

ICSE Paper 2016

Geography

(Two hours)

Answers 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.

Attempt **seven** questions in all.

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. 45D/7
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. 45D/7 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. 45D/7 and answer the following questions :

- (a) Give the six figure grid reference for : **[2]**
 - (i) Surveyed tree 219 north east of Pirojpora settlement.
 - (ii) Triangulated height 364 in the southern part of the map extract.

(b) What is the direction of flow of Banas river? Give one evidence for your answer. **[2]**

(c) What do you understand by: **[2]**

- (i) 12r in the grid square 9878 and
- (ii) 180 in the grid square 9182.

(d) Calculate the area in kilometre of the region between 93 and 99 eastings and 76 and 81 northings. **[2]**

(e) (i) What is the compass direction of settlement Juvol from settlement Arnivada ?
(ii) Give the difference in altitude between the highest point on the map to the altitude of Moti Bhatamal. **[2]**

(f) Name the feature depicted by: **[2]**

- (i) Blue line in Balaram nadi
- (ii) Brown patch in 9678

(g) Name the drainage pattern found in: **[2]**

- (i) 9782
- (ii) 9478

(h) What do you infer about the climate of the region by the information provided on the map ? Give an evidence in support of your answer. **[2]**

(i) Name two man made and two natural features in 9580. **[2]**

(j) What do the following denote: **[2]**

- (i) Black vertical line running along with 93 easting.
- (ii) RS near Chitrasani settlement.

Answer:

(a) Six Figure grid reference are :

- (i) Surveyed tree 219–979755.
- (ii) Triangulated height 364–957744.

(b) Direction of flow of River Banas is from ENE to WSW.

Evidence: Contour height is decreasing towards WSW i.e., from 200 m to 180 m.

(c) (i) 12 r in grid square 9878 is the relative height of a sand dune i.e., 12 m.
(ii) 180 in grid square 9182 is the contour height above mean sea level.

(d)

Length in cm = 12

Length in km = $\frac{12}{2}$ 6 (scale 2 cm = 1 km)

Breadth in cm = 10

Breadth in km = $\frac{10}{2}$ 5 (scale 2 cm = 1 km)

Area = L × B

Area = 6 × 5

= 30 km²

(e) (i) Compass direction of juvol from settlement Arnivada is NW. (North-West)

(ii) Highest point in the map is 542

Altitude of Moti Bhatamal is 198

Difference in Height = 542 – 198 = 344 m.

(f) (i) Blue line in Balaram nadi is a perennial water channel in a seasonal river, (ii) Brown patch in 9678 indicates sanddunes.

(g) Drainage pattern in

(i) 9782-Radial

(ii) 9478 – Disappearing.

(h) Climate of the region depicted in the map is hot and dry with seasonal rainfall.

Evidence: Rivers and streams in the map are seasonal in nature.

(i) Two man made and natural features in 9580 are :

Man Made: Perennial lined well and permanent huts.

Natural Features: Broken ground and seasonal stream.

(j) (i) Black vertical line running along with 93 easting is Longitude.

(ii) RS near Chitrasani settlement is Railway Station.

Question 2:

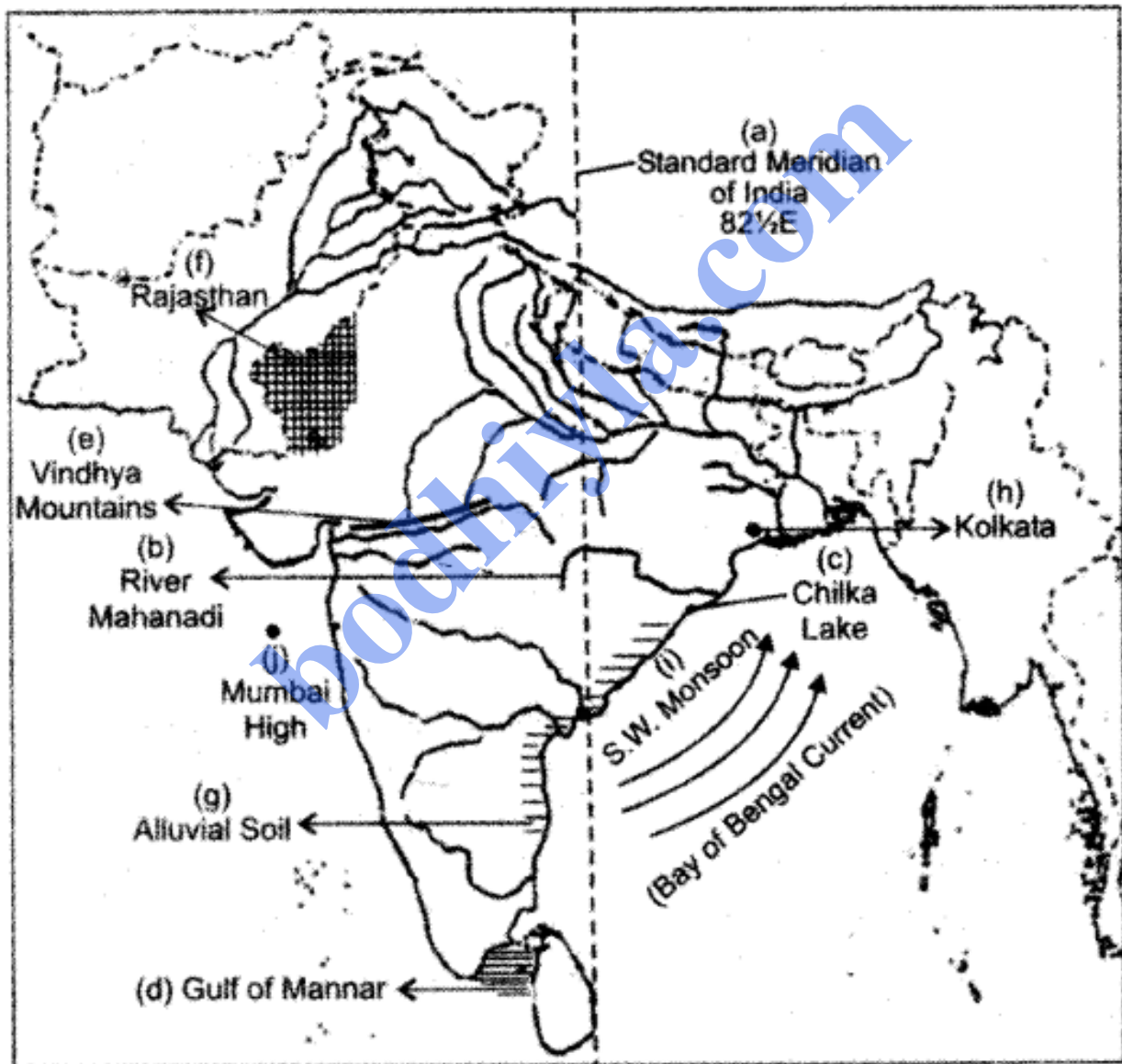
On the outline map of India provided :

(a) Draw and number the Standard Meridian of India. [1]

(b) Label the river Mahanadi. [1]

- (c) Mark and name Lake Chilka. [1]
- (d) Shade and name the Gulf of Mannar. [1]
- (e) Mark and name the Vindhya Mountains. [1]
- (f) Shade and name a sparsely populated region in western India. [1]
- (g) Shade a region with alluvial soil in South India. [1]
- (h) Mark and name Kolkata. [1]
- (i) Mark with arrows and name South West Monsoon winds over the Bay of Bengal. [1]
- (j) Mark and name Mumbai High. [1]

Answer:



PART II [50 Marks]

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

Question 3:

(a) What is the name given to the climate of India ? Mention any two factors responsible for such a type of climate. [2]

(b) Name the following: [2]

(i) The winds that bring heavy rain to Cherrapunji.

(ii) The local wind that bring a light rainfall to South India and is good for tea and coffee crops.

(c) Give a geographical reason for each of the following: [3]

(i) Kanpur has extreme temperature conditions.

(ii) Kochi is warmer than Mumbai even though both lie on the western coast of India.

(iii) The Ganga Plain gets the monsoon rain much later than the west coast of India.

(d) Study the climatic data of station x given below and answer the questions that follow: [3]

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Temp°C	24.5	25.7	27.7	28.4	30.0	32.5	31.0	30.2	29.8	28.0	25.9	24.7
Rainfall cm	4.3	1.6	1.7	2.4	2.8	4.6	8.6	11.4	11.8	30.6	35.0	13.9

(i) Calculate the total annual rainfall experienced by the station.

(ii) What is the annual range of temperature ?

(iii) On which coast of India does the station lie ? Give a reason for your answer.

Answer:

(a) Name given to the Indian climate – ‘Tropical Monsoon Type’.

Two factors responsible for it are :

(i) Altitude

(ii) Distance from the sea.

(b) (i) Moisture Laden Monsoon winds of **Bay of Bengal Branch** of South West Monsoon.

(ii) Mango Showers.

(c) (i) Kanpur has extreme type of temperature conditions because it is away from the influence from the sea and is not influenced by the land and sea breezes.

