise
to cultural unity dominated
by Sino-Tibetan groups.

(i) Desert climate of western
Rajasthan, interior region
of Deccan Plateau, Telangana
Plateau has generated a harsh
climatic unity.

(ii) The monsoonal climate of
gangetic region + western and
eastern coast is the largest
among the climatic regions
of the country. Due to

State
in
context
of
temperature
&
precipitation
variations

the vastness of it has developed many cultural groupings in mainland India.

iv) The equatorial climate in the Andaman & Nicobar island has special emphasis on the tribes of this region - such as Jarawa, Shopmen, Santalese etc.

Thus the climatic unity of the various climates of various parts of the country can be treated as another aspect of 'Unity in Diversity' of India.

Social & cultures

State the factors like

↳ latitudes

↳ Day night variations

↳ local wind pattern etc.

4

16. National Air Quality Index is a tool for effective dissemination of air quality information to people. What are the significant features of the National Air Quality Index. Suggest measures to curb increasing air pollution in urban India.

राष्ट्रीय वायु गुणवत्ता सूचकांक लोगों में वायु गुणवत्ता की जानकारी के प्रसार हेतु एक प्रभावी उपकरण है। राष्ट्रीय वायु गुणवत्ता सूचकांक की महत्वपूर्ण विशेषताएं क्या हैं? शहरी भारत में बढ़ते वायु प्रदूषण पर अंकुश लगाने हेतु उपाय सुझाइए।

National Air Quality Index

has recently been launched by 'Government of India', for effective dissemination of air quality information to people.

Significant features of the National Air quality Index

i) Colour coding of the pollution level

ii) four level of severe, high, moderate and low risk pollution level

iii) City wise monitoring

iv) Real time monitoring

State that it is divided into two categories

- v) information dissemination through mobile phones, Apps, messages etc.
- vi) Issuing alert for severe polluted air etc.

To curb the increasing air pollution
in Urban India, following steps
can be taken

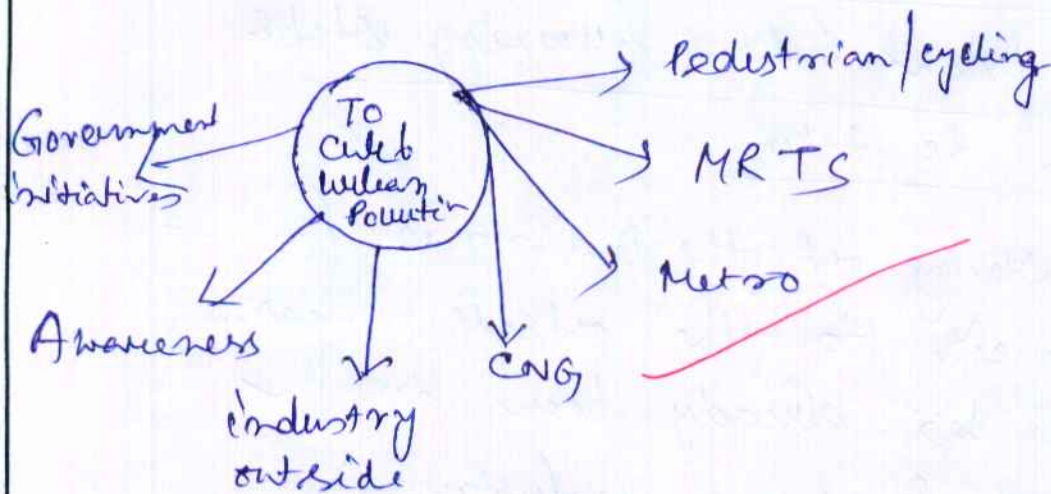
i) Moving out the industries from the city to the outside areas. This has already been done in NCR for heavy industries.

ii) Proper waste management plan.
e.g. - incineration plant in Bangalore.

iii) Afforestation, reforestation along the roads.

iv) Use of CNG vehicles, electric vehicles etc.

- v) Developing ~~public~~ ^{mass} transport system ~~such as~~ - ~~Metro~~ ^{Rapid} ~~transport~~ ^{system}
- vi) citizen awareness buildup.
- vii) Use of cycle, pedestrian culture



6

The recent initiative by government of Delhi such as odd-even scheme or banning diesel vehicles by Supreme court should be replicated through out the country for having a better future & clean air.

17. In India, oats are increasingly gaining popularity as a healthy breakfast cereal. What are the favourable geographical conditions required for cultivation of oats. Discuss the potential of its cultivation in India.

