

# ICSE GEOGRAPHY

## Answer Key to Self-Assessment Sample Paper - 1

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### ANSWER 3

- (a) (i) Agra lies in the interior of the country and Mumbai is a coastal city.  
(ii) North Western India including Punjab, Haryana and Western U.P.
- (b) The Aravalli Hills lie parallel to the Arabian Sea Branch of the S.W. Monsoons and thus, fail to form a climatic barrier. Hence, no rainfall is shed in western Rajasthan.
- (c) (i) 8°C  
(ii) 183.2 cms.  
(iii) Station A is situated on the eastern coast. Retreating North-East winds bring rainfall to this region.
- (d) (i) Kerala is the first state to receive the South-West Monsoon and the last to see it withdraw.  
(ii) The Konkan coast lies on the windward side of the Western Ghats.  
(iii) Tamil Nadu coast receives retreating monsoon.

### ANSWER 4

- (a) (i) Coarse material is deposited in higher altitude areas and fine material is brought to lower plain.  
(ii) Sugarcane / Jute
- (b) (i) Important crop grown in black soil is cotton / sugarcane  
(ii) Chemical property – Rich in lime, potash, calcium & magnesium carbonate. Poor in phosphorous nitrogen and organic matter LIMCAP/non- acidic/non-alkaline.
- (c) I. Red soil need irrigation as it does not retain moisture since it is highly porous.  
II. The roots of the trees hold the soil together.  
III. Laterite soil is red in colour rich in iron oxide.
- (d) (i) Removal and destruction of soil is called soil erosion.  
(ii) Two causes of soil erosion in India.
- Increasing population
  - Nature of rainfall

**ANSWER 5**

(a) Two important characteristics of the tidal forest are:

- (i) The tidal forest is characterised by breathing roots.
- (ii) Its stilt roots remain submerged under the water.

(b) There is a decline in the forest cover in India because of the following reasons:

- (i) Growing demand for agricultural land
- (ii) Urbanisation and industrialisation.

(c) Deodar: It is used for railway sleepers and house construction.

Sandalwood: It is used for handicrafts, perfumery, and cosmetics and in making sandalwood oil.

Ebony: It is used for making extensive furniture.

(d) They either have very thin leaves or no leaves. Kutch and Saurashtra in Gujarat, Rajasthan, and Southwest Punjab.

**ANSWER 6**

(a) Tube wells are used extensively in UP, Bihar and Punjab. It provides water during drought when surface wells dry up.

(b) (i) U.P and Punjab.

(ii) Lower-level relief with deep fertile soil is found in the states of U.P and Punjab and there are large number of snow fed perennial rivers flowing through these two states.

(c) (i) Irrigation is necessary despite the monsoon because monsoon is erratic, unreliable, irregular, uncertain, and unevenly distributed.

(ii) In drip irrigation, water is taken directly to the roots of the plants or trees.

(iii) Canal irrigation leads to the ground around it becoming unproductive because due to over flooding of the fields, salt effervescence takes place which makes the soil unproductive for farming.

(d) Government should adopt the following policies: 1. Reduce water pollution. 2. Improve the water quality of the rivers. 3. The policy also aims at reducing the run-off, recharging of ground water as a priority.

**ANSWER 7**

(a) (i) Iron ore – is used in the making of steel which is used for manufacturing of machines.

(ii) Manganese is important in the making of iron and steel and in strengthening of steel.

- (b) (i) Magnetite and Haemetite.  
(ii) The low-grade iron ore is used in manufacturing of sponge iron.
- (c) (i) This is because: · It is expensive. · There is a problem of radioactive waste disposal.  
(ii) Kaiga in Karnataka.
- (d) (i) Minerals are the source of raw materials and form the basis for industries. They are the source of energy and power, e.g., coal and petroleum.  
(ii) Limestone is needed in the manufacture of iron and steel, cement, fertilizers/Fluxing material in smelting of iron ore/Glass manufacturing.

