Sample Question Paper-1

(Specimen Paper Issued by CISCE on 12ᵗʰ July 2022)
Geography
Class-10

SOLVED

Time Allowed : 2 hours   **Maximum Marks : 80**

Answer to this Paper must be written on the paper provided separately.
You will not be allowed to write during the first **15 minutes.**
This time is to be spent in reading the question paper.
The time given at the head of this Paper is the time allowed for writing the answers.

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Part I is compulsory. All questions from ***Part I*** *are to be attempted.*
A total of five questions are to be attempted from ***Part II***
The intended marks for questions or parts of questions are given in brackets [ ].

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To be supplied with this paper: Survey of India Map Sheet No. **G43SIO** *and 20 cm of twine.*

Part-I   **[30 marks]**

*(Attempt **all** questions from this **Part**.)*

Question 1

Study the extract of the Survey of India Map sheet No. G43S10 and answer the following questions:

(i) (a) Give the four figure grid reference of the settlement where Ayurvedic hospital is found. **[2]**
     (b) Name two man-made features in grid square 6429.

(ii) (a) What is the pattern of drainage seen in grid square 6729? **[2]**
     (b) What is the pattern of settlement seen in grid square 6934?

(iii) Calculate the shortest distance in kms. between settlement Udwaria (6934) and Sanwara (6636). **[2]**

(iv) What advantage does Representative Fraction have over Statement scale? **[2]**

(v) What do you mean by the following: **[2]**
     (a) 3r in grid square 6933
     (b) .437 in grid square 6729

Question 2

On the outline map of India provided:

(i)   Draw and label the Tropic of Cancer. **[1]**
(ii)   Shade and label the river Tungabhadra. **[1]**
(iii) Shade and label Malabar Coast. **[1]**
(iv)   Shade and label Andaman Sea. **[1]**
(v)   Mark with a dot and name Kochi. **[1]**
(vi)   Shade an area which has black soil. **[1]**
(vii) Mark and name Nathu-la Pass. **[1]**
(viii) Mark and name Jharia. **[1]**
(ix)   Mark and label Aravali. **[1]**
(x)   Shade and label the area of Sparse population in North India. **[1]**

Question 3

Choose the correct option:

(i) _____ is a hot and dry local wind that blow in north India during pre-monsoon period.
    (a) Western Disturbance   (b) Loo
    (c) Kal Baisakhi   (d) Cherry Blossom

(ii) **Gully erosion is common in the:**
    (a) Chambal basin   (b) Ganga basin
    (c) Rajasthan   (d) Hilly region

(iii) _____ and _____ crops are associated with laterite soil.
    (a) Wheat and rice   (b) Sugarcane and rice
    (c) Maize and Bajra   (d) Tea and Coffee

(iv) **Which are the most widespread forests of India?**
    (a) Tropical Rain Forests   (b) Tropical Thorn Forest
    (c) Tropical Deciduous Forests   (d) Littoral Forests

(v) _____ **is the oldest coalfield of India.**
    (a) Raniganj   (b) Jharia
    (c) Bokaro   (d) Karanpura

(vi) **Cultivation of crops and raising of animals is a feature of _____.**
    (a) Intensive farming   (b) Plantation farming
    (c) Mixed farming   (d) Commercial farming

(vii) _____ **industries are also known as household industry.**
    (a) Basic Industry   (b) Co-operative Industry
    (c) Cottage Industry   (d) Basic Industry

(viii) **Rourkela Steel Plant was built with the cooperation of _____.**
    (a) USSR   (b) Germany
    (c) Japan   (d) France

(ix) _____ **transport supplements the other modes of transport.**
    (a) Airways   (b) Roadways
    (c) Waterways   (d) Railways

(x) **Cheapest method of disposal of waste:**
    (a) Dumping   (b) Compositing
    (c) Segregation   (d) Recycling

Part-II

[50 marks]

(*Attempt **any five** questions from this **Part**.*)

Question 4

(i) (a) Name the type of climate experienced by India. **[2]**
    (b) Mention any two factors responsible for it.

(ii) With the help of a suitable example explain how relief features affect the rainfall of a place. **[2]**

(iii) Give a geographical reason for each of the following: **[3]**
    (a) Annual range of temperature is higher in Delhi than Mumbai.
    (b) Mango showers are beneficial local winds.
    (c) The North East monsoon bring almost no rain to most parts of India.
    (d) Study the climatic data and answer the following questions:

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Temp.	23.8	25.0	27.7	28.3	30.2	30.3	30.4	30.3	30.0	30.3	25.5	24.2
Rainfall cms.	0	0	1.1	1.5	2.1	45.3	46.5	45.4	43.3	20.1	3.0	1

    (a) Calculate the annual range of temperature.
    (b) What is the total rainfall during the monsoon season?
    (c) On which coast is the station located? Give a reason for your answer.

