GS SCORE

TEST - 04

GEOGRAPHY

Time Allowed: 3 hr. *Max. Marks: 250*

Instructions to Candidate

- There are **EIGHT** question divided in **Two Sections.**
- Candidate has to attempt **FIVE** questions in all
- Question No. 1 and 5 are compulsory and out of the remaining, three are to be attempted choosing at least one question from each section.
- The number of marks carried by a question/part is indicated against it.
- 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.
- Word limit in questions, wherever specified, should be adhered to.
- Attempts of questions shall be counted in chronological order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-Cum-Answer booklet must be clearly struck off.

127/250

1. *Invigilator's Signature* _____

2. *Invigilator's Signature* _____

Name Ravi Kumar

Mobile No. _____

Date _____

Signature _____

Roll No.____________

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SECTION-A

Attempt all questions:

1. Answer the following questions in about 150 words each: (10 × 5 = 50)

   (a) Write a short note on Archean and Dharwar rock system.

   (b) Discuss the views regarding the formation of northern plains.

   (c) Discuss the emerging problems in the cropping pattern of India.

   (d) Write a short note on emerging sources of clean energy

   (e) Write a short note on Middle Himalayas.

a) India has range of rock system forming over different period of time.

Archaen → It is the oldest rock system in India formed around 4000 million year ago.

It has 2 types of rocks < Gneisses rocks / Schists rocks

In India, it was responsible for the formation of 3 physical features namely -

1. Eastern Ghats
2. Aravali Mountain range
3. Satpura Ranges

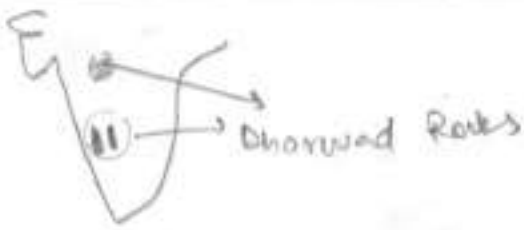
Provide more systematic answer

Dharwar Rock System → It is a type of rock system which got its name from Dharwad Region of Karnataka. It is formed later than Schist and Gneisses rock system

4/10

Remarks

Conclusion you are preparing



(b) ~~There are different~~
Northern plains are youngest tectonic system formed in pleistocene (late) age.

There are various theories of formation —

(1) Burrard ⇒ According to him, there was a giant rift valley at the foothill of Shiwalik which ultimately got filled up by sediments. No evidences are found.

(2) Blanchard & Bramford ⇒ ~~There~~ According to them, ~~the~~ with the upliftment of himalayas, the grand gulf was drained ~~on~~ :—

① Eastern side → Cuttack gulf

② western side → Sind gulf

Provide more explanation

This is possible as of following evidence—

Remarks

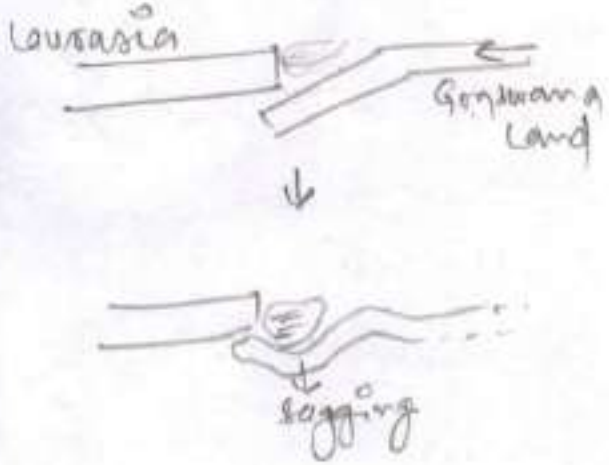
a) Availability of salt lake and plains in Rann and western Rajasthan. ✓

b) Marine deposits are found.

c) Oil and gas fields available in Barmer region ✓

(2) Modern view ⇒ Due to the collision between Eurasia and Laurasia and Gondwana, there was sagging which had caused depression which was fill up ultimately by Himalayan sediments. ✓

give more detail figure and explain them properly



4-10

conclude your answer properly

c) Cropping pattern → It refers to the temporal and spatial pattern of crops shown in a region. ⇒ give more clear definition and proper introduction

Remarks

Emerging problems in crop patterns in India —

(1) Monoculture → Causing depletion of particular type of nutrient.

(2) Improper crop planning → Hazardly growing.

Solution → Nitrogen required pulse should be grown after nitrogen less nitrogen intensive crop.

Eg:- Pulses → Potato → wheat → Pulses.

(3) No attention to relief and associated problem.

Solution is

Eg:- Ideally →

give more examples

(4) Destruction of water resources and soil fertility.