### ANSWER 8

- (a) Sugar mills are far away from the sugarcane growing fields. Low yield of sugarcane
- (b) Farming in the regions with less than 75 cm of annual rainfall is called dry farming. Oilseeds and pulses.
- (c) (i) It loses the bark and facilitates removal of fibre from the stalk.  
(ii) Productivity decreases with each successive sugarcane crop.  
(iii) Organic farming is a system which avails the use of synthetic inputs like chemical fertilizers.
- (d) Tea and coffee

### ANSWER 9

- (a) (i) Rourkela Iron and Steel Plant.  
(ii) Iron ore from the reserves of Sundargarh & Manganese is obtained from Barajmda.
- (b) Reasons for Localisation of sugar Industries
- Availability of large quantities of sugarcane
  - Good network of transport
- (c) (i) Natural gas and Crude oils  
(ii) The products are adhesives, fertilizers, dyes  
(iii) As port cities are large consumers of oil and its products and by-products, it minimises the cost of transport if it has its own oil refinery.
- (d) (i) White sugar, jaggery and brown sugar. (Khandsari)  
(ii) Railway tracks, engines, ships, motors, bridges etc.  
(iii) Computers and Television

### ANSWER 10

(a) The Northernmost part of India is dominated by the lofty Himalayas. Railway tracks cannot be laid on such rugged terrain.

(b) (i) There are no traffic lights on expressways, unlike on highway

(ii) The first Expressway: Ahmedabad-Vadodara Expressway.

(c) (i) National Waterway No. 2 (NW-2)

(ii) Yamuna Expressway connects Agra and Noida.

(iii) Kolkata.

(d) (i) The rivers are rain-fed and seasonal. • They are shorter.

(ii) Chennai and Visakhapatnam.

## ANSWER 11

(a) Incinerators can be good for the environment simply because they greatly reduce the volume of materials that go to the landfills.

(b) Waste disposal is the management of waste to prevent harm to the environment, injury or long-term progressive damage to health.

(c) The air scrubbers are the anti-pollution devices which are visible as metal pipes. They are used to trap the particles from the emissions of gaseous waste.

(d) Aluminium: Many beverage containers are made of aluminium which can be melted and recycled.

Glass: Scrap glass is called 'cullet' which melts at lower temperature than other raw materials thus savings fuel and money. Scraped glass is sorted by colour and made free from impurities.

# ICSE GEOGRAPHY

## Answer Key to Self-Assessment Sample Paper - 2

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### ANSWER 3

- (a) (i) Tropical monsoon climate.  
(ii) Effect of monsoon wind/ Latitudinal extent/ Tropic of Cancer passing through its centre / Effect of Himalayas.
- (b) (i) South West monsoon winds from the Bay of Bengal branch.  
(ii) Mango Showers or Cherry Blossoms.
- (c) (i) add the rainfalls  
(ii) Annual Range of Temperature = Maximum Temperature - Minimum Temperature  
(iii) East Coast.
- (d) (i) Patna receives a much heavier rain than Delhi because Patna lies in the lower Ganga valley while Delhi lies in the upper Ganga valley and the Bay of Bengal branch of the South West Ganga valley.  
(ii) Western Rajasthan gets no rain from the Arabian Sea Branch of the South West Monsoon winds because it blows parallel to the Aravalli Mountains.  
(iii) Because of the moderating influence of the sea and because it is quite close to the Equator.

### ANSWER 4

- (a) (i) Black cotton soil is formed by the weathering of igneous rocks.  
(ii) Cotton.
- (b) (i) Alluvial soil.  
(ii) Alluvial soil is formed by the deposition of sediments and silts brought down and deposited by the rivers.
- (c) (i) Laterite soil.  
(ii) Laterite soils are suitable for building purpose.  
(iii) This soil is not suitable for cultivation because it is highly acidic in nature.
- (d) (i) Alluvial soil/ Black cotton soil.  
(ii) Laterite soil.  
(iii) Red soil.

