

ICSE Board EXAMINATION - 2024
GEOGRAPHY
(H.C.G. Paper-2)
Solved Paper
Class-10th

Maximum Marks: 80

Time allowed: Two hours

Answers to this paper must be written on the answer sheet 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.

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 [].

To be supplied with this paper: Survey of India Map Sheet No. G43S7 and 20 cm of twine.

Note:

- (i) In all map work, make wise use of arrows to avoid overcrowding of the map.
- (ii) The extract of Survey of India Map Sheet No. G43S7 must not be taken out of the examination hall. It must be handed over to the Supervising Examiner on completion of the paper.
- (iii) The map given at the end of this question paper must be detached and after marking, must be fastened to your answer booklet.
- (iv) All sub-sections of the questions attempted must be answered in the correct serial order.
- (v) All working including rough work should be done on the same answer sheet which is used to answer the rest of the paper,

PART I (30 Marks)

(Attempt all questions from this part.)

Question 1

Study the extract of the Survey of India Map Sheet No. G43S7 and answer the following questions:

- (i) (a) Give the six-figure grid reference for spot height .522. [2]
- (b) What is the pattern of settlement in the grid square 3591?
- (ii) (a) Mention two man-made features seen in the grid square 3794. [2]
- (b) Mention two means of transport used by the people of Nani Bhatamal in the grid square 3691.
- (iii) (a) Identify the landform marked by the contours in the grid square 3896. [2]
- (b) What is the pattern of drainage seen in the grid square 3697?
- (iv) (a) What is the reason for the presence of causeway in the grid square 3695? [2]
- (b) What is the compass direction of Khara (4097) from Karja (3994)?
- (v) Calculate the area in kilometre square of the region to the South of 94 Northing. [2]

Question 2

On the outline map of India provided:

- (i) Mark and label the river Krishna. [1]
- (ii) Mark and label the Eastern Ghats. [1]
- (iii) Shade and label a densely populated area in the Southern part of India. [1]
- (iv) Shade and label the Konkan coastal plain. [1]
- (v) Mark with an arrow and label the direction of Western disturbance. [1]
- (vi) Shade and label the Thar Desert. [1]
- (vii) Shade and label the Andaman Sea. [1]
- (viii) Mark and label the city Chennai. [1]
- (ix) Mark and name the highest peak of Himalayas in India. [1]
- (x) Mark and label Mumbai High. [1]

Question 3

Choose the correct answers to the questions from the given options. [10]

(Do not copy the questions, write the correct answers only.)

- (i) What causes snowfall in Kashmir during winter?
 - (a) Tropical cyclone
 - (b) Northeast Monsoon wind

- (c) Southwest Monsoon wind
 (d) Temperate cyclone
- (ii) Which of the following helps in soil conservation?
 (a) Afforestation
 (b) Overgrazing
 (c) Mining
 (d) Shifting agriculture
- (iii) Which means of irrigation can be developed with minimum expenditure?
 (a) Tube well
 (b) Canal
 (c) Well
 (d) Drip irrigation
- (iv) Read the table and identify the pair that is **correctly matched**:

	Natural Vegetation Belt	Tree
P	Tropical evergreen	Babool
Q	Tropical deciduous	Teak
R	Littoral	Ebony
S	Mountain forest	Banyan

- (a) P
 (b) Q
 (c) R
 (d) S
- (v) Bauxite is the ore of:
 (a) Aluminium
 (b) Copper
 (c) Manganese
 (d) Iron
- (vi) Identify the source of energy that leads to pollution:
 (a) Tidal energy
 (b) Wind energy
 (c) Natural gas
 (d) Geo-thermal energy
- (iv) Study the climate data of Station X and answer the questions that follow: [3]

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temp C	8.4	11.5	21.6	28.3	35.1	38.5	41.0	38.0	30.8	29.2	15.6	10.2
Rainfall cms	1.5	0.9	0.5	_	_	12.5	17.8	18.5	12.5	12.5	6.2	2.1

- (a) Calculate the annual range of temperature of Station X.
 (b) Name the rainiest month of the Station X.
 (c) Is the Station X located in coastal area or in the continental interior?