Question 5

(i) Differentiate between alluvial and laterite soil. **[2]**

(ii) Name the following: **[2]**
    (a) This soil is sticky when wet and cracks when dry.
    (b) This soil is mainly used for making bricks.
    (c) This soil is classified into khadar and bhangar.
    (d) When heavy rainfall washes away the topmost layer of the soil.

(iii) Give geographical reasons for the following: **[3]**
    (a) Black soil is a residual soil.
    (b) Red soils are generally infertile.
    (c) Alluvial soil differs in texture.

(iv) What is Soil Conservation? Mention any two measures taken to conserve soil. **[3]**

Question 6

  (i)   Mention *any two* characteristics of Tropical Evergreen forests.   **[2]**

  (ii) Name the forest which is found in the delta of the river Ganga. Name two trees which are found here. **[2]**

  (iii) Give geographical reasons for the following: **[3]**

    (a) Xerophytic plants have long roots.

    (b) Forests prevent floods.

    (c) Tropical deciduous forests are commercially most exploited.

  (iv) Give *three* reasons why we must conserve our forests.   **[3]**

Question 7

  (i)   Mention *two* conditions necessary for the construction of wells.   **[2]**

  (ii) Define: **[2]**

    (a) Surface water

    (b) Ground water

  (iii) Mention *one* advantage of canals and *two* disadvantages of tanks.   **[3]**

  (iv) Mention *three* ways by which you as an individual can reuse and conserve water.   **[3]**

Question 8

  (i)   Mention *one* advantage and one disadvantage of coal found in India.   **[2]**

  (ii) Name *two* states where copper is found in India. Mention one use of it.   **[2]**

  (iii) Mention *two* advantages of using natural gas over petroleum. Name an area where natural gas is found.

                                                                                                                            [3]

  (iv) What are the advantages of using bio gas?   **[3]**

Question 9

  (i)   Mention *any two* problems faced by Indian farmers.   **[2]**

  (ii) Differentiate between intensive and extensive farming.   **[2]**

  (iii) With reference to rice cultivation answer the following: **[3]**

    (a) Name a state that produces the largest quantity of rice.

    (b) Mention *any two* geographical conditions necessary for its growth.

    (c) Which is the best method for its cultivation?

  (iv) (a) Mention *two* reasons why sugarcane cultivation is gaining importance in Peninsular India.   **[3]**

    (b) State *one* problem of sugarcane growers of Uttar Pradesh.

Questions 10.

  (i)   Explain the terms: **[2]**

    (a) Ancillary Industry

    (b) Public Sector Industry

  (ii) Mention two problems faced by the cotton textile industries.   **[2]**

  (iii) From where Tata Steel gets its supply of coal, iron ore and water supply from?   **[3]**

  (iv) What is the significance of the Electronics industry for education, entertainment and research?   **[3]**

Question 11

  (i)   What is the Golden Quadrilateral? Mention two economic benefits of it.   **[2]**

  (ii) How is a good transport network important for India? (Two points)   **[2]**

  (iii) Mention *two* advantages of railways and one disadvantage of airways.   **[3]**

  (iv) (a) Name the terminal stations of East West Corridor.   **[3]**

    (b) Who looks after the construction and maintenance of the following?

      1 . National Highways   2. Border Roads

Question 12

  (i)   Give two reasons why we need to manage our waste?   **[2]**

  (ii) Mention one advantage of sanitary landfill and one disadvantage of composting.   **[2]**

  (iii) Give reasons for the following: **[3]**

    (a) We should avoid using plastics.

    (b) Radioactive wastes are hazardous.

    (c) Open dumping is not an environment friendly method of managing waste.