**ANSWER 5**

- (a) Tropical Monsoon Deciduous Forests. The rain range of between 100 cm to 200 cm.
- (b) (i) Natural vegetation refers to the plant cover that has not been disturbed over a long time and has grown naturally depending upon the climate and soil conditions of that area.  
(ii) The uppermost leafy layer of a forests formed by the crowns of the trees and climbers is called canopy.
- (c) (i) Teak: Excellent for making furniture, ships, boats, and railway sleepers.  
(ii) Sal: Railway sleepers and house construction.  
(iii) Sandalwood: Scented wood used for making handicrafts, perfumes, and sandalwood oil.
- (d) (i) Mangrove/ Littoral forest or Tidal forest  
(ii) Tropical Evergreen forest/ Tropical rain forest  
(iii) Mountain forest

**ANSWER 6**

- (a) Indian agriculture depends on Monsoons, which are seasonal. But India has a yearlong agricultural season. India experiences uneven distribution of rain.
- (b) Soft alluvial soil makes digging of wells easy here. Availability of plentiful groundwater for drawing.
- (c) (i) Because it has perennial rivers and land is soft enough for canal to be constructed from the rivers to the fields.  
(ii) Being in Deccan region Karnataka has natural depressions and hard sub surface rocks which make tank irrigation important.  
(iii) Although expensive, yet, sprinkler irrigation is gaining popularity in recent times, as it helps to conserve water.
- (d) (i) It is a technique of increasing the recharge of ground water by capturing and storing rainwater.  
(ii) To make water available for future use. To avoid flooding of roads.

**ANSWER 7**

- (a) (i) Emission of carbon dioxide from burning coal also accounts for the additional 65% of carbon dioxide in the atmosphere, increasing greenhouse gases.

(ii) Burning coal emits harmful waste such as carbon dioxide, sulphuric acid, arsenic, ash, and nitrogen oxide and sulphur dioxide.

(b) Manganese: (i) It is the most important mineral for making iron and steel. (ii) It is also used for making bleaching powder, dry batteries, etc.

Aluminium: (i) Aluminium is used for making aircraft, ships and automobiles. (ii) It is used in the electrical industry for its good conductivity.

(c) (i) Hazaribagh, Gaya (ii) Sundargarh, Mayurbhanj (iii) Ankleshwar and Koyali

(d) (i) Conservation of mineral is must because the economic development of a country depends upon its mineral resources and its capacity to utilise them.

(ii) Uranium, Plutonium, Beryllium and Thorium.

(iii) Composting: The process involves decomposition of organic waste into humus known as compost which is a good fertilizer for plants.

## ANSWER 8

(a) Provides food for our growing population and fodder for livestock. · Crops like cotton, jute, coffee, etc, provide raw material for the agro-based industries.

(b) Frost and cloudy weather is detrimental to the healthy growth of cotton plants. Pests such as the ‘boll weevil’ lays eggs inside the boll and destroys the crop.

(c) **Importance of Pulses:** they are rich in protein. Pulses are grown as rotation crops as they are leguminous crops that fix atmospheric nitrogen in the soil and increase its fertility. · Pulses act as good cattle fodder, too.

(d) The three cropping seasons are:

1. Kharif: Sown in June-July; Harvested in October-November; Crops-Rice.
2. Rabi: Sown– October-November; Harvested–February to May; Crops–Wheat.
3. Zaid: Grown between Rabi and Kharif; Seasons-during the months of March, April, May. Crops – ‘Boro’ rice

## ANSWER 9

(a) Mineral based industries use raw materials obtained from mines / e.g., iron. Agro based industries use raw materials obtained from agriculture / e.g. sugar

(b) Maharashtra is the largest producer of sugar

- The geographical conditions in the south are more suitable (temperature 20-30 degree Celsius, rain 100-200 cm, no frost, black lava soil).
- Large holdings are well planned.