Eg:- water intensive crops in Punjab (Rice) has caused salination and depletion of groundwater.

(5) Introduction of Sugarcane in South India due to irrigation has reduced the region under traditional crop growing region.

Remarks

make your answer systematic

(6) Water intensive crops in dry region.
Eg:- Sugarcane in plateau interiors.

(7) ~~Dropping share of pasture and grazing land.~~

(7) Dropping share of fodder crops and more focus on cash crop and food crop.
It is affecting the cattles as India has largest no. cattle and buffaloe in world.

→ provide good conclusion to ans

5/10

(d) Energy is the major driving force of various sectors of economy < agriculture, industry

There are two type of energy < polluting energy, clean energy.

Clean energy refers to energy which is derived from the source which is either renewable (solar, wind) or non polluting (LPG)

major region

Emerging Sources

(1) Shale Gas and Coal Bed Methane (CBM) → Cleaner than conventional coke and coal.

give examples

→ India has estimated 9 trillion sq. ft of shale gas reserve.

Remarks

(2) CNG and LPG are less polluting and are cleaner than coal.

Eg. Government promoting LPG cylinder use in Pahal Scheme.

(3) Renewable Sources –

(1) Solar Energy → India has high potential
Eg:- Rajasthan, Gujarat.

(2) Wind Energy → MNRE establishing an offshore wind energy plant

(3) Hydroelectric Plant → Now even large HEP (>25 MW) is considered renewable source

5/10

(4) Nuclear energy → Only 2% of total energy generation in India.
- However Uranium & Plutonium waste is radioactive and need careful handling.
- Discovery of Thorium in Kerala Coast can reduce the import of uranium from Canada, Australia and Sumerkand (mongolia)

provide more details to the answer

Remarks

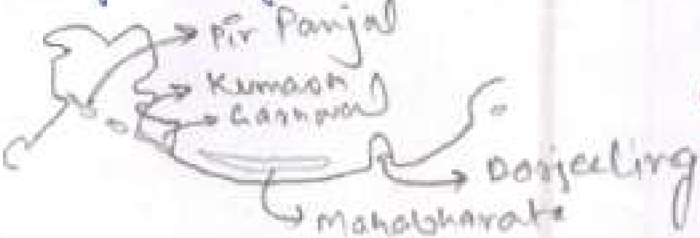
→ conclude your ans properly

c) The Middle Himalayas or Himachal are formed during Miocene period where it encountered maximum compression force.

- It is broken in various mountain range { Pir Panjal, Kumaon, Garwhal.

- It is many complex features { asymmetric, incumbend fold, Nappe

- The average height is 6100 m



— explain

4/10

It has various Passes due to discontinuous nature like Pir Panjal Pass.

- They are steeper on eastern side than western side.
- The soil is largely mountaineous

Answer is too short provide more clear and systematic answer
→ give more facts and figure in the Ans

Remarks

Remarks

2. Answer the following questions:

(a) Recently Aravali was in the news because of vanishing lakes. Discuss the causes of their disappearance and suggest the appropriate solutions. (250 Words) (20)

(b) Discuss the application of geospatial technology for monitoring natural resources in India. (200 Words) (15)

(c) Discuss the impact of climate change on agricultural productivity and farm revenue. Also, discuss its implications on agricultural performance in the long run. (200 Words) (15)

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

3. Answer the following questions:

(a) With the planets second largest population at 1.3 billion, and expectant growth to 1.7 billion by 2050, India finds itself unable to serve the vast majority of that populace with safe, clean water. In light of the above statement discuss the causes of the water crisis in India. (250 Words) (20)

(b) Compare the geographical, economic and cultural features of the Indian islands. (200 Words) (15)

(c) Discuss the global, regional and locational factors which control the phenomena of monsoon. (200 Words) (15)

a) India is a water stressed country and is consuming about 1100 m^3 / person / year water. It is running in the risk of becoming water scarce country (1000 m^3/ person /yr).

According to NITI Aayog 2018 report
(1) Country is facing worst water crisis
(2) By 2050, there will be loss of 6% GDP due to water scarcity.
(3) By 2050, demand would outrun supply by two times.

According to Economic Survey 2018, India's export to import ratio of virtual water (in form of rice etc.) is 4:1 where in china, it is 0.1:1.