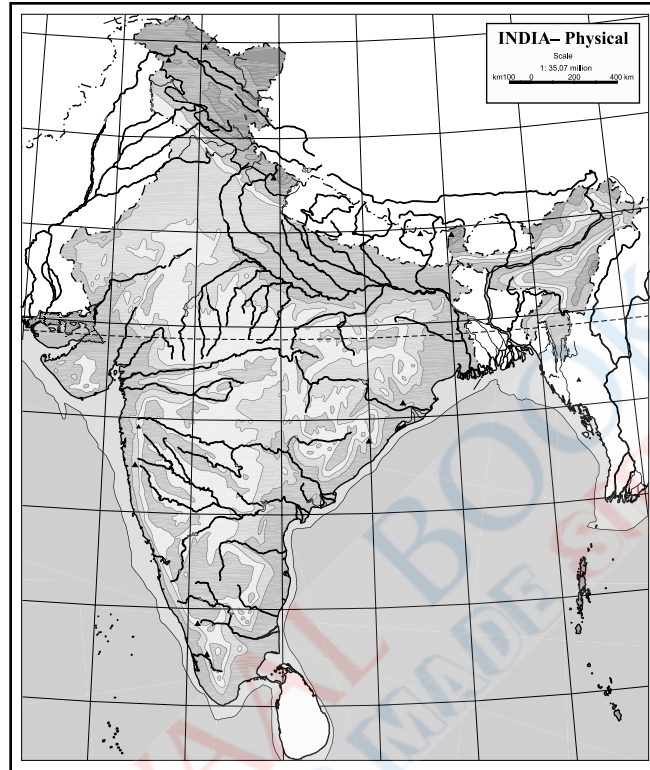 (iv) How will you as an individual reduce and reuse waste at home?   **[3]**

Question No. 2

Index No. _____ **UID** _____

(This map, if used, must be fastened with all other answers)

Map of India for Question 2.

INDIA– Physical
Scale
1 : 35.07 million
km100   0   200   400 km

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SOLUTIONS

Sample Question Paper-1

Geography

PART I

1. (i)
   (a) Four-grid reference for ayurvedic hospital is 6634.

   (b) Two man-made features in 6429 are: wall and NH168.

(ii)
   (a) Drainage pattern in grid square 6729 is radial.

   (b) Settlement pattern in the grid square 6934 is linear.

(iii) Direct/Shortest Distance on given map = 5 cm

Given scale is 2 cm = 1 km (or 1 cm = ½ km)

Shortest Distance between Udwariya and Sanwara (in km) will be:

$\Rightarrow$ 5 cm = (½ × 5) km $\Rightarrow$ 2.5 km

(iv) The Statement of Scale expresses the relationship of map to the ground in words while the Representative Fraction (R.F.) is the ratio between the distance on the map to the distance on the corresponding ground and is in fraction. The numerator denotes the length on the map and the denominator denotes the actual distance on the ground. e.g. 1 : 50,000.

Representative Fraction (R.F.) = Distance on the Map/Distance of the Ground

One of the major advantages of using the R.F. scale is that it allows you to directly compare the sizes of objects between different maps. Because the earlier one eliminates the use of specific units (such as inches, feet, miles, etc) there are no complicated conversions needed.

(v)
   (a) 3r is the relative height of the embankment and is equivalent to 3 meters.

   (b) .437 is the spot height of a particular place.

3. (i) **Option (b) is correct.**

Explanation: **Loo :** It is a local wind that blows in the north western part of the country and causes heat strokes. It is a gusty, hot and dry wind.

(ii) **Option (a) is correct.**

Explanation: Gully erosion-Removal of clayey soil along drainage lines by running water thereby making deep channels that erodes soil mostly in hillsides after Deforestation and Over grazing. This phenomena can be found in the Chambal river basin.

(iii) **Option (d) is correct.**

Explanation: Formed in-situ as a result of leaching under typical monsoonal conditions with high temperature and heavy rainfall with alternating wet and dry spells. Major crops includes Tea, Coffee, Rubber, Cashew, Tapioca and Millets.

(iv) **Option (c) is correct.**

Explanation: Tropical deciduous forests cover most of the forest area in India. As these forests depend on the monsoon, they are also known as monsoon forests.

(v) **Option (a) is correct.**

Explanation: Raniganj in West Bengal is the oldest coalfield in India while Jharia in Jharkhand is the largest coalfield in India. They both belong to the Damodar Valley region.

(vi) **Option (c) is correct.**

Explanation **:** Mixed Farming is a type of farming in which a farmer conducts different agricultural practices on a single farm to increase income through different sources while rearing cattle simultaneously.

(vii) **Option (c) is correct.**

Explanation: Cottage Industries are organised by individuals with Private resources and with the help of their family members and their skills e.g., Weaving, Handloom, Carpet Industry, etc. Therefore they are also known as household industries.

(viii) **Option (b) is correct.**

Explanation: Rourkela Steel Plant was established in 1959 with the Technical Collaboration from the German firm, Krupps and Demag. It is located in the Sundargarh district of Odisha.