(c) (i) Tussar (ii) Bagasse (iii) Sericulture

(d) With reference to cotton textile industry:

(i) Abundant supply of soft water for dyeing and bleach in Banking facilities available.

(ii) Ahmedabad & Surat

## ANSWER 10

(a) The area near the mouth of the Ganga is an extremely plain with a very gentle slope. Due to the gentle slope, the rivers flow very steadily in the plain.

(b) (i) Air India and Indian Airlines are two National Airlines. (ii) King fisher and Jet Airways are two private Airlines of India.

(c) Mumbai-Pune Expressway: 93 km; long connecting Mumbai to Pune. It forms a bypass route for NH-4 between these cities.

(d) (i) Poor quality of roads and their maintenance have led to much wear and tear of vehicles

(ii) The development of roads has not kept pace with the rise in population. The result is that the roads in some of our small towns have become bottlenecks, leading to traffic jams.

## ANSWER 11

(a) (i) Waste segregation is the separation of waste that is generated through human activities.

(ii) It is important because a large portion of waste can be recycled and a part of it can be converted into “compost”, that is used as manure for soil fertility enhancement.

(b) • Proper disposal of waste which involves collecting, segregating, and transporting waste materials.

• Treatment of waste that involves the processing of waste to reduce its harmful impact.

(c) • Bio-degradable waste includes any organic matter that can be broken down into simple organic molecules or decomposed easily, e.g., kitchen waste, vegetable and fruit peels, flowers, leaves etc. • Non-biodegradable waste is that which cannot be broken down by natural organisms and are treated as pollutants, e.g., plastic, glass, metal, paints, bulbs, chemicals etc.

(d) • Pathogens are killed • The size of waste is reduced. • It is turned into important soil ingredient.

# ICSE GEOGRAPHY

## Answer Key to Self-Assessment Sample Paper - 3

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### ANSWER 3

(a) Rainfall in northwest part of India occurs due to temperate cyclone whereas in south east part of India it is due to winter monsoon / retreating monsoon.

(b) (i) Kerala (ii) Mango shower helps in early ripening of Mango crop and is also helpful for tea / coffee cultivation in Karnataka.

(c) (i) Kanyakumari is near the sea and is also near the equator and so has equable climate.

(ii) Central Maharashtra lies in the rain shadow area whereas coastal Maharashtra is on the windward side of Western Ghats.

(iii) Jaipur lies in continental interior whereas Mumbai lies close to the sea.

(d) **Summer Monsoon Season:** 1 Wind is onshore from S.W. direction. 2 Heavy rain, high humidity, high temperature. 3 There is rain in almost whole country.

**Retreating Monsoon Season:** 1 Wind direction is north east. / withdrawal of monsoon. 2 Clear sky, high temperature, low humidity. 3 There is no rain in most parts of India but when wind pick up moisture from Bay of Bengal it brings rain to coromandel coast.

### ANSWER 4

(a) (i) Black soil/ Regur/Black cotton soil

(ii) Maharashtra & Gujarat

(b) (i) Alluvial soil (ii) Red soil

(c) (i) Terraces check the speed of running water and thus reduce the chance for erosion.

(ii) Red soil is ideal for dry farming because it is porous and does not retain moisture.

(iii) Soil erosion by wind is common in arid regions because arid areas do not support vegetation and since there are no roots to hold the soil together.

(d) (i) Man is responsible for soil erosion because of large scale deforestation done for agriculture.

(ii) Deepening the riverbed increases the capacity of the river to hold water which then will not overflow to cause soil erosion.

(iii) It is red in colour.

**ANSWER 5**

(a) Provide valuable timber and other forest products. These forests are not as dense as the tropical evergreen forests.

(b) (i) Forests control humidity, lower the temperature and can be responsible for rain.

(ii) Roots of the trees check the speed of the running water which then does not overflow its banks and also because of roots that take some water.