Question 5

- (i) Why is Black soil found suitable for the production of cotton? (*Any two points*) [2]
 (ii) Give *one* difference between each of the following: [2]
 (a) Alluvial soil of *Uttarakhand* and alluvial soil of *West Bengal*.
 (b) Transported soil and residual soil.

- (vii) Which of the following is **NOT** a centre for the iron and steel industry?
 (a) Bhilai
 (b) Bengaluru
 (c) Rourkela
 (d) Vishakhapatnam
- (viii) Which of the following farming method is used to grow tea on a large scale?
 (a) Subsistence farming
 (b) Plantation farming
 (c) Mixed farming
 (d) Shifting agriculture
- (ix) Which of the following means of transport has best use during floods/earthquake?
 (a) Airways
 (b) Railways
 (c) Roadways
 (d) Waterways
- (x) Which of the following is a biodegradable waste?
 (a) Broken glass
 (b) Waste paper
 (c) Polythene
 (d) Plastic bags

PART II (50 Marks)

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

Question 4

- (i) 'Himalayas act as a climatic divide'. Justify the statement giving two reasons. [2]
 (ii) Differentiate between Southwest Monsoon and Retreating Monsoon. (*Any two differences*) [2]
 (iii) Give a geographical reason for the following: [3]
 (a) Kolkata gets more rain than Delhi during rainy season.
 (b) Though both are hill stations, Shimla experiences snowfall during the winters but Ooty does not.
 (c) Winter monsoons bring less rain.

[3]

- (iii) With reference to *Laterite soil*, answer the questions that follow: [3]
 (a) How is Laterite soil formed?
 (b) How can Laterite soil be made productive?
 (c) Name *one* region where Laterite soil is found.
 (iv) (a) Mention *two* causes of soil erosion in India. [3]
 (b) Mention a soil conservation method suitable for hilly area.

Question 6

- (i) How is tropical monsoon forest useful for the Indian economy? (*Any two points*) [2]
 (ii) Mention the climatic condition that leads to the development of tropical desert vegetation.

- (iii) Give a reason to explain each of the following: [3]
 (a) Mountains have varied vegetation.
 (b) Stilt like/aerial roots are a typical feature of littoral forest.
 (c) The tropical evergreen forests do not look bare at any time of the year.
- (iv) (a) How has the rising population of India resulted in the loss of forest cover? (Any one point) [3]
 (b) Mention any two forest conservation methods that may be adopted to protect the forests.

Question 7

- (i) Mention one advantage and one disadvantage of using tank irrigation. [2]
 (ii) (a) What is the advantage of using Drip irrigation? [2]
 (b) Why is Drip irrigation not practiced on a large scale in India?
 (iii) Give a reason to explain each of the following: [3]
 (a) Sprinkler irrigation is gaining popularity in recent times.
 (b) Tube well irrigation is used in Punjab.
 (c) North India has more area under canal irrigation.
 (iv) With reference to the picture below, answer the questions that follow: [3]



- (a) Name the water conservation practice shown in the above picture.
 (b) How does this system help to reduce floods?
 (c) Why is water conservation necessary? (Any two reasons)

Question 8

- (i) (a) Name any three varieties of coal produced in India. [2]
 (b) Name the variety of coal widely used in iron and Steel Industries of India.
- (ii) (a) Name the state that is the largest producer of iron ore in India. [2]
 (b) Name any one mining area of iron ore from the state mentioned by you.
- (iii) (a) Mention two ways in which Hiraakud dam has helped the people of Odisha. [3]
 (b) Across which river is the Hiraakud dam built?
- (iv) Give reasons for each of the following: [3]
 (a) Geothermal energy is not popular in India.
 (b) Solar energy is gaining popularity.
 (c) Petroleum is considered a harmful source of energy.

Question 9

- (i) Why is agriculture considered an important sector of Indian economy? (Any two points) [2]
 (ii) (a) What is mixed farming? [2]
 (b) Mention any one advantage of mixed farming.
 (iii) Give one reason to explain each of the following: [3]
 (a) West Bengal is a leading producer of jute.
 (b) Millets are fast becoming the popular food crops.
 (c) More than two ratoon crops are not advisable for sugarcane farmers.
 (iv) (a) With reference to tea cultivation, explain the term 'fine pluck'. [3]
 (b) Name the Indian state that leads in coffee production.
 (c) Why is cotton grown as a Kharif crop in India?