(ix) **Option (b) is correct.**

Explanation: Road transport is most suited for carrying perishable goods and people to and from rural areas which are not served by Rail, Water or Air transport.

(x) Option (a) is correct.

Explanation: After Segregation, Dumping of waste products is the next procedure. Waste materials are dumped in open low lands far from the city, though it is not environment friendly but it is the cheapest method.

Part-II

4. (i) (a) Tropical monsoon climate.

(b) Two factors responsible for the climate are:

• India has a Tropical Monsoon Climate as it is a tropical country.

• Due to strong influence of Monsoon winds India receives rainfall otherwise it would have only a dry climate instead of having dry and moist weather during rainy season.

(ii) (a) Goa is located on the windward side of western Ghats, so Arabian Sea Branch of South West Monsoon bring heavier rainfall but Puducherry is located on the eastern coast and therefore receives lighter rainfall from North East Monsoon.

(b) Rajasthan is receiving less rainfall i.e., less than 50cm of rainfall as the Aravalli range works as a barrier to the South-West monsoon.

(c) Mawsynram experiences Orographic rainfall as it is located on windward side of Garo Hills. Bay of Bengal Branch of South West Monsoon brings heavy rains to this area/funnel shape of Garo, Khasi, Jaintia hills helps in trapping of clouds thereby resulting in more rains.

(Any One)

(iii) (a) Delhi is situated in the interior part of the country, far away from the influence of the sea while Mumbai is a coastal city and is influenced by sea. Thus, Delhi has a higher annual range of temperature than Mumbai.

(b) Mango Showers or Cherry Blossom are the local winds which blow in Kerala during summers (June). This wind helps in the growth of Mango, Coffee and Tea.

(c) The North-east monsoons winds prevail over the country during the Winter Season and blow from land to sea, thus they do not carry any moisture to precipitate over most parts of India. However, when part of these winds blow over the Bay of Bengal, they pick up moisture from there and strike the Eastern Ghats, thereby, shedding heavy rainfall along the Coastal Plains.

(d) (a) As per the given data, Annual range of temperature can be calculated to be:

30.4°C – 23.8°C = 6.6°C

(b) Total rainfall

= (45.3+ 46.5 + 45.4 + 43.3) cms

= 180.5 cms

(c) The station is located in the western coast of India because as per the given data, there was almost negligible or absolutely no rainfall received during the winter months.

5. (i)

Alluvial Soil	Laterite Soil
Transported soil by the deposition of silts and sediments brought down by the rivers. Hence, also called Riverine soil.	Formed in-situ as a result of leaching under typical monsoonal conditions with high temperature and heavy rainfall with alternating wet and dry spells.
Wheat, Rice, Sugarcane, Oil Seeds	Tea, Coffee, Rubber, Cashew, Tapioca and Millets
It is porous and is coarse in the upper region and fine in the lower region; rich in Potash and Lime but deficient in Nitrogen, phosphoric acid and humus (except the alluvium in the Ganga deltaic region which is rich in humus); colour varies from light grey to ash grey depending on the depth of the deposition, the texture of the materials, and the time taken for attaining maturity.	Highly acidic in nature; It is porous and coarse; Rich in iron; Poor in Silica, Lime, Nitrogen and Humus; Red in colour.
Found mainly in Uttar Pradesh, Punjab, Haryana, Jharkhand, Bihar, West Bengal.	Found mainly in summits of Eastern Ghats and Western Ghats namely in Andhra Pradesh, Tamil Nadu, West Bengal, Odisha, Assam.

(ii) (a) Black Cotton Soil

(b) Laterite Soil

(c) Alluvial Soil

(d) Slip Erosion

(iii) (a) Residual soils are formed 'in situ' that is formed where they are found in their original position by the breaking up of parent rocks, e.g., Black soil, Red soil, Laterite soil, etc. Black soil is formed in situ by the weathering of volcanic rocks or igneous rocks, hence are also known as residual soils.

(b) Red Soil is acidic in nature due to deficiency of Lime, Nitrogen, Phosphorous and Humus in the soil.

(c) Alluvial soil is coarse in the upper valley of the rivers because the eroded matter is carried away by the fast flowing river but in the lower course, the river reduces its speed and the soil particles become finer due to attrition or because the load itself gets eroded.

(iv) Soil Conservation is the effort made by man to prevent soil loss from erosion or reduced fertility caused by over usage.