(c) (i) The delta of the Ganga river - mangrove forests / Sundarbans / tidal forests

(ii) The windward side of the Western Ghats - tropical evergreen forests

iii) The Deccan Plateau - monsoon deciduous forests/ thorn forests.

(d) (i) shed their leaves during winter

(ii) soil erosion

**ANSWER 6**

(a) Recharge groundwater resource. Reduces soil erosion.

(b) (i) The significance of irrigation in Punjab: Availability of water is highly uneven and variable.

(ii) Significance of irrigation in Rajasthan: The groundwater level is available only at a depth of 30 to 60 m.

(c) (i) Severe water shortage is due to wastage/ pollution/ overuse

(ii) Make rainwater harvesting mandatory in every housing colony. Levy fine on wastage

(d) Three reasons to justify the need to conserve water.

(i) The growth of population has resulted in water scarcity.

(ii) Deforestation has led to drought and reduction of rainfall.

(iii) The underground water has been exploited and the water table has been lowered.

**ANSWER 7**

(a) No supply issues. No pollution issue.

(b) (i) Manganese

(ii) Ujh Multipurpose project

(c) (i) For generation of electricity.

(ii) good conductor of electricity

(iii) India lies in the equatorial region

- (d) (i) Uranium.
- (ii) Petrol.
- (iii) easily available in India

**ANSWER 8**

(a) Farm fragmentation reduces the size of the farm. Because of poverty the farmers cannot afford good quality seeds, fertilizers or pesticides or farm implements and so the yield is low.

(b) Any two of the following: Huge capital investment Large land holding Labour intensive Single crop or monoculture Crop grown usually for export Crops grown as plantation crops are tea, coffee, rubber and spices.

(c)

RICE	WHEAT
1. KHARIF CROP	1. RABI CROP
2. 18°C -32°C; 150 to 300 cm of rain	2. 10°C-15°C; 50 to 100 cm of rain
3. Requires alluvial soil with a subsoil of clay	3. Loamy soil

- (d) (i) 21°C to 30°C; 50 to 75 cm of rain; black soil.
- (ii) The new tea plant has all the qualities of the mother plant from which the cutting is taken and sown.
- (iii) Oil of the oil seeds is useful, gives edible oil and raw material for products like paints

**ANSWER 9**

(a) Mineral based industries use raw materials obtained from mines / e.g., iron. Agro based industries use raw materials obtained from agriculture / e.g. sugar

- b) i) Favourable climate for rearing of the silk with a temperature ranging from 16 to 310 C.
- ii) Mulberry trees grow well here.

c) Methods of production and machinery is outdated. Average number of crushing days is 160 in a year, rest of the days the factories are idle. Factories are not close to the farms, so the transportation cost is high.

(d) Contribution of cotton industry. -Provides employment to large number of people. -Earns foreign exchange. -Supports many industries like chemicals, packing materials etc

**ANSWER 10**

(a) (i) The National waterway No. 2 (ii) The Sher Shah Suri Marg, connecting Delhi and Amritsar.

(b) (i) Railways are difficult to construct in the hilly and mountainous parts of India. (ii) The huge size of the country makes it difficult to connect the remote parts of the country.

(c) (i) **The problems of Air transportation are:** Heavy air traffic at the major airports has increased the hazards of air travel. Terrorism, hijacking, sabotage are becoming more common due to politics.

(ii) Jammu and Kashmir and Himachal Pradesh (hilly areas).

(d) (i) For efficiency and convenience the Railway system is divided into zones. There are 17 Railway zones.

(ii) Roads are routes of travel by two wheelers, three wheelers, cars, trucks, and buses.

(iii) Roads and Railways are the means of transport by land.

**ANSWER 11**

(a) Incinerators can be good for the environment simply because they greatly reduce the volume of materials that go to the landfills.

(b) Waste disposal is the management of waste to prevent harm to the environment, injury, or long-term progressive damage to health.

(c) The air scrubbers are the anti-pollution devices which are visible as metal pipes. They are used to trap the particles from the emissions of gaseous waste.