Remarks

Causes of water crisis in India

(1) Related to water Availability

a) According to Eco-Survey 2016-17, more than 90% of water is diverted to Agriculture.

b) Monsoon erratic nature has severe impact
→ Irregular (temporal, Spatial, Quantity wise) Explain

c) The depletion of groundwater in North plains due to water intensive crops.
Eg:- low water level in Punjab due to Rice cultivation and resultant pumping.

d) Draining Rivers → Rivers like Narmada, Cauvery, Chambal has reduced significantly due to depleting source.

e) Changing climate → Global warming is disturbing Hydrocycle resulting into (flood (too much water), Drought (too little water))
Eg:- increasing flood instances in Kerala, Maharashtra and Bihar.

maintain flow

Remarks

Eg:- Long drought period in Marathwada eg and vidarbha causing suicide

f) Low level of Government intervention for promoting water efficient irrigation technology like drip irrigation, Sprinkler system

(2) Related to water Quality

g) West Bengal and Gujarat are facing Saline groundwater due to marine water incursion.

h) Punjab, North Rajasthan, Haryana, & Western UP are facing depleting water from ground and increasing salinisation

c) Central water commission's 2018 report shows 42 rivers are contaminated by atleast 2 toxic heavy compound.

Ganga has atleast 5 heavy metal

d) Industrial effluent mixed untreated to river causing River pollution.

Eg: Ganga near Lucknow and Kanpur is dangerous.

Remarks

2-3 lines should be written about this

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e) Untreated sewage :- Eg:- Delhi's sewage goes to Yamuna.

f) Dumping of nuclear waste make water radioactive.

g) River flowing over natural rocks sometimes dissolve them in excessive amount.
Eg:- Too much calcium dissolved if river flows over sandstone or limestone rock

13/20

with growing population, demand will grow and hence better practises for conservation of water is needed to be adopted. We can learn from Israel for micro irrigation.

b) India has two Island Groups < Lakshadweep, Andaman and Nicobar

(Geographical)

Lakshadweep	Andaman & Nicobar
→ Located on west side of Kerala coast.	→ Located on East side of Tamil Nadu.
→ Separated between 2 groups by Nine degree channel	→ separated between Andaman and Nicobar by 10 degree channel.

Remarks

→ No volcanic island.	→ 2 volcanic islands Narcondam Island ↔ Barren Island
→ Literally means a group of 1 lakh islands but consist of 25 islands.	→ Group of around 265 islands.
→ Tropical Region ✓	→ Tropical Region
→ Relatively less rainfall	→ Heavy rainfall due to South West and North East Monsoon.
→ Frequency of cyclones is comparatively low.	→ Frequently hit by tropical cyclone due to warmer Bay of Bengal and also cyclones from South China Sea due to Isthmus of Kra.
→ Economic	
→ No agriculture due to poor / no land.	→ Some / little agriculture of cashew, coconut.
→ Relatively & low tourism due to less infrastructure	→ Major tourist attractions – ① Cellular Jail ② Marine Harriet National Park ③ Corals
→ 1 airport and less developed port.	→ Good number of Ports and Naval Bases.

Arrow in tabular form should not be too long

Remarks

→ provide systematic answer with proper in sentences.

Cultural

→ culturally more open and welcome change and outer people contact.	→ PVTGs groups like sentilose, Jarawa groups are very shy.
→ ethnic similarity with Kerala people.	→ Negritos ethnic group is prevalent.
	→ In 2018, a US photographer was shot by Sentinlese people.

5/15

entire answer is in tabular form with good

× give proper conclusion

c) Monsoon is the seasonal reversal of wind which accompanied by rainfall pattern in the region → more clear definition

factors that control Monsoon phenomenon →

① Global factors

a) Mostly developed in tropical region like East Africa, Brazilian Coast North Australia.
Sometimes also in temperate region
eg:- Gulf of Mexico
:- South China & South Japan

explain with diagram

Remarks

b) walker Cycle and consequent El Nino affects the wind system in Indian Ocean Region. Low pressure at Peru attracts Somalia Jet Stream and causes drought in India. ✓ map

c) The interplay of Trade winds and Shifting of Inter Tropical Convergence Zone also affect the direction and intensity of monsoon ✓ Diagram

d) Jet streams → like STWJ jetstream affects Indian Monsoon

2) [Regional factors] ✓

a) Regional deviation of low pressure also affects monsoon.
Eg:- In a Negative Indian Ocean Dipole (IOD) Arabian sea has high pressure and hence less rainfall in southern Asia. ✓

give some flow chart and diagram

b) M-Julian Oscillation (MJO) also changes regional low and high pressure affecting rainfall.

c) Heating of Tibetan Platea. :- According to Kooteswaram, Tibetan plateau heats up and attract monsoon wind in India. ✓

Remarks

d) Strengthening by simultaneous Low and High Pressure areas.