Measures to prevent Soil erosion:

(i) Afforestation and Re-afforestation: Afforestation means planting trees in an area where there was never a forest or plantation; it's a method to create a new forest and Re-afforestation means planting of trees in lieu of the number of trees being cut adopting the ratio as 2 : 1. Because of this, the roots of trees and plants hold soil together, reducing speed of running water, enabling water to get absorbed in the soil. Trees also reduces the force of winds, preventing the blowing away of soil particles.

(ii) Restricted grazing of animals: Animals should be spread out to different pastures and fodder crops should be grown in large quantity.

(iii) Construction of dams: In order to check the speed of river water and control river floods, construction of dams also saves soil from erosion.

(iv) Proper farming techniques–

(a) Crop rotation: It is a system of farming in which farmers grow crops cyclically to minimise consumption of particular nutrients from the soil, thus maintaining fertility of land.

(b) Contour ploughing: Contours act like bunds. Ploughing along contours across the slope of the land prevents soil being washed away by rainwater or by surface run-off.

(c) Terrace farming: Hill slopes are cut into a number of terraces having horizontal top and steep slopes on the back and front. It is a very effective and one of the oldest methods of soil conservation.

(d) Strip cropping: In this system, large fields are divided in strips and grass is grown between the crops which reduces wind velocity and protects the top soil from erosion.

(e) Shelter belts: When trees are planted in rows to create shelters along sand dunes, these rows are called Shelter belts. They help stabilizing sand dunes and prevent the desert to extend into land available for farming. It's a way of soil conservation.

(Any two)

6. (i) The characteristic features are :

(a) They are dense and have a variety of trees and shrubs.

(b) Trees reach at a height of 60 m or above.

(c) Due to thick canopy of trees, herbs and grasses cannot grow.

(d) These forests do not have any fixed period of time for shedding of leaves.

(e) These forests produce hardwood trees. All trees do not shed their leaves at the same time. That is why these forests always appear green. **(Any Two)**

(ii) Mangroves are found in the delta region of the Ganges.

The important trees of the mangrove forests are the Sundari, Gurjan, Hintal, Keora, Rhizophora, Amur, Bhara, Canes, etc.

(Any Two)

(iii) (a) Xerophytic plants have long roots because they are adapted to the dry and hot climatic conditions of the tropical regions so that they can fulfil their water needs from the deeper layers of the soil.

(b) The roots of the trees check the speed of running water which does not overflow its banks and thus controls floods.

(c) Tropical Deciduous forests are the commercially most exploited kind of forests because they provide timber (hardwood) for making durable furniture, fruits and other valuable products. Parts of these forests are also cleared to carry out agricultural activities.

(iv) We need to Conserve our Forest Resource because:

(a) They have a favourable effect on the climate or temperature and rain.

(b) They help in Soil conservation.

(c) They act as a Flood control measure.

(d) They maintain the Ecological balance.

(e) They serve as a habitat of Wild life.

(f) They provide forest products.

(g) They are one of the places of Tourist interest.

(h) They become a source of Humus.

(i) They help to keep check on extension of sand dune.

(j) They prevent global warming.

(k) They recharge ground water

(Any Three)

7. (i) Well irrigation is the oldest method of irrigation. A well is a hole, dug in the ground to obtain the underground water. It is generally carried out in the places where-

   (a) the soil is soft and

   (b) easy to dig.

(ii) (a) Surface Water : Water that is available on land in the form of Rivers, Oceans, Seas, Lakes and Ponds.

   (b) Ground Water : Underground water that seeps into soil and is located in large aquifers under the ground.

(iii) Advantages of Canal Irrigation :

   (a) The perennial canals provide constant supply of water and save the crops from drought situations.

   (b) Canal irrigation has proved to be a boon for the sandy areas of Rajasthan which are yielding good agricultural crops.

   (c) Canal irrigation has converted Punjab and Haryana into 'the Granary of the country'.

   (d) Canals carry lot of sediments brought down by the rivers which get deposited in the agricultural fields and add to the fertility of the soil.

   (e) Although the initial investment for constructing a canal is high but it is quite cheap in the long run. **(Any One)**

Disadvantages of Tank Irrigation:

   (a) In the absence of rainwater during dry season, the tanks become dry and fail to provide water for irrigation.

   (b) Due to deposition of sediments, the tanks get silted up soon and de-silting is necessary for maintaining the storing capacity of tank.

   (c) Tanks occupy large fertile areas which otherwise could be used for agricultural purposes.