भारत में, जई (oats) तेजी से एक स्वस्थ स्वल्पाहार अनाज के रूप में लोकप्रियता प्राप्त कर रहा है। जई की खेती हेतु आवश्यक भौगोलिक दशाएं क्या हैं? भारत में इसकी खेती की क्षमताओं पर चर्चा कीजिए।

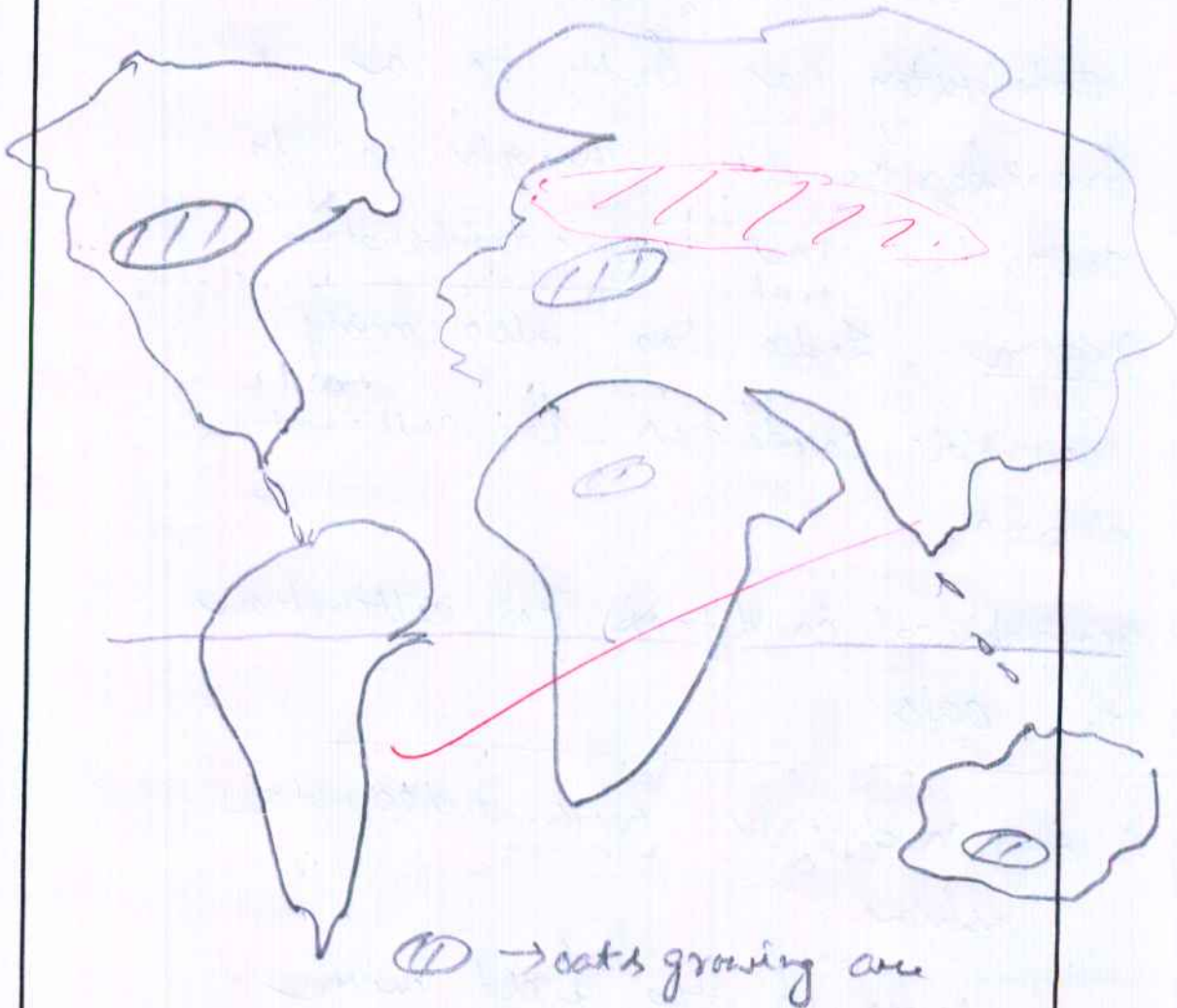
Oats are gaining much popularity in India as a breakfast cereal. Though mainly cultivated in warm temperate region, India has also many favorable conditions for cultivation of oats.

geographical condition for cultivation of oats

- i) Any condition with adequate sunshine.
- ii) Levelness of the field with good facility of drainage to remove water.

State the beta glucan content which is proven to reduce cholesterol.

- iii) forest free condition.
 iv) light shower at the time
 of harvesting.



Potential for oats cultivation in India

i) Cultivation of oats as a drought ~~resistance~~ crop.

ii) Dry condition and ~~eq~~ adequate sunshine of Central India, Deccan trap is suitable for its cultivation

iii) Black regur soil is suitable for oat cultivation

iv) Huge market

v) Nutrition available from it can be a measure against the hidden hunger among Indian population.