Question 10

- (i) (a) Based on the ownership, what type of industry is Visakhapatnam Steel Plant? [2]
 (b) What is meant by cooperative sector industry?
 (ii) Explain the following terms: [2]
 (a) Sericulture
 (b) Integrated steel plant
 (iii) Give one reason to explain each of the following: [3]
 (a) Mini-steel plants help in conservation of coal.
 (b) Location of sugar industry is shifting to the Southern part of India.
 (c) The electronic industry is growing at a fast rate.
 (iv) (a) State two conditions that favour the location of cotton textile industry in Ahmedabad. [3]
 (b) State any one advantage of locating Iron and Steel industry at Rourkela.

Question 11

- (i) Why is road transport an important means of transport in India? (Any two reasons) [2]
 (ii) Give a reason for each of the following: [2]
 (a) Northern plain is best suited for the development of Railways.
 (b) Railways are managed completely by the Central Government.
 (iii) Mention two advantages and one disadvantage of Inland water transport. [3]
 (iv) Why has airway become more popular than other means of transport? (Any three reasons) [3]

Question 12

- (i) With reference to the picture below, answer the questions that follow: [2]



- (a) Which waste management method is depicted here?
- (b) State *one* way in which this method may be implemented at our home.
- (ii) Explain how waste accumulation can be harmful. *(Any two points)* [2]
- (iii) Explain how waste generated in following sectors may be made useful. *(Give one example for each)* [3]
- (a) Household
- (b) Industry
- (c) Agriculture
- (iv) (a) Give two uses of composting. [3]
- (b) Why are landfills set up far away from the city? *(Any two reasons)*



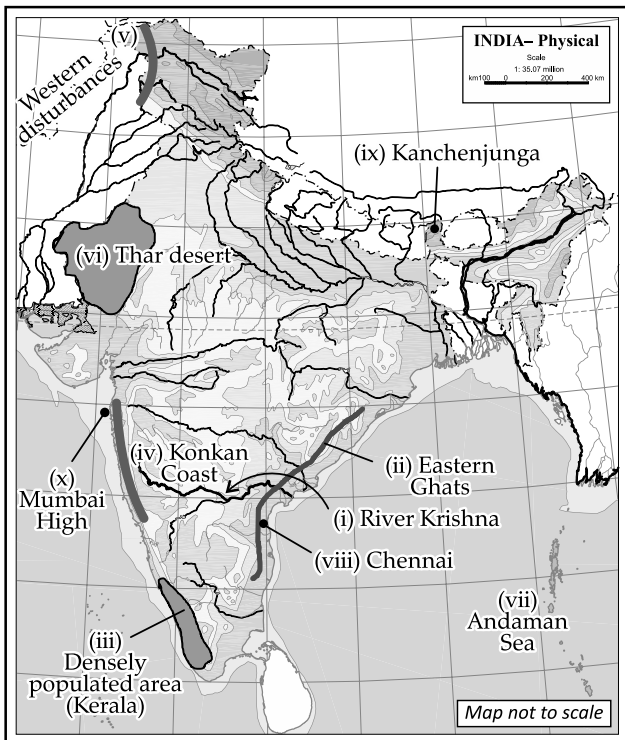
ANSWERS

PART I (30 Marks)

Answer 1

- (i) (a) 375976
 (b) Dispersed settlement
- (ii) (a) Chhatri, cart track, pack track, lined perennial wells and permanent settlement (Any two)
 (b) Cart track and pack track
- (iii) (a) Ridge
 (b) Radial drainage
- (iv) (a) A causeway's existence suggests that the region receives less rainfall.
 (b) North-west.
 (v) 10 northings and 26 eastings
 Distance between consecutive northing and easting is 2 cm on map.
 According to the given scale of the map, 2 cm = 1 km
 Therefore, (10×25) sq. km = 250 sq. km

Answer 2



Answer 3

- (i) **Option (d) is correct.**
Explanation: The temperate cyclone or Western disturbances that takes place at Mediterranean sea brings snowfall in Kashmir and rainfall in North-west India.
- (ii) **Option (a) is correct.**
Explanation: Afforestation means planting of trees which protects the soil from erosion.
- (iii) **Option (d) is correct.**

Explanation: Drip irrigation is the cheapest and simplest mode of irrigation.