   (d) Since tanks are very extensive and shallow, huge quantities of stored water go waste as it gets evaporated or sinks underground. **(Any two)**

(iv) The following are some of the ways through which we can conserve the water and reuse it:

   (a) Rainwater harvesting

   (b) Watershed Management

   (c) Aquifer

   (d) Percolation Pits

   (e) Surface runoff harvesting

   (f) Rooftop rainwater harvesting

   (Any Three)

8. (i) The main advantages of Coal are :

   (a) It is a source of direct heat and energy for Domestic purposes.

   (b) It is one of the cheapest forms of energy.

   (c) It provides numerous raw materials to Chemical Industries like Benzole, Ammonia, Coal Tar, Coal Gas, etc.

The main disadvantages of Coal in India are:

   (a) Coal releases Carbon dioxide which affects the environment leading to Greenhouse Gas Emissions and Global Warming Effect.

   (b) The Coal reserves in India are concentrated in Chota Nagpur region.

   (c) The transportation cost of Coal is significantly high.

   (d) Coal reserves are limited in India.

   (e) Coal found in India is of poor quality.

   (Any one)

(ii) The major Copper Mines are in Khetri in Rajasthan, Singhbhum in Bihar and Malanjkhand in Madhya Pradesh. Besides these, Guntoor in Andhra Pradesh and Nagpur in Maharashtra also have these mines. **(Any two)**

Uses of Copper:

   (a) Since Copper is a good conductor of electricity, it is used for making electric wires.

   (b) It is also used in Automobiles and in Defence Industries.

   (c) It is alloyed with Nickel and Iron to make Stainless Steel.

   (d) It is alloyed with Aluminium to make Duralumin.

   (e) When it is alloyed with Zinc, it is called Brass and when alloyed with Tin, it is called Bronze.

   (f) Copper is also used in building construction, plumbing and in ship building.

(iii) Two advantages of Natural Gas:

   (a) It can be stored safely and can be transported efficiently through Pipelines, Cylinders, etc.

(b) It is cheaper and cleaner than Petrol or Diesel.

Regions which has Natural Gas deposits are Mumbai High, Assam, Rajasthan, Tamil Nadu and Tripura.

(iv) Advantages of Bio-gas :

(a) Bio-gas is a cheap and clean source of energy.

(b) It is non-polluting and does not produce Greenhouse gases.

(c) It is a Renewable source of energy.

(d) There is no storage problem since there is direct supply of gas from the plant.

(e) The sludge left behind is a good fertilizer for pastures and meadows and is better from an ecological point of view.

(f) It leads to employment generation in rural areas.

(g) It produces enriched organic manure which can supplement or even replace Chemical Fertilizers.

9. (i) Problems of Agriculture in India :

(a) Lack of adequate Irrigation facilities and dependence on Monsoon.

(b) The land holdings are uneconomic due to their small size and as such the yields are low.

(c) Agriculture is becoming mechanized and requires huge Capital investments to purchase Machineries, Fertilizers, Pesticides and High Yielding Variety Seeds. The Indian Farmers are poor to buy all these materials.

(d) A majority of Indian farmers are still dependent on the primitive and poor techniques of producing crops.

(Any two points)

(ii)

Intensive Farming	Extensive Farming
Intensive Farming is a system of farming that involves Higher input of labour, Increased use of Fertilizers, Pesticides, High quality seeds, etc. and higher level of output also in relation to the size of the land area.	Extensive Farming requires less labour in large areas of land. It uses Machinery and Scientific methods to produce large quantity of crops.
It is practised in the regions where the density of population is high.	Large and inexpensive farming technique practiced in a moderately populated area. It is practised in parts of Terai region of Sub-Himalayas and in parts of North-Western India.
In this type of farming, the yield per hectare is high.	Per hectare production may be less but the total output is very high in this type of farming.
Rice and Wheat are the main crops that are grown in Intensive Farming.	Crop specialisation is one of the major characteristics of this type of farming. The main crops grown are Rice, Wheat, Sugarcane, etc.
Practised close to Markets.	Practised at remote locations far off from Market.

(iii) (a) The leading producers of rice in India are : West Bengal, Tamil Nadu, Punjab, Uttar Pradesh, Andhra Pradesh and North-eastern states of India.

(b) The geographic conditions necessary for cultivation of rice are as follows :

Temperature : above 25°C.

Rainfall : above 100cm

Soil : Deep fertile clayey or loamy soils are necessary. The soil should be able to stagnate water in the field.

(c) Transplanting Method is the best method for rice cultivation whereby seedlings or the tiny plants are first grown in nurseries and after 4 to 5 weeks when the saplings attain a height of 25 cm to 30 cm they are transplanted to prepared Rice fields. It is a popular

method because it gives a higher yield.