Eg:- Low pressure over Tibet is accompanied by High Pressure on ~~Madag~~ Somalia and Madagascar

③ Locational factors

a) The coastal geometry affects the monsoon. make it more clear

Eg:- Malabar coast is 1st to receive monsoon after Andaman Nicobar Island.

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b) mountain affect the monsoon wind direction

Eg:- Western Ghats prevent monsoon to enter main land India

:- Aravalis prevent rain in Rajasthan

:- Himalayas prevent SW monsoon to enter China

:- Patkai bum and Purvanchal divert Bay of Bengal Branch.

Give more detail

c) Gaps or passes ~~and~~ allow monsoon wind
- Sabarmati Gap
- Palaghat
- Bhorghat.

Explain this gap

Remarks

4. Answer the following questions:

(a) Discuss the main issues of land management in the country. Comment on the scope of rural and agricultural development in relation to land resources.
(250 Words) (20)

(b) Discuss the climatic conditions during the post monsoon season in various parts of the country.
(200 Words) (15)

(c) Discuss some of the challenges in the management and protection of Wildlife sanctuaries and National Parks in India. Suggest some measures.
(200 Words) (15)

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

SECTION-B

Attempt all questions:

5. Comment on the following into 150 words: (10 × 5 = 50)

(a) Discuss the mitigation strategies against the tropical cyclone in India.

(b) Koeppen's Classification of Climatic Regions of India

(c) Discuss the gender specific interventions in agriculture taken by India.

(d) Discuss the Jet Stream and Kootishwaram theory of Monsoon.

(e) Discuss the challenges in agriculture of the north-east region of India and suggest some measures.

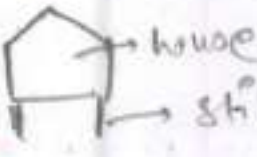
a) India is hit by tropical cyclone every year in both Bay of Bengal and Arabian sea region during N-W monsoon usually. → Need structure introduction needed

Mitigation Strategies in India

(1) Bio shelter in coastal villages. ✓
Eg: Nelluvedapathy village in Kerala has community level tree plantation which prevented cyclone impact

(2) Cyclone shelters build with Indian Building Code in cyclone prone regions. give more diagram

(3) Coastal regions like Orissa, Andhrapradesh have homes built on stilt. ✓ explain



Need proper diagram

(4) Coastal Regulation Zones (CRZ) also regulate the construction activity in various regions like CRZ I, CRZ II, CRZ III, CRZ IV — example

make clear diagram.

Remarks :

(5) Conservation and promotion of mangroves, coral reefs and wetland conservation to impede cyclone movement.

(6) Early cyclone Detection system using Remote Sensing and international collaboration.

(7) Mock drills during the time of surge are conducted by NDRF personnels.

(8) Community level participation, traditional techniques are ~~~~ brought into mainstream. Explain with examples

(9) PM's 10 point agenda ~~~~ is also used to mitigate cyclone. What is that explain briefly

Recent examples in Fani cyclone have shown India's capability of cyclone mitigation.

Conclude you answer properly

6/15

c) Agriculture ~~~~ caters to half (~~~~) of population directly

c) more than half of population has ~~~~ dependence on Agriculture.

=> Improve introduction part

Women forms large chunk of agricultural ~~~~ labourer and non-labourer work force.

Remarks

Gender Specific Intervention taken in Agriculture

1. Inheritance Right under Hindu Succession law. Women are equally owner of father's land / property. ✓

2. Gender Budgeting having women-specific and women scheme in agricultural section. ✓ give some example to substantiate your answer

3. Credit availability to women SHGs. ✓ Similarly, seed, fertilizer, insecticide are promoted to be purchased by female Aadhar Card.

4. More promotion of women for Kisan Credit Card, Soil Health card etc... ✓

5. LPG-Rural scheme to remove cooking and use LPG as cooking fuel targets rural women. ✓

6. Extension services for use of machine and technology for women and men specifically. ✓

7. Female tenants are protected for rents and ownership by Land Reforms. ✓

conclude your answer properly — 6/10

9) There are various theories of monsoon formation over southern Asia like Airmass theory of Fohn and Differential heating theory by. Some other theories

① Jet stream theory by Yin :-

In winter

The STWJ jetstreams are bifurcated by Potwar and Himalayas in winter

make clear diagrams

The major portion goes to southern branch causing High pressure at Tibet which holds monsoons winds out of India.

Explain theory systematically

In Summers

STWJ shifts northward and hence North and south branch merges causing Low Pressure at Tibet. This bring monsoon in India.

→ Explain more under this heading.

better diagram

Remarks

This explains the ~~arrival~~ two phenomenons —

a) Arrival → when STWJ passes over Tibet.