(d) Aluminium: Many beverage containers are made of aluminium which can be melted and recycled.

Glass: Scrap glass is called 'cullet' which melts at lower temperature than other raw materials thus saving fuel and money. Scraped glass is sorted by colour and made free from impurities.

# ICSE GEOGRAPHY

## Answer Key to Self-Assessment Sample Paper - 4

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### ANSWER 3

(a) Tropical cyclones in Tamil Nadu coastal regions- Western disturbances in North-West India (J.K, Punjab, and H.P)

(b) Uncertain and Unreliable rainfall - Uneven distribution of rainfall

(c) (i) add the monthly rainfall (ii)maximum temperature- minimum temperature (iii)eastern coast

(d) (i) Tamil Nadu receive less rainfall because it is situated in the rain shadow area.

(ii)Being away from the influence of sea they have very hot summers and very cold winters.

(iii)Central Maharashtra has very little rainfall as it lies in the rain-shadow area of the Western Ghats.

### ANSWER 4

(a) (i) Black cotton soil is formed by the weathering of igneous rocks. (ii) Cotton.

(b) (i) Alluvial soil.

(ii) Alluvial soil is formed by the deposition of sediments and silts brought down and deposited by the rivers.

(c) (i) roots will bind the soil

(ii) Because red soil retains less moisture

(iii) As the soil are not held by roots of the plants

(d) (i) Alluvial soil/ Black cotton soil. (ii) Laterite soil. (iii) Red soil.

### ANSWER 5

(a) Forests must be conserved because they have a favourable effect on the climate or temperature and rain & help in soil conservation.

(b) (i) Temperature 26°C to 29°C & Rainfall – more than 200 cm

(ii)Vegetation consists of mixed deciduous and coniferous forests.

(c) (i) Thick under growth & inaccessible (ii) Rosewood

(d) (i) This is due to non-availability of enough water for growth of trees.

(ii) This is due to check on deforestation.

(iii) Lack of sufficient moisture for leaves to withstand dry weather conditions.

## ANSWER 6

(a) No loss of water due to evaporation and leakage. - Use water economically.

(b) Ground water level is high– Soft nature of rocks which makes digging tube wells easy.

(c) (i) South Indian states have uneven terrain hence they are not suitable for constructing canals

(ii) To meet the increasing demand of growing population.

(iii) Rainfall in India is seasonal/uncertain/unevenly distributed/annual crops need water all through the year/to maximize the agricultural production.

(d) (i) The canals that are taken out from the rivers without any regulating system like weirs, etc at their head / the canals that are filled with water only during floods

(ii) Rainwater can be collected over rooftop and collected water channelized through small PVC pipes into the underground pits, wells, etc.

(iii) Water found on the surface of the earth in the form of rivers, lakes, ponds, etc. is called surface water.

## ANSWER 7

(a) No supply issues. No pollution issues.

(b) (i) Manganese

(ii) Ujh Multipurpose project

(c) (i) For generation of electricity.

(ii) good conductor of electricity

(iii) India lies in the equatorial region

(d) (i) Uranium.

(ii) Petrol.

(iii) Easily available in India

## ANSWER 8

(a) Provides food for our growing population and fodder for livestock. Crops like cotton, jute, coffee, etc, provide raw material for the agro-based industries.

(b) Frost and cloudy weather is detrimental to the healthy growth of cotton plants. Pests such as the 'boll weevil' lays eggs inside the boll and destroys the crop.

(c) They are rich in protein. Pulses are grown as rotation crops as they are leguminous crops that fix atmospheric nitrogen in the soil and increase its fertility. Pulses act as good cattle fodder, too.

(d) The three cropping seasons are:

1. Kharif: Crops-Rice
2. Rabi: Crops-Wheat
3. Zaid: Crops- 'Boro' rice

## ANSWER 9

(a) (i) Iron Ore – Dalli-Rajhara Range

(ii) Iron Ore –Bastar.