(ii) Kochi is warmer than Mumbai even though both lie on the western coast of India because Kochi is located on lower latitude and is close to the equator.

(iii) Ganga plain gets the monsoon rain much later than the west coast of India because Ganga plain lies in the north India and the monsoon being S.W. Monsoon, first strikes the west coast of India.

(d) (i) Total annual rainfall experienced by the station is 128.7 cm.

(ii) Annual range of temperature of the station is 8°C.

(iii) Station lies on the east coast of India because it receives its maximum rainfall in the month of October and November.

Question 4:

(a) What is soil erosion ? Mention two steps that could be taken to prevent soil erosion. [2]

(b) Mention two similarities between red soil and laterite soil. [2]

(c) Give a geographical reason for each of the following: [3]

(i) Alluvial soil differs in texture.

(ii) Black soil does not get leached.

(iii) Khadar is more fertile than bhangar

(d) Define the following: [3]

(i) Sheet erosion

(ii) Soil conservation

(iii) In situ soil

Answer:

(a) **Soil Erosion:** The detachment of the soil particles from the uppermost portion of the earth's crust is called soil erosion.

Steps taken to prevent soil erosion are :

(i) **Contour Ploughing:** The fields are ploughed and sown along the contours instead up and down the slope.

(ii) **Planting of Shelter belts:** In desert areas trees are planted on the margins of deserts perpendicular to the wind direction which prevents soil erosion.

(b) Two similarities between red soil and laterite soil are :

- (i) Both are red in colour as they are rich in iron oxide.
- (ii) Both are porous and friable.

(c) (i) Alluvial soil differs in texture because it is a transported soil deposited by rivers.

(ii) Black soil does not get leached because it is moisture retentive.

(iii) **Khadar** is new alluvium deposited by the rivers in their flood plains which is replenished every year. **Bangar** is older alluvium found in upland area above the flood plains, Bangar is older alluvium which is not renewed by the floods.

(d) (i) Sheet Erosion: When the vegetation cover of an area is removed, the rainwater instead of seeping into the ground, washes down the slope. A complete layer is carried along with water in a larger area. It is called sheet erosion.

(ii) **Soil Conservation:** It refers to the steps taken to protect the soil from erosion. It aims at prevention as well as reclamation of soil that has been damaged by natural phenomenon or due to exploitation and impoverishment over centuries.

(iii) **In Situ Soil:** When the soil remains at the place of its formation it is called in situ soil. e.g. Black Soil.

Question 5:

(a) (i) Name the forest which is commercially most important in India. **[2]**

(ii) Name two trees which grow in this forest.

(b) (i) Name the forests which grow on the windward slope of the Western Ghats. **[2]**

(ii) Why do such forests grow in this region ?

(c) To which type of forest do the following trees belong ? **[3]**

(i) Hintal and Sundari.

(ii) Rosewood and Ebony.

(iii) Deodar and Chir Pine.

(d) Give three reasons for rapid depletion of forest resources in India in the past. **[3]**

Answer:

(a) (i) Tropical monsoon deciduous forest.

(ii) Two trees found in these forest are **Teak** and **Semul**.

(b) (i) Tropical evergreen rainforests grow on the wind ward slope of the western ghats.
(ii) These forests grow in this region because the temperature here ranges between 24°C to 27°C and rainfall is above 200 cm.

(c) (i) Hintal and Sundari – Tidal or Littoral Forest
(ii) Rosewood and Ebony – Tropical Evergreen Rain Forest.
(iii) Deodar and Chirpine – Mountain Forest.

(d) Three reasons for rapid depletion of forest resources are :

(i) Increase in Population.
(ii) Industrial Growth.
(iii) Defects in the method of farming (slash and burn farming).
(iv) Dependence of forest fuel for energy. (any three)

Question 6:

(a) "Without irrigation, development of agriculture is difficult in India." Clarify the statement by giving two reasons. **[2]**

(b) Mention two factors which are essential for the development of tube well irrigation. **[2]**

(c) Give one reason for each of the following:

(i) The Northern Plain of India is found suitable for canal irrigation.
(ii) Tank irrigation is an important method of irrigation in Karnataka.
(iii) Although expensive, yet, sprinkler irrigation is gaining popularity in recent times.

(d) (i) What is rain water harvesting ? **[3]**

(ii) Mention two objectives of rain water harvesting.

Answer:

(a) Without irrigation, development of agriculture is difficult in India because :

(i) India is an agricultural country and proper irrigation becomes a must. Rainfall in India is uncertain in both time and amount.
(ii) Cultivation in winters is only possible when there is proper irrigation facilities as monsoon in India are limited for four months only.