(iv) (a) The sugar cane yield per hectare is higher in south due to the tropical climate of Peninsular India and long crushing season of about 8 months.

(b) • Sugarcane is a soil-exhausting crop and thus need good amount of fertilizers which increases the cost of production.

• In India the yield per hectare is extremely low as compared to other countries of the world.

• Sugarcane has a short crushing season normally from 4 to 7 months in a year which results in financial problems for the industry as the mills and the workers remain idle.

• The location of Sugar Mills is far from

the fields; thus, a delay of more than 24 hours results in the reduction of sucrose content in the canes.

- Sugarcane is an annual crop but the land available for sugarcane is less as compared to other crops, thus, the farmers are unable to cultivate any other crop.

- The production cost of Sugarcane in India is the highest in the World due to uneconomical process of production, inefficient technology and heavy excise duty.

(c) Small and uneconomic size of Mills.

(d) Old and obsolete Machinery.

(e) Sugar industry is facing competition with gur and khandsari, since Khandsari Industry is free from excise duty and can offer higher prices of cane to the cane growers.

(f) Sugarcane cultivation needs good amount of water but lacks Irrigation facilities.

(g) The Government has fixed prices for the sugarcane farmers which is not profitable for them. **(Any one point)**

10. (i) (a) Ancillary Industries provide spare parts or components required by Large Industries like Heavy Electrical Industry, Locomotives, Aircraft Industry, etc.

(b) Public Sector Industries: These Industries are owned and managed by the Central Government or the State Government of the country (Government holds more than 50% of the share and the rest is Public share) for the public welfare which includes Industries of Public utility like Post and Telegraph, Railways, Oil Refineries, Heavy Engineering Industries, Defence Establishments, etc. E.g., Bharat Heavy Electricals Limited (BHEL), Steel Authority of India Limited (SAIL), Gas Authority of India Limited (GAIL), etc.

(ii) Problems of Cotton Textile Industry:

(a) A long staple Cotton is not adequately grown in India and thus there is shortage of it.

(b) Many factories are old, obsolete and sick industrial units and thus face low productivity.

(c) The cost of maintenance and replacement of old machineries with the new ones require heavy financial investments.

(d) Due to the development of Cotton Textile Industries in countries like China and Japan and in African countries, the Indian cotton textile Industry is facing a tough competition and losing foreign markets.

(e) The Cotton Textile is also facing a tough competition from synthetic fabrics like polyester, nylon, rayon, etc. which is in increasing demand.

(f) The Cotton Textile Industry is also facing a problem from inadequate production due to lack of regular power supply.

(g) Great difficulties are being experienced by mill-owners in obtaining the capital needed for Modernization.

(h) Acute shortage of power and obsolete machinery results in low productivity and poor quality of goods and thus effectively retarding the growth of Cotton Textile Industry. **(Any two)**

(iii) Coal from the Jharia and Bokaro Coalfields.

Iron ore from Gorumahisani Mines in Mayurbhanj District of Odisha and Noamundi Mines in Singhbhum District of Jharkhand.

Kharkai and Subarnarekha are the two perennial rivers that supply water throughout the year.

(iv) Significance of electronics industry in field of:

(a) Education: Electronics Industry engages and challenges students with innovative and interactive methods. Thus, learning becomes interesting now-a-days. It also reduces weight instead of carrying lots of Books, Students just carry a Laptop or a Tablet.

(b) Entertainment: Electronics are used in Televisions and Video players, Computers and LCD projectors.

(c) Research: Indian Electronic Industry plays an important role in Space Technology, defence and other such fields' researches by launching many Indigenous Satellites like APPLE and INSAT-1 and INSAT-2 Series and so on aiming at growing advanced technology for the use in Agricultural fields, Weather forecasting, etc.

11. (i) It is the largest super Highway project in India. It connects India's four biggest metropolitan cities-Delhi, Mumbai, Kolkata and Chennai by six-lane Super Highways.

The main economic benefits of this project are:

(a) Establishing Faster Transport Networks between Major Cities and Ports.

(b) Providing fast and smooth movement of products and people within India.

(c) Developing Industries and creating job opportunities in smaller towns through access to markets.

(d) It also provide opportunities for farmers, through better transportation so that the agricultural produce could be transported to Major Cities and Ports for Exports.

(e) Driving economic growth directly, through construction as well as through indirect demand for cement, steel and other construction materials.