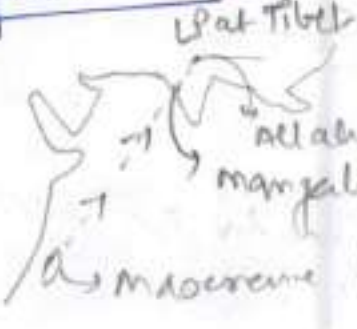
b) Monsoon Break → Due to wavy nature of STWJ, sometimes ~~too~~ high pressure is re-established over Tibet causing mousam Break.

Theory of Tibet Heating by Koteshwaram

Tibet is highest plateau in world.

Tibet < in winter → ice and snow
in summer → extensive heating.

As a result in summer, there is low pressure (LP) at Tibet. Consequently there is HP at Mascarene High. Wind blows from Madagascar to Tibet along Prayagraj – Mangalore Axis



6/10

Improve diagram

Conclude your answer properly

Remarks

c) North east region is relatively isolated landmass due to chicken's neck or siliguri pass.

provide proper inbound link

Better diagram

Challenges in NE-region Agriculture

1. Shifting Agriculture → NITI Aayog's 2018 report show it as major concern. ✓
2. deforestation due to slash and burn (Jhumming) of cultivation. ✓
3. Poor soil due to excessive draining due to large monsoon rainfall making it acidic.
   Eg: Mawsynram (Meghalaya) receives 1000cm of rainfall.
4. Primitive Tools - still use of ~~st~~ sickle, hoe and draught animals. explain with examples
5. Primitive seeds and traditional fertilizers - less intervention of HYV seeds ✓ explain
6. Low political intervention → very less effect of Green Revolution. ✓ how?

Remarks

(5) Hugely undulating plain make agriculture unproductive
Eg:- many mountains & plateaus < Garo, Kasi, Jaintia Naga, Patkai Bum.

~~Solutions~~ Measures

(1) ~~Organic farming~~ and Zero Budget Natural farming.
Eg. learn from Sikkim.

(2) Agro-climatic & Agro-ecological classification to be utilized properly

(3) Comprehensive land ~~use~~ capability classification to be carried out. - explain

(4) Mechanisation and introduction of modern input like HYV seeds etc...

(5) Credit Availability like Kisan Credit Cards etc..

(6) Terrace Farming - explain } To prevent soil erosion.

(7) Contour ploughing

(8) Sustainable agriculture.

Conclude your answer properly

5/10

Please use separation

Remarks :

Remarks

6. Answer the following questions:

(a) Give an account of energy resources in the country. Comment on the need for developing and harnessing alternative energy sources support with appropriate arguments. (250 Words) (20)

(b) What are minor forest produce? Discuss their significance to rural and tribal economy. (200 Words) (15)

(c) Discuss the importance of animal husbandry and also discuss socio-economic and environmental aspect of animal husbandry in India. (200 Words) (15)

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

Remarks

7. Answer the following questions:

(a) What are dry the regions of India? How do the physical and human factors intervene to create the unique conditions of poverty and deprivation in these areas? (250 Words) (20)

(b) Agriculture in North East India provides livelihood support to 70% of the region's population still it produces only 1.5% of the country's food grain production. Discuss reasons and suggest measures. (200 Words) (15)

(c) Critically analyze the overall change in cropping pattern in India post green revolution era. (200 Words) (15)

a) Dry regions in India connotes regions coneding rainfall less than 75 cm annually. → more detail introduction needed

✓ good map

Surprisingly these regions are some of the most poor and deprived areas- ✓

① Bundelkhand has little rain and is poorest region -

② High suicide of cotton farmers in Vidyavada and Marathwada. ✓

good grain in details

Remarks

These are due to—

(1) Physical factors — Mountains — 2 more explain

(a) Desert region of Rajasthan has too little agricultural potential. ✓ lack

(b) Cold desert in Ladakh ~~is~~ very less rainfall ✓

(c) Rainshadow zone of western ghats prevent South-west monsoon rain in various region. explain the reason behind this

(1) Marathawada ✓

(2) Rayaloseema ✓

(3) ~~to~~ Southern Karnataka Plateau

(d) Aravali prevent SW monsoon's ~~to~~ Bay of Bengal branch to reach Rajasthan dry region — how?

Soil

→ 2-3 lines explain needed

(a) Semi arid and arid soil has little moisture content ✓

(b) Laterite soil is heavy drained ~~soil~~

c) Salinization and calcification of soil in Punjab, Rajasthan affects soil. ✓

Temperature — explain

Remarks

(a) • In summers, Rajasthan temp. is goes beyond 45° C.
In winters, Ladakh's temp drops below -40°c

b) Plateau region is heated excessively affecting cotton crop and sugarcane.