(b) Climate is suitable for sericulture & large market.

(c) (i) Sugarcane starts losing its sucrose after it is cut.

(ii) Molasses & bagasse

(iii) North India – Uttar Pradesh

(d) (i) Humid climate/availability of raw material/availability of skilled and unskilled labours.

(ii) Provides employment– Brings in foreign exchange.

(iii) Raw materials used in petrochemical industries are mainly derived from petroleum.

## ANSWER 10

(a) Supplies necessary machinery for production of other goods. Railway tracks, engines, ships, and motors are made of iron and steel.

(b) (i) Rourkela Steel Plant

(ii)Iron ore – Bonaigarh, Mayurbhanj,

(c) (i) Hindustan Aeronautics Limited

(ii) Bangalore.

(iii) Chittranjan Locomotives

(d) (i) Plastics / insecticides / Synthetic fibre

(ii) Car/ Truck

(iii) Computers / Television Sets

### **ANSWER 11**

(a) (i) Waste accumulation results in air pollution which may cause acid rain and several air-borne diseases/ bad odour/release harmful greenhouse gases/ chemicals near the underground water by leakage.

(ii) Water pollution affects human health and animal life on land it also affects aquatic animals adversely/ eutrophication/biomagnification.

(b) It may lead to foul smell and several diseases such as malaria, cholera etc., may be caused due to flies and other insects that carry the disease-causing bacteria which grow in the decomposing waste.

(c) (i) Individual may use carry bags / adopt reusable containers and utensils

(ii) It will help in safe disposal and will cause lesser pollution.

(iii) It not only reduces waste accumulation but also increases plant growth.

(d) (i) Trees give out oxygen and take in carbon dioxide and carbon monoxide emitted by industries/trees control noise pollution/air pollution/ maintain temperature.

(ii) The chemicals in chemical fertilizers combine with plant nutrients and the plants are consumed by animals and humans which is harmful.

(iii) Plastic and polythene products must be banned because they are non-biodegradable and take hundreds of years to decompose. If these plastics are ingested by animals like cattle or marine life like whales, it can lead to their death.

# ICSE GEOGRAPHY

## Answer Key to Self-Assessment Sample Paper - 5

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### ANSWER 3

(a) Mangalore lies on the windward side of the Western Ghats on the west coast of India while Mysore lies on the leeward side of the Eastern Ghats.

(b) The North West part of India. This rainfall is beneficial for the cultivation of Rabi crops.

(c) (i) Mean annual temperature = Total temperature/12

(ii) Total rainfall- add all the rainfall

(iii) The range of temperature is very low.

(d) (i) Due to the normal lapse rate.

(ii) Aravalli Hills lie parallel to the South west monsoon winds

(iii) It lies near waterbody

### ANSWER 4

(a) Highly acidic and not very fertile

(b) (i) Alluvial soil (ii) Red soil

(c) (i) Laterite soil.

(ii) Laterite soils are suitable for building purpose.

(iii) This soil is not suitable for cultivation because it is highly acidic in nature.

(d) (i) Alluvial soil/ Black cotton soil.

(ii) Laterite soil.

(iii) Red soil.

### ANSWER 5

(a) (i) Dense, evergreen (ii) Trees have long roots submerged under water

(b) (i) Babul – yields timber and tannin (ii) Kikar – Treat cancer and cough

(c) (i) Different leaf shedding period (ii) Three-tiered vegetation (iii) Mixed type of trees

(d) Rajasthan (i) To maintain the environmental stability. (ii) The wide variety of flora and fauna

### ANSWER 6

(a) Recharge groundwater resource & Reduces soil erosion.

(b) (i) The significance of irrigation in Punjab: Availability of water is highly uneven and variable.

(ii) Significance of irrigation in Rajasthan: The groundwater level is available only at a depth of 30 to 60 m.

(c) (i) Severe water shortage is due to wastage/ pollution.