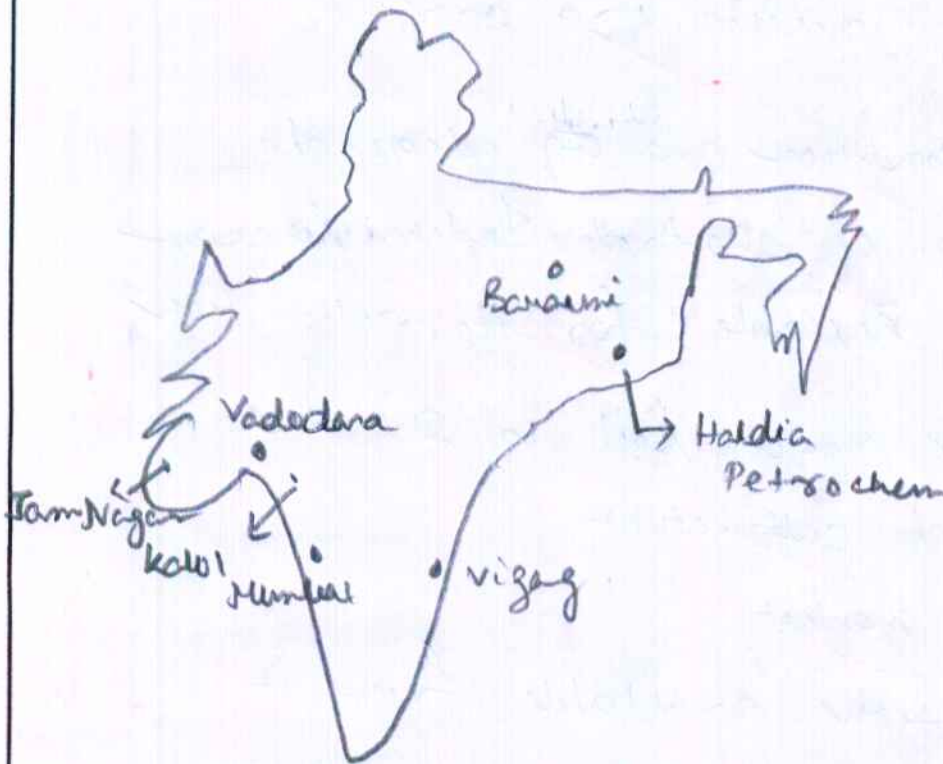
Also state
the use
for animal
feed

Can be
used as a
rotation
crop.

etc.

18. How can chemical industry act as a driver for other industries? Illustrate. Analyse the potential of chemical industries in India.

रसायन उद्योग अन्य उद्योगों के लिए किस प्रकार प्रेरक का कार्य कर सकता है? व्याख्या कीजिए। भारत में रसायन उद्योगों की क्षमता का विश्लेषण कीजिए।



Chemical Industry act as the
driver of other industries
in following ways.

- ↳ It gives the required
input for other industries.
For-eg - Cotton and textile,

cement, Pharmaceutical.

ii) It generally established as a complex ~~this~~ act as a growth point of regional development. e.g. - ~~Haldia~~

iii) Petrochemical industry supply inputs, ~~for~~ ~~which~~ has great demand in India as well as abroad.

iv) Attract labour and capital which is conducive for other industries.

e.g. - Gujarat has developed many other industries based on chemical industry.

Potentials of Chemical Industry in India!

i) India has a great market of chemical ~~industry~~ in the entire ~~subcontinent~~.

Also link it to
↳ use for chemicals to
pressure &
improve quality
↳ used in
advanced
research
etc.

- ii) Domestic demand.
- iii) Cheap availability of labour results into cheap manufacturing cost.
- iv) Availability of water.
- v) 'Geographical interlink' in Maharashtra / West Bengal.
- vi) Research and Development in various institutions.

Also state the potential linked to

- ↳ Consolidation of the industry
- ↳ Speciality sector chemicals etc.

4.5

19. Tropical regions are not only the most resource rich but also one of the most underdeveloped regions of the world. What are the factors responsible for this? How have some of the tropical countries turned their natural limitations to their advantage? Illustrate.

उष्णकटिबंधीय क्षेत्र न केवल सर्वाधिक संसाधन संपन्न हैं वरन् विश्व के सर्वाधिक अविकसित क्षेत्रों में से भी एक हैं। इसके लिए कौन-से कारक उत्तरदायी हैं? कुछ उष्णकटिबंधीय देशों ने अपनी प्राकृतिक रूकावटों (बाधाओं) को स्वयं हेतु लाभप्रद स्थितियों में किस प्रकार परिवर्तित किया है? व्याख्या कीजिए।

Two third of the world's poorest people lives in the tropical region of Africa and Southern Asia, despite being the world's most resource rich region —

i) 'Resource curse theory' is prominent in this region. Due to which the resources are exploited by the foreigners but nothing significant has been done for the native population.

i) Non-availability of technical inputs for ~~exploit~~ exploring the natural resources.

ii) Scientific advancement is much lesser.

iii) The area is historically dominated by Subsistence Agriculture, thus economically weaker.

iv) Colonial exploitation has made the socio-economic backbone so weak, that it is still difficult for these countries to explore natural resources in huge scale.