- (iv) **Option (b) is correct.**

Explanation: The main varieties of trees found in tropical deciduous are Sal, Teak, Arjun, Mahua, Shisham, Palas, Mulberry, Semul and Sandalwood.

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

Explanation: Bauxite is the main ore of aluminum.

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

Explanation: Natural gas is a non-renewable source of energy which creates pollution.

- (vii) **Option (b) is correct.**

Explanation: Bengaluru is hub of IT industry.

- (viii) **Option (a) is correct.**

Explanation: Tea is a commercial crop which is grown on a large scale with plantation farming method.

- (ix) **Option (a) is correct.**

Explanation: Floods and earthquake disrupt the waterways and land transportation.

- (x) **Option (b) is correct.**

Explanation: Broken glass, polythene and plastic bags are non biodegradable products.

PART II (50 Marks)

Answer 4

- (i) Firstly, Himalayas prevent the cold winds of Central Asia from entering India. This prevents India from experiencing very or severe cold winters. Secondly, the Himalayas also prevent the rain-bearing monsoon winds from leaving the country thus allowing the country to receive sufficient rainfall.
- (ii)

	South west monsoon	Retreating monsoon
(i)	It blows from south west direction	It blows from north east direction
(ii)	Blows from sea to land	Blows from land to sea
(iii)	Causes rainfall during July-September	Causes rainfall during Oct-November
(iv)	Causes rainfall in the western part, south western, Gangetic plain and north eastern parts of India	Causes rainfall in the south eastern parts of India

(Any two)

- (iii) (a) Kolkata is situated in the Ganga Delta region whereas Delhi is located inland in the middle course of the Ganga. The Bay of Bengal branch of the SW Monsoon is exhausted as it blows up the Ganga Plain. Therefore, Kolkata receives more rainfall than Delhi.

- (b) Ooty lies in the south of tropic of cancer on the tropical zone whereas Shimla lies in the temperate zone at higher latitude. Hence, Shimla experiences snowfall whereas Ooty does not.
- (c) The winter monsoon winds are dry as it blow from land to sea. Hence, causes less rainfall.
- (iv) (a) 32.6° C
- (b) August
- (c) Station X is Located in the continental interior as the temperature is high and receiving rainfall in the month of August.

Answer 5

- (i) Black soil is suitable for the production of cotton because:
 - (a) It is fine textured.
 - (b) Clayey in nature.
 - (c) It is moisture retentive and becomes sticky when wet and forms crack when dry.
 - (d) Rich in Lime, Magnesium and Iron.
 - (e) Poor in Phosphorous, Nitrogen and Organic matters **(any two)**
- (ii) (a) Alluvial soil of Uttarakhand is Coarser in texture, in West Bengal it is finer in texture.
- (b) Soil which is transported from the place it is formed, ex-situ are transported soil while in-situ soil are residual soil found at the place where it is formed.
- (iii) (a) The laterite soil is formed in high temperature and intense rainfall with alternate wet and dry periods, leading in soil leaching.
- (b) The laterite soil can be made productive by substantial use of manure and fertilizers.
- (c) Laterite soil can be found in eastern ghats and western ghats.
- (iv) (a) Deforestation and overgrazing
- (b) Terrace farming, contour ploughing **(any one)**

Answer 6

- (i) Tropical monsoon forest in India is primarily used for lumbering and for producing multiple products like buildings, railway tracts, furniture, etc.
- (ii) Tropical desert vegetation is found in areas getting less than 25 cm of rainfall with an average temperature of 25 degree Celsius to 27 degree Celsius.
- (iii) (a) Mountain vegetation differs according to variation and increase in altitude. As the height increases, the temperature decreases. Thus, trees at a higher altitude or elevation are conical shape and form the coniferous forests while at lower elevation are broad leaves forest.
- (b) Firstly, providing structural support, Secondly, aerial roots play an important part in providing oxygen for respiration during high tides.
- (c) The tropical evergreen forests do not experience any dry season. Hence, they don't shed their leaves.