Less Availability of minerals

(a) exploration is less developed
(b) Coal only available in eastern plateau
(c) Barmer oil & gas reserve unexplored
(d) Lignite of Rajasthan is of poor quality

Not needed in this answer

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(2) Human factors

(a) Poor crop planning in terms of crop rotation, cropping pattern.
Eg:- Monocropping, Sugarcane in water stressed region (eg: Marathwada)

(b) Concentration of industries and factories are largely on eastern part of Indian peninsula.
Eg: Jharkhand, orissa, Andhra Pradesh.

maintain flow in answer

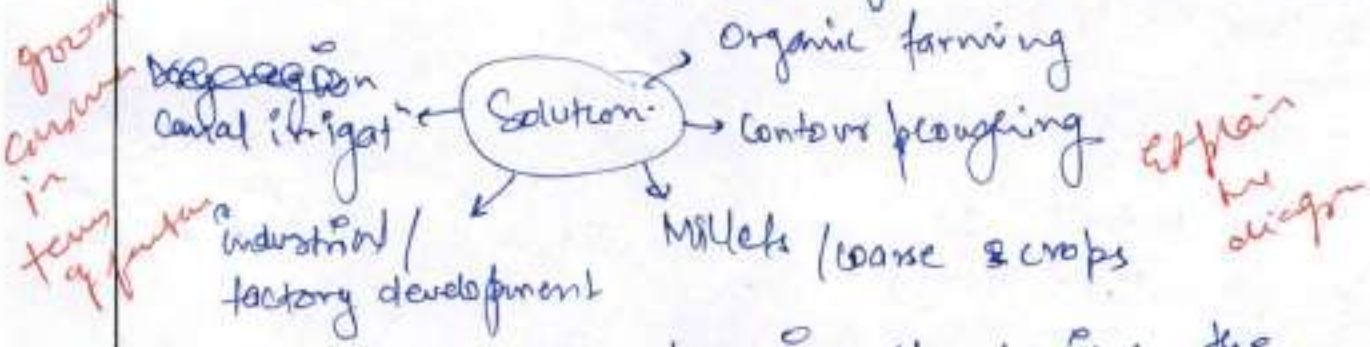
(c) Low social intervention by government
Eg:- Lack of education, soil Health Card, credit.

(d) Improper Agro-climatic & Agro-economic regionalisation approach

Remarks:

(e) Low transportation development inspite of having tremendous of potential.

(f) Poor land Reforms.
- Still farmers own more surplus than ceiling.
- Jamindar are replaced by moneylenders.



dry region has huge potential of saving the Pulse, Millet, Jowar, Bajra, Rai demand and hence should be intervened properly.

(b) North East region has high dependence over Agricultural sector.

Agricultural Practices in NE India
- Shifting Cultivation
- Primitive tools (Sickle/hoe)
- Traditional seeds / fertilizers
- Subsistence Type of Agriculture

Reason for High dependence → About 70% livelihood support

(i) Low development of industrial sector due to undulating terrain and rough environment.

Remarks

(2) Low level of educational level affects youth's ability to join service / tertiary sector.

(3) Rich in humus and organic manure, agriculture is preferred

Eg:- Ash from burning adds to fertility

(4) Reason for low contribution to country's food grain

(1) Low productivity → due to faulty practise and largely subsistence agriculture

(2) Poor yield due to traditional seeds

(3) Infertile soil due to extensive rain draining nutrients turning soil acidic (Monsoon soil)

(4) Poor storage and transportation facility.

Eg:- Huge lack of cold storage and scientific management.

(5) Low irrigation infrastructure.

Monsoon is very limited stretch such agriculture need water throughout growing season.

- Low intervention of < drip irrigation / sprinkler system

Due to hard, rocky terrain.

each point should have explain and provide example

maintain flow of the answer

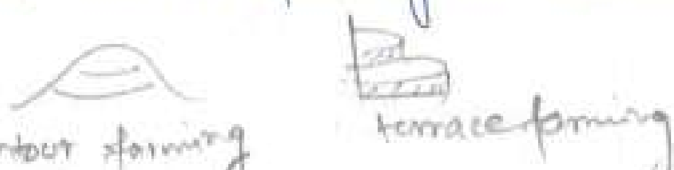
Remarks

(6) low availability to timely financial credit due to
- low bank penetration
- low diversified services

Some Measures

1. Organic and Zero Budget farming should be promoted
   Eg: Sikkim in 2015 became full organic state

2. contour farming and terrace farming to obstruct water flow.