(ii) Make rainwater harvesting mandatory in every housing colony/ levy fine on wastage.

(d) Three reasons to justify the need to conserve water.

(i) The growth of population has resulted in water scarcity.

(ii) Deforestation has led to drought and reduction of rainfall.

(iii) The underground water has been exploited and the water table has been lowered.

### ANSWER 7

(a) (i) Iron ore – is used in the making of steel which is used for manufacturing of machines.

(ii) Manganese is important in the making of iron and steel and in strengthening of steel.

(b) (i) Magnetite and Hematite. (ii) The low-grade iron ore is used in manufacturing of sponge iron.

(c) (i) This is because: It is expensive. There is a problem of radioactive waste disposal.

(ii) Kaiga in Karnataka.

(d) (i) Minerals are the source of raw materials and form the basis for industries. · They are the source of energy and power, e.g., coal and petroleum.

(ii) Limestone is needed in the manufacture of iron and steel, cement, fertilizers & Fluxing material in smelting of iron ore.

### ANSWER 8

(a) Provides food for our growing population and fodder for livestock. Crops like cotton, jute, coffee, etc, provide raw material for the agro-based industries.

(b) Frost and cloudy weather is detrimental to the healthy growth of cotton plants. Pests such as the ‘boll weevil’ lays eggs inside the boll and destroys the crop.

(c) Importance of Pulses: they form an important part of the Indian diets because they are rich in protein. Pulses are grown as rotation crops as they are leguminous crops that fix atmospheric nitrogen in the soil and increase its fertility.

(d) The three cropping seasons are:

1. Kharif: Crops-Rice, maize, millets.
2. Rabi: Sown-Crops-Wheat, barley, gram.
3. Zaid: Crops- 'Boro' rice

## ANSWER 9

(a) Heavy Industries are those which use heavy and bulky raw materials e.g., Iron and steel, machinery manufacturing, ship building. Light Industries use small and light raw materials e.g., cycles, electronic goods.

(b) Maharashtra is the largest producer of sugar. The geographical conditions in the south are more suitable (temperature 20-30 degree Celsius, rain 100-200 cm, no frost, black lava soil).

Two reasons are: Because in Maharashtra, superior quality canes are available. Maharashtra has a long crushing season because here, the weather is humid, and cane dries slowly.

(c) (i) This is because products made from petrochemicals are cheaper and more durable.

(ii) Iron and Steel industry is the basic or 'key industry' for any country because all major industries such as heavy engineering, construction, cement, railway tracks, shipbuilding and motors etc. are dependent on iron and steel. It forms the backbone of modern industrial economy.

(iii) The electronics industry is a fast-developing industry because electronics are used in many fields i.e., computers, which are important for the development of a country.

(d) (i) The reasons are:

- Easy availability of raw material from the Black Cotton soil area of Maharashtra.
- Humid climate
- Cheap hydroelectric power.

(ii) Ahmedabad/ Surat/ Kanpur/ Coimbatore

## ANSWER 10

(a) Broad, Metre and Narrow Gauge.

(b) (i) Expressways, (ii) National Highways (NH), (iii) State Highways, (iv) Major and Minor District Roads and (v) Village Roads.

(c) (i) Difficult to construct in the hilly and mountainous areas.

(ii) The large size of the country.

(iii) Obsolete trains tracks and equipment.

(d) East Coast: Chennai, Kolkata,  
West Coast: Mumbai, Mormugao.

### ANSWER 11

(a) Disposal of Solid Waste is through landfills, composting, and incineration.

(b) Many non-biodegradable items can be reused or recycled.

(c) (i) Newspapers and telephone books are ground up and made into newsprint, cereal boxes, cellulose insulation.

(ii) Glass bottles are crushed, melted, and recycled into more glass bottles.

(iii) Aluminium cans are melted down and recycled into other products made of aluminium.

(d) When manure and woody material are placed on the ground, microorganisms from the ground begin to eat the material.