(b) Two factors for development of tubewell irrigation:

(i) Cheap supply of Electricity.
(ii) High underground water level.

(c) (i) **Northern plains** are suitable for canal irrigation because the rivers in the north are perennial in nature.

(ii) **Tank irrigation** is an important method of irrigation in Karnataka because its a plateau region with natural depressions.

(iii) **Sprinkler irrigation** is gaining importance in recent times because it prevents loss of water and there is economical use of water.

(d) (i) **Rain Water Harvesting:** Collection of rain water for recharging the underground water is called rainwater harvesting.

(ii) **Two Objectives:**

(1) Preventing soil erosion and flooding.

(2) Dilutes salinity of ground water.

Question 7:

(a) (i) Name any three types of coal found in India. [2]

(ii) Which type of coal is mostly used in Iron and Steel Industries ?

(b) Name the following: [2]

(i) An off-shore oil field of India

(ii) An iron ore mine of Karnataka.

(c) Name the following: [3]

(i) Largest coal field of India.

(ii) Oldest oil-field of India.

(iii) Best variety of iron ore.

(d) (i) Name the metal extracted from Bauxite.

(ii) Mention two uses of this metal.

Answer:

(a) (i) Three types of coal found in India are :

(1) Anthracite. (2) Bituminous. (3) Lignite.

(ii) Iron and steel industries mainly use Bituminous type of coal.

(b) (i) Mumbai High in Maharashtra.

(ii) An iron ore mine of Karnataka : Kudremukh iron ore mine.

(c) (i) Jharia coal field in Jharkhand.

(ii) Digboi oil reserves in Assam.

(iii) Haematite.

- (d) (i) Aluminium is extracted from Bauxite.
(ii) Uses of aluminium are :

1. Used in air craft Industry.
2. Used for making head light reflectors.

Question 8:

(a) Mention any two reasons for the importance of agriculture in India. [2]

(b) With reference to rice cultivation answer the following: [2]

- (i) Why does rice grow well in a soil with a clay like subsoil ?
- (ii) What is the advantage of growing rice in nurseries before it is transplanted ?

(c) Study the picture given below and answer the questions that follow: [3]



- (i) Name one State where this crop grows well.
- (ii) Why are mostly women employed to harvest it ?
- (iii) Mention two geographical conditions suitable for the cultivation of this crop.

(d) Explain briefly the following terms: [3]

- (i) Shifting cultivation
- (ii) Budgrafting
- (iii) Oil cake.

Answer:

(a) Two reasons for the importance of Agriculture are :

- (i) One-third of the India's national income is earned through agriculture.
- (ii) About 70% of working population of India is directly involved in agriculture.

(b) (i) Rice grow well in a soil with a clay like subsoil because rice requires stagnant water in the field. The subsoil layer prevents water from draining away and allows the water to stagnant in the field.

(ii) Advantages of growing rice in nurseries before it is transplanted is that, the weeds are removed so problem of weeds is solved and there is less wastage of seeds.

(c) (i) Assam.

(ii) Mostly women are employed to harvest tea leaves because of their temperament. Tea leaves plucking is a very skilled job. They are able to pluck the leaves delicately. Other work on the fields is done by men.

(iii) Two geographical conditions suitable for the cultivation of tea are :

1. It requires the temperature ranging between 13°C to 35°C.
2. Rainfall ranging between 150-200 cm annually is best suited. Dry spell is harmful. High humidity, heavy dew and morning fog favours its growth.

(d) (i) **Shifting Cultivation:** It is widely practiced on the hill slopes of north eastern states. In this farming a patch of ground is cleared by burning the trees. After cultivating for 2 to 3 years they switch over to another piece of land when soil is exhausted. Mainly practiced by tribals. This farming has been banned by the government as it encourages deforestation and increases the greenhouse gases.

(ii) **Bud grafting:** It is associated with rubber crop. This method is done by the insertion of a strip of bark containing a bud from high yielding clones under a bark of a young seedling about 5 cm high till they become united in 3 to 4 weeks. The old seedling stem is then cut off above the grafted bud, which then grows to form a new rubber plant.

(iii) **Oil Cake:** The residue left after crushing the nuts is called oil cake. It makes an excellent feed for cattle.

Question 9:

(a) Give two reasons for the importance of the jute industry in the Ganga-Brahmaputra delta region. [2]

(b) Mention two problems of the Cotton Textile industry in India. [2]

- (c) (i) Give two reasons why the woollen industry is not a flourishing industry in India. [3]
(ii) Name two centres for this industry.