3. Rejuvinate traditional rainwater harvesting technique
   Eg: Zoga in Nagaland to prevent drought like condition.

8/15

4. Cropping pattern should be choosen by utilizing agri-ecological regionalisation.

5. Increase farm mechanization and extension service

6. Ensure credit Availability
   Eg:- Adhaar Enabled Payment (AeP) can be started by government.
   :- Extension of Indian Post Payment Bank

7. Development of seed vault, seed village and Gramin Agricultural market (GrAM) and e-NAM

Answer has good facts but need more systematic answer in terms of flow

Remarks

X - interlinking of facts is imp

(c) Green revolution in 1966-67 has drastically changed cropping patterns in India.

Credit availability ← (Reasons) → New seeds (HYV)

Government interventions ← (Reasons) → more Irrigation facility (canal)

↓ explain

introduce the content given question properly

Changes →

1) Northern India

a) Wetter crops were introduced in otherwise dry region of India i.e. North-west India.

Eg:- Rice in Punjab, Western UP and Punjab

∵ Rice in some parts of Rajasthan (Ganganagar)

[illegible]

b) Introduction of cotton in northern land like Rajasthan which was earlier only sown in South i.e. Regur soil ✓

c) Reduced region under Jute crop due to high yielding rice crop in deltaic region of Bengal and Punjab

d) Diffusion of sugarcane in Rajasthan due to Canal introduction.

Explain more with examples

Give map or diagram

Remarks

(P) Southern India.

(a) Introduction of Millet crops in dry regions:
Eg:- Ragi in South Maharashtra & North Karnataka
:- Jowar and Bajra in Vidarbha and Marathwada

(b) Introduction of sugarcane in ~~western~~ southern peninsula due to increasing irrigation infrastructure.
Eg:- Krishna and Tungabhadra basin;

(c) Reduced region of Cotton due to high stress and suicide in Vidarbha

(d) Larger region ~~~~ under oil seed and Pulse cultivation. Especially dry regions receiving rainfall less than 75 cm.

(e) Rice in deltaic region & interior region (canal) has increased.

However its has caused severe issues:
- Groundwater depletion in sugarcane & rice region.
- less fodder crop
- Salinisation & alkanisation of soil
- degradation, Deforestation and Desertification
- Surplus food grain → Less remuneration & high wastage.
- High incidents of suicide (11703 suicides in 2016)

10/15

provide map and diagram

good but mark & name systematic and in flow

Remarks

8. Answer the following questions:

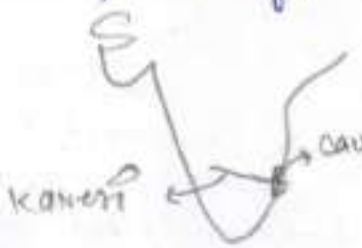
(a) What is the genesis of the Cauvery interstate river water dispute? What are the prospects of a national water grid in addressing the issue? (250 Words) (20)

(b) Discuss the importance of soil forming factors in determining the soil types in different parts of India. Elaborate with suitable examples. (200 Words) (15)

(c) Discuss the issues and measures of agricultural pricing in India. (200 Words) (15)

→ Cauvery is Peninsular river & flowing over Southern plateau region traversing Tamil Nadu, Karnataka and some parts of Kerala.

→ more detail introduction is needed



Genesis of dispute ✓

(1) Year round flow since it receives ~~too~~ rain in both south-west and North East Monsoon ✓

(2) fertile Cauvery Basin make is South Granary of India

(3) water distribution has been a bone of contention between Karnataka, Kerala, Puducherry and Tamil Nadu. ✓

(4) Direct fetching, Groundwater fetching, Stoppage/ impediment has caused severe tension between States.

Remarks

(5) Both States have filed multiple cases in Central Water Commission (CWC) and Supreme Court (SC) against each other.

Recently some measures have been taken to tackle the issue

→ CWC established Cauvery Water Management Authority.

→ National Water Grid

→ Amnesty mediation.

National Water Grid can address the issue:

(II) It is a large engineering infrastructural project which proposes to combine Perennial Rivers (Himalayan) with Non Perennial Rivers (Peninsular).

It can address the issue by —

maintain flow in cauvery

(1) Rejuvinating Tungabhadra river during dry period. Hence giving water to Karnataka.

(2) It can rejuvinate groundwater so that Kerala and Puducherry increase ground-water use for drinking purpose

Remarks

(3) It can increase Cauvery flow during lean times ie October - mid November, thus prevent stress.

(4) Direct supply from Ganga system / Godavari system to respective state can also be looked at.

(5) Also reducing flood incidents in Wayand and other southern region by giving water to any marathwada & Vijawada region, Rayalseema region.