- (iv) (a) Rising population is leading to the growing demand for land for cultivation and shelter. Due to shifting cultivation and deforestation to meet the demand of the rising population, the forest cover is depleting.
- (b) Afforestation, reforestation, community engagement. **(Any two)**

Answer 7

- (i) **Advantage:** Tanks are cheaper and widely used. **Disadvantage:** Tanks becomes dry during summer season. Hence, siltation can take place. **(Any one)**
- (ii) (a) Drip irrigation: efficient water conservation method, cost friendly, helpful in arid climates. **(Any one)**
- (b) Initial cost is expensive and vulnerable to silting and clogging.
- (iii) (a) In sprinkler irrigation, water is used efficiently and less wastage takes place. Hence, gaining popularity in recent days.
- (b) Punjab is dependent on groundwater for irrigation. So, well is an important source of irrigation as it irrigates large areas of land in comparatively less time and it can irrigate the fields throughout the year.
- (c) The soil of Northern India is permeable and level of groundwater is high. This leads to better development of canal irrigation in North India.
- (iv) (a) Rainwater harvesting.
- (b) The water harvesting results in the increase of soil moisture and storing excessive water. This reduces runoff and risk of flooding.
- (c) Water conservation is necessary because:
 - (i) With a change in climate, the level of groundwater is decreasing. This results in limited use of water because of the fallen level. So, we should conserve water in order to increase the groundwater level and accomplish the shortage of water when the underground water level goes down drastically.
 - (ii) The population is increasing day by day at an increasing rate and water sources are decreasing. To prevent the scarcity of water we should conserve more and more water and save it for the next generations as well.

Answer 8

- (i) (a) Bituminous, Lignite and Peat.
- (b) Bituminous
- (ii) (a) Chhattisgarh.
- (b) Bailadila
- (iii) (a) First, the dam controls and mitigates the impact of floods in the Mahanadi River basin and second, Hirakud dam provides water for agricultural purposes and significantly enhances the irrigation facilities in the region.
- (b) Mahanadi.
- (iv) (a) India has limited geothermal resources compared to other countries hence is not popular.

- (b) Solar energy is a renewable source of energy and produces minimal greenhouse gases as well as production cost is also less. Thus, has gain popularity.
- (c) Petroleum is a fossil fuel which when burned emits harmful greenhouse gases causing ozone depletion and global warming. Thus, it is harmful.

Answer 9

- (i) It plays an important role in the Indian economy due to the following reasons:
 - (a) Agriculture is essential because it feeds millions of people and its ever increasing population.
 - (b) It also helps in raising livestock with suitable environmental conditions and provides fodder to them. Over 60% of India's land is arable and about 70% of the rural families are engaged in this occupation for their livelihood.
 - (c) Agriculture helps in creating job opportunities to millions of people. Agriculture is the single largest private sector occupation and provides employment to about 58.4% of country's workforce.
 - (d) It supports many important industries with the supply of raw materials like Cotton and Jute Textile Industries, Sugar Industries, Vanaspati, Food processing, etc.
 - (e) Various small scale and cottage industries like Handlooms, Spinning Oil Milling, Rice thrashing, etc., are dependent on Agriculture for their raw material. **(Any two)**
- (ii) (a) 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 and rears cattle simultaneously.
- (b) It maintains Soil fertility, Soil biodiversity, Minimize soil erosion and help to conserve water.
- (iii) (a) West Bengal is the largest producer of Jute, due to its favourable climatic condition. It has hot and humid climate with sufficient amount of rainfall and irrigational facilities.
- (b) Millets are gaining popularity because of its diverse range of health benefits. It is low in calories and has lots of fiber, which helps to lose weight.
- (c) With each successive ratoon crop, the yield of sugarcane tends to decline. That is why, sugarcane farmers are not advise to grow for more than two ratoon crops.
- (iv) (a) Method of plucking only shoots with two leaves and a bud are fine plucking.
- (b) Karnataka
- (c) Cotton is grown during the summer season in India, hence, known as kharif crop.