- (d) With reference to the silk industry, answer the following: [3]
(i) Why is Karnataka the largest producer of mulberry silk ?
(ii) Mention two varieties of non-mulberry silk produced in India.
(iii) Name one silk weaving centre each in U.P. and in Tamil Nadu.

Answer:

(a) Two reasons for the importance of the jute industry in the Ganga-Brahmaputra delta region are :

- (i) Raw material is easily available, as jute is grown in Ganga delta.
(ii) The hot and humid climate is favourable for spinning and weaving.

(b) Three problems faced by the cotton textile industry are :

- (i) Shortage of raw material. India has still to face shortage of raw material and has to import it.
(ii) Obsolete Machinery
(iii) Competition with synthetic fibre which is cheap and durable.

(c) (i) (1) India is a tropical country and woollen clothes are required only in Northern India during winter season.

(2) A large number of people are poor and cannot afford to spend on costly woollen clothes.

(3) Woollen industry is decentralised. Therefore improvement and development is difficult. (Any two)

(ii) Two centres of this industry are Ludhiana and Kanpur.

(d) (i) Karnataka is the largest producer of mulberry silk because

1. Temperature in this region ranges between 16°C to 30°C which is favourable for rearing silk worms.
2. Enough fresh water free from alkaline salts for the processing of silk fibre is also available.

(ii) Two varieties of non mulberry silk—eri and muga.

(iii) U.P. – Banaras, Tamil Nadu – Tanjore.

Question 10:

(a) Mention two advantages that a mini steel plant has over an integrated iron and steel plant. [2]

(b) (i) Name an iron and steel plant which was established with British collaboration. [2]

(ii) From where does it get its supply of:

1. iron ore
2. manganese
3. coal

(c) Give a reason for each of the following: [3]

(i) Products made from petrochemicals are growing in popularity.

(ii) A heavy engineering industry requires huge capital investment.

(iii) The electronics industry contributes to the development of the country.

(d) Name the industrial product for which the following centres are well known: [3]

(i) Bhilai

(ii) Chittaranjan

(iii) Koraput.

Answer:

(a) Advantages of Mini steel plants are:

1. They use the electric arc furnace and thus conserve coal.
2. They require small capital investment.
3. They cater to the local need of the market and the cost of transport is reduced.
(any two)

(b) (i) Durgapur steel plant.

(ii) It gets its supply of

1. Iron ore from Keonjhar in Orissa and Singhbhum in Jharkhand.
2. Manganese from Keonjhar in Orissa.
3. Coal from Jharia and Raniganj.

(c) (i) Products made from petrochemicals are growing in popularity because they are cost effective, economically stable and do not depend on agricultural raw material.

(ii) A heavy engineering industry requires huge capital investment because it requires enormous amount of power, good transport facility and heavy bulky raw material which is costly.

(iii) The electronics industry contributes to the development of the country because it has largely contributed to space technology, communication, information technology, software industry, medical sciences and defence to develop with electronic apparatus.

(d) Industrial products of the following centres are:

- (i) Bhilai—Iron and Steel-rails, beams etc
- (ii) Chittaranjan—Electrical and diesel locomotives
- (iii) Koraput—Air Crafts.

Question 11:

(a) Mention two advantages and one disadvantage of waterways. [3]

(b) Roadways are always considered more important than any other means of transportation. Give two reasons in support of the statement. [2]

(c) (i) Mention any two sources of waste. [2]

(ii) What are Biodegradable waste ?

(d) Explain briefly the meaning of the following terms: [3]

- (i) Composting.
- (ii) Incineration.
- (iii) Segregation.

Answer:

(a) Two advantages of waterways are :

1. It is the cheapest source of transport.
2. Most suitable transport to carry heavy and bulky goods.

One disadvantage of waterways is :

1. Demand for waterways is declining because its movement is not as fast as airways or railways.

(b) Roadways are considered more important than any other means of transportation because

1. It is a cheap transport for long distances and for bulky products.
2. It promotes national integration and integration within states.

(c) (i) Two sources of wastes are :

1. Domestic Waste
2. Industrial Waste

(ii) **Biodegradable Waste:** Waste produced by plants and animals, kitchen, paper, green waste etc that can be broken down in a reasonable amount of time through microbial activities of fungi and bacteria.

(d) (i) **Composting:** It is a process that involves decomposition of organic waste into humus known as compost which is a good fertilizer for the plants.

(ii) **Incineration:** It is a process of controlled high temperature oxidation of primary organic compounds that release thermal energy and produce carbon dioxide and water.

(iii) **Segregation:** The waste from residential areas, hotels and restaurants, office complex and commercial areas must be segregated at source into different categories of biodegradable and non-degradable waste, this process is called Segregation.

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