(f) Provides an impetus to Truck transport throughout India.   **(Any two)**

(ii) Importance of a good transportation network for India:

(a) Transportation facilitates access to natural resources lying unutilized in the hills, forests and mines thereby increasing economic productivity.

(b) It links the backward areas to the urban cities and reduces Regional Industrial Disparity.

(c) Transport System helps in transporting the raw materials and other necessary machineries to the industries.

(d) Transportation protects the people during War, Natural calamities and Other crisis.

(e) It helps in the process of Industrialisation and Urbanisation.

(f) The Transport System helps to enhance and strengthen the feeling of Unity and Brotherhood amongst the people.

(g) It has shortened the distances between various places.

(h) It helps in supplying finished goods to the Consumer Markets.

(i) Connects the remote areas and villages with cities.   **(Any Two)**

(iii) Advantages of Railways:

(a) Railways help in the easy movement of people and bulky goods from one place to another.

(b) It helps in reducing long distance with respect to time.

(c) It helps in linking the Industries with the Market.

(d) It has developed and commercialised agriculture since the farmers can sell their agricultural produce easily.

(e) Railways are an important source of employment in India since lakhs of skilled and unskilled people are employed in operating the Railways.

(f) It helps during famines or other crisis by carrying the food-grains and other necessary materials to the affected areas.

(g) They are instrumental in providing internal security and in making efficient arrangements in transporting defence equipment to the strategic areas.

Disadvantages of Air Transport :

(a) Air transport is expensive.

(b) It connects only major cities.

(c) It is dependent on weather conditions and can get delayed or cancelled causing inconvenience to passengers.

(d) It causes pollution as it runs on Petroleum which is a non-renewable source of energy.

(e) It gives limited and restricted services between two destinations.

(f) It carries small tonnage but has high Freight charges.

(g) Its maintenance and overhead cost is too high.   **(Any one)**

(iv) (a) The East-West Corridor connects Silchar in Assam to Porbandar in Gujarat.

(b) (1) The National Highways are the main roads constructed and maintained by the Central Government.

(2) The Border Road Organisation looks after construction and maintenance of India's Borders roads and develop infrastructure in remote areas of the North and North-East states of the country.

12. (i) Waste Management is needed because :

(a) Improperly stored waste can cause health, safety and economic problems.

(b) Transmission of diseases due to accumulation of wastes is a major threat to people and environment.

(ii) Advantages of sanitary landfills:

(a) The waste products of landfills can be used as direct fuel for combustion.

(b) The location of waste deposition in the landfills is monitored.

(c) After the landfills are completed they can be used as parks or farming land.

(d) Landfills are free from pollution and burning.   **(Any one)**

Disdvantages of composting:

(a) Cost for site preparation and equipment

(b) Lengthy treatment period

(c) Targeting final use of compost product, and

(d) Environmental issues such as odours and dust. **(Any one)**

(iv) (a) Plastic products must be banned because they are Non-biodegradable and take hundreds of years to decompose. If the plastics are ingested by animals like cattle or marine lives like whales, it can lead to their death. / They cause clogging of drains / pollute soil / obstruct the seepage of water. **(Any one)**

(b) Radioactive or nuclear Waste is hazardous as it can remain radioactive for thousands of years/if it is not disposed off properly it continues to be hazardous/it can enter the human body through food and water/ the damage it causes is irreparable/ it affects future generations.

(c) Open Dumping is not environment friendly because waste materials which are dumped in open pits become the breeding ground for Mosquitoes, Flies, Insects, etc.

(iv) Each individual should take the following steps for reduction and reuse of wastes: Each individual should carry cloth bag or paper bag instead of polythene bags.

(a) Should use eco-friendly products.

(b) Should avoid the use of chlorofluorocarbons (CFCs) as they destroy the ozone layer.

(c) Instead of CFCs, chemicals derived from peaches and plums can be used to clean the computer chips and circuit boards.

(d) Use CFC Free Refrigerators.

(e) Should save electricity by switching off as and when not required.

(f) Use of renewable energy resources should be adopted, e.g., solar energy cooker.

(g) Must use rechargeable batteries which will help to reduce metal pollution.

(h) Use of mass transport system.

(i) Should reduce, reuse and recycle the wastes whenever possible.

(j) Use Biodegradable Dish washing liquid, Laundry Detergent and Shampoo.

(k) Use of organic manure should be encouraged instead of Synthetic fertilizers.

(l) Each individual should take a vow to plant trees as much as possible which can help to purify the atmosphere.

(m) Should initiate paperless system by encouraging the use of computer storage system and should go for recycle used paper.

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