Answer 10

- (i) (a) Public ownership owned by Rashtriya Ispat Nigam Ltd.

- (b) Co-operative Industries are owned and operated by a collective of individuals.
- (ii) (a) Process of cultivating silkworms and extracting silk from them is sericulture.
- (b) In integrating steel plant, all the processes involved in steel making are done in one place.
- (iii) (a) Mini Steel Plants utilise electric furnaces consequently saving coking coal.
- (b) Because there is a cooler climate in these areas, the success of the cooperative movement in these areas and higher sucrose content in the sugarcane cultivated in these areas. Hence, sugar industries are shifting towards south.
- (c) Increasing demand for the electronics is resulting in the faster growing of electronic industries.
- (iv) (a) They are as follows:
 1. Regular supply or proximity to raw material.
 2. Favourable climatic conditions specially the humid climate.
 3. Good network of road and rail transportation within the country and sea routes for the international market.
 4. Location of major ports facilitates the export and import facilities.
 5. Availability of cheap and skilled labours.
 6. Accessibility to capital since Mumbai and Ahmedabad are centres of financial and commercial resources.

(Any two)

- (b) Close to the raw materials like iron ore.

Answer 11

- (i) (a) Roadways are ideal for short distances as through it, every village can be reached.
- (b) It is cost effective in comparison to other means of transport.
- (c) It transports people and goods quickly and easily.
- (d) It provides Door-to-Door services.
- (e) Roads are easily constructed on hilly terrain where building railway line is not possible or the Air services are inaccessible.

(Any two)

- (ii) (a) The Northern Plains have relatively flat terrain and fertile alluvial soil that facilitate construction of straight railway tracks and strong railway foundations respectively.
- (b) The railway sector needs more investment in case of buying the costly coaches, laying tracks etc., hence, are managed by central government.
- (iii) **Advantage:** Inland waterway is the cheapest means of transportation suitable for carrying bulk materials.

Disadvantage: The South Indian rivers are non-perennial, hence inland waterways can not be used during dry seasons.

- (iv) (i) Air transport is the fastest and most comfortable mode of transport.

- (ii) It can easily reach to remote and inaccessible areas like mountains, forests, deserts, etc.
- (iii) It is very useful during the times of war and natural calamities like floods, earthquakes, famines, epidemics, hostility and collapse of law and order.

Answer 12

- (i) (a) Segregation
- (b) Segregating waste into biodegradable and non-biodegradable items.
- (ii) Waste accumulation is because:
 - (a) Waste accumulation results in air pollution which may cause Acid Rain and several Airborne Diseases/ Bad Odour/Release harmful Greenhouse gases/ Chemicals near the underground water by leakage.
 - (b) Water pollution affects human health and also animal life on land, it also affects Aquatic animals adversely/ Eutrophication/ Biomagnification.
- (iii) (a) Many materials like glass, metal, plastics, cloths, paper, etc. that is used in our day to day life can be reused. e.g., cloth bags can be used instead of plastic bags by making bags out of old clothes, donating old clothes, toys and furniture, etc.

- (b) Some solid wastes from the industry can be utilised directly, e.g., fly ash from power plant is used as a substitute for cement, for making roads and filling up low lying areas.
- (c) The dry straws from agriculture can be used to feed cattles.
- (iv) (a) (i) Composting is a highly nutrient rich fertilizer source that will reduce the amount of synthetic fertilizers used in the farming fields.
- (ii) Compost decreases the erosion potentiality on the fields and enhances the structural ability of soil.
- (iii) It prevents plant diseases and also protects the spread of pathogen diseases.
- (iv) The presence of microorganisms like Bacteria, Fungi, etc. aerate the soil which speeds up composting and convert nitrogen to a usable form. **(Any two)**
- (b) To avoid water overflow, landfills are built outside the cities. Upon arrival of the garbage or bin, the city is dismantled. In order to keep the city free of waste, landfills are located outside the cities.