You need to state issues related to

↳ Burden of disease

↳ Deterioration of tropical soil

↳ Difficulties in lumbering, livestock farming etc.

Some tropical countries turn their natural limitation to advantage in following ways.

i) harnessing the water & use it for energy generation.
For-e.g- China.

ii) Developing tourism industry.
For-e.g- South East Asia.

iii) ~~Urban~~ Urban Development.
e.g- Singapore.

iv) Development of agriculture due to availability of fertile soil - E.g - India.

Tropical countries thus have the potential, only requirement is the right direction and right leadership to make the resources useful for pro-poor, pro-people growth.

Also state the development of

→ solar energy
→ Market Reforms

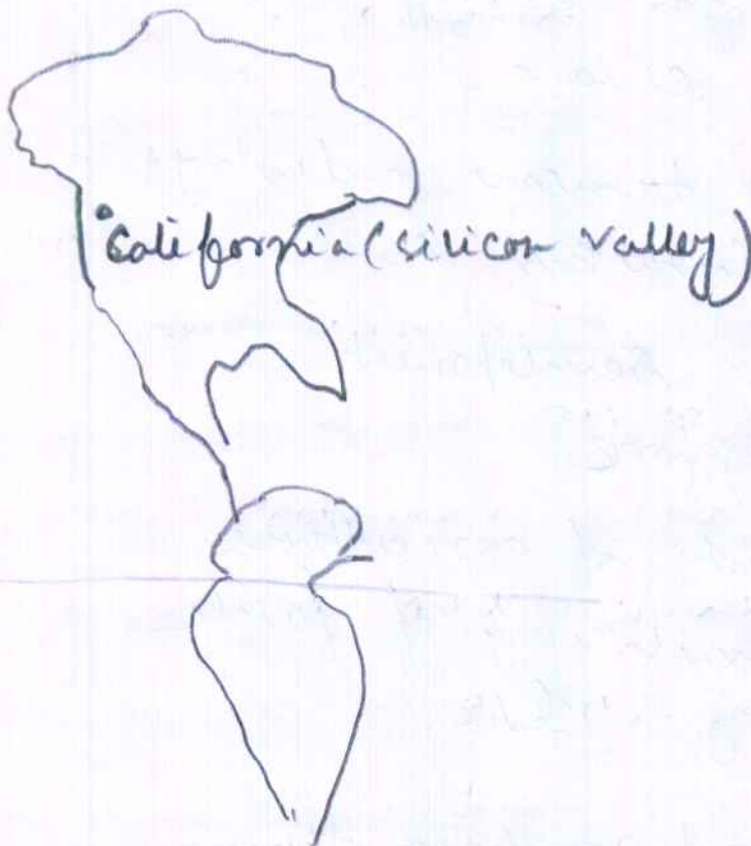
etc

4

good pt

20. The Silicon Valley area - surrounding San Francisco Bay in northern California - has arguably been the world's supreme entrepreneurial hotspot. Discuss the factors responsible for the success of the Silicon Valley as the hub of technological innovation.

सिलिकॉन वैली क्षेत्र (उत्तरी कैलिफोर्निया में सैन फ्रांसिस्को खाड़ी के आसपास) वस्तुतः दुनिया का सर्वोच्च उद्यमशीलता (entrepreneurship) केंद्र बिंदु रहा है। प्रौद्योगिकीय नवोन्मेष (innovation) के हृदय स्थल रूप में सिलिकॉन वैली की सफलता के लिए उत्तरदायी कारकों की चर्चा कीजिए।



Silicon valley of northern
California of USA has
been the hub of technological

innovation and entrepreneurship
due to following factors -

- i) Capital - huge capital
is available from American
Canadian entrepreneurs
- ii) Research & Development: Research
and Development from American
university, such as - Texas,
Harvard, Michigan
- iii) Low material: Low material
for electronic cheap generation
such as selenium, silicon
from - Rockies Mountain,
great lake region, Pennsylvania
- iv) Climate: Mediterranean climate
in California is
pleasant and thus give suitable
condition.

n) Electricity - Electricity generated from the thermal, hydro power plants.

ni) Market! Lastly the huge market of North America has contributed largely in development of this region.

The Silicon valley has not been developed only for the North America, rather it has opened a new window for the entire world for an electronic revolution.

4.5

Also state the factors like Govt policies being favourable
↳ Assimilation of culture of migrants
↳ Renewal of one paradigm of technology to another etc