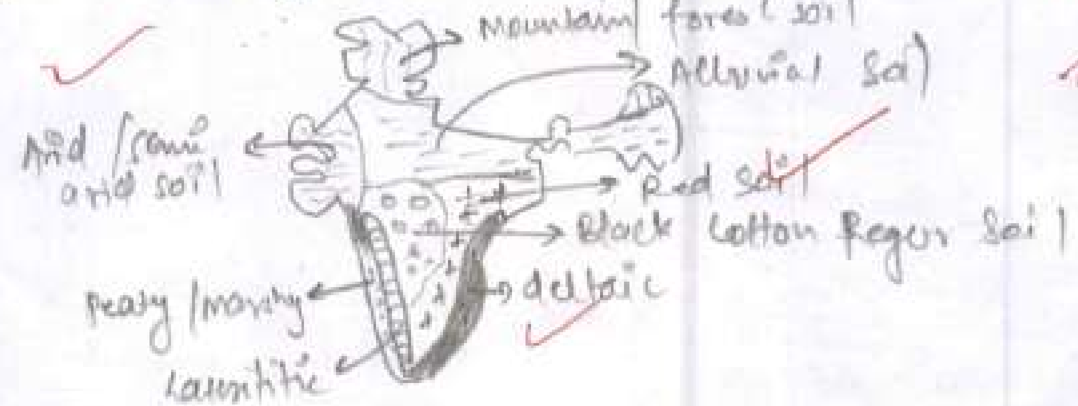
Hence an engineered interlinking can address simultaneously
- Flood
- drought
- drinking water crisis
- Agricultural water need.

explain

9/15

(b) Soil is the top most layer of earth crust. It is formed due to a variety of factors.

Different soil types in India —



⇒ Provide few lines bringing [illegible] give some [illegible] then start having map and diagram

→ **Slope**

a) Himalayas are largely devoid of thick soil cover due to steep slope

b) Hill regions of Vindhya, Aravali has less soil.

→ **Parent Rock**

a) Black soil is formed due to Basaltic lava rock disintegration. ✓ It is known for cotton soil crops.

b) Largle alluvial Northern plains are result of Himalayan sediments carried by Ganga, Brahmaputra & Indus Rivers. Explain with more details

→ **Climate**

(a) Temperature

(i) Rajasthan has arid / semi arid soil which is formed in intense heating condition and consequent mechanical disintegration. It is lacks moisture ✓

(b) Rainfall

(i) North-East Region see heavy SW monsoon rain, as a result soil is largely drained and acidic

Remarks

(ii) Rajasthan soil is has high potash content but no humus since the soil is not eroded.

(iii) Western and Eastern Ghats have laterite soil which is largely exhausted due to rainfall. It is used to make brick.

(iv) Too much rain in western ghat provides peaty and marshy soil good for cashew, Tea, Rubber and coffee plantation.

→ Location

(i) Delta region has deltaic alluvial soil near Sundarban, Godavari - Krishna delta and Kauvery delta. Explain

(ii) foothills of himalayas have alluvial fan and terai. Terai is poorly drained hence unfit for cultivation

good effort. Can give some diagrams

9/15

(c) ~~Agriculture~~ More than 50% ~~for~~ people ~~lives~~ depends on agriculture. yet it only contributes 17% to the GDP.

→ Briefly introduce main demand of the question

Issues with Agricultural Pricing in India

Remarks

(1) Surplus production reduces remunerative prices.

(2) Inadequate minimum support price announced by Government.
Also fair and Remunerative price of Sugarcane

(3) Low Agri. export price due to global surpluses and protectionism by America

(4) Poor e-NAM development due to lack of internet infrastructure and knowledge

(5) Low penetration of Negotiable warehouse Receipt and Cold Storage.

(6) APMC mandis and private purchaser cartelization.

(7) Low fish demand and high fat content in tropical fish reduces price

(8) Even during price inflation, farmers do not get their share.
Eg:- Even if apple price goes to 80 ₹ per kg farmer still gets 5-10 ₹ per kg.

give some flow diagram to more clear visible

Remarks

* Measures

(1) Expansion of Gramin Agricultural Market (Gr Ann)
(2) e-NAM and NWR penetration should increase.
(3) Contract farming to prevent price fluctuation
(4) Implementation of Model Agricultural Produce and livestock marketing Act.
(5) cooperative farming should increasing.
(6) Farmer Producer ~~Bank~~ organisation (FPO) should be encouraged to get cheap credit and fair remuneration.

8/15

To fulfil Dr. Ashok Dalwai's Committee recommendation and NITI Aayog's plan to double the farmer income by 2022, farmers and Agriculture has to centre of development.

could conclude your answer properly.

Remarks

Remarks