

# ICSE Solved Paper 2023

## Geography

### Class-X

(Maximum Marks : 80)

(Time allowed : Two hours)

*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.*

#### 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.)

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

- (i) (a) Give the four-figure grid reference for  $\Delta 224$ . [2]  
(b) What is the contour interval used in the given map extract?
- (ii) (a) Mention two made features seen in grid square 2706. [2]  
(b) Mention two natural features seen in grid square 2905
- (iii) (a) What do you understand by 1:50,000 printed below the map extract? [2]  
(b) What is the pattern of drainage seen in the grid square 2505?
- (iv) (a) What do you understand by .10r in 2709? [2]  
(b) What is the compass direction of Mahudi Nani (2604) from Panswala (2909)?
- (v) Calculate the area in kilometre square of the region enclose between Easting 26 to 29 and Northing 05 to 11. [2]

- Ans.(i) (a) 2706  
(b) Contour interval given in the map is 20 meters
- (ii) (a) Two man-made features are metalled roads and temples.  
(b) Two natural features are trees and seasonal stream.
- (iii) (a) The scale of the given toposheet in

representative fraction (RF) is 1:50000

- (b) The drainage pattern in 2505 is dendritic.

- (iv) (a) 10r. is the height of a sand dune which is shaded in brown.

- (b) The compass direction of Mahudi Nani (2604) from Panswala (2909) is north-east.

- (v) Areas between 26 to 29

Squares covered: 3 squares

Side of each square:  $1 \times 3 = 3$  km

Areas between 05 to 11

Squares covered: 6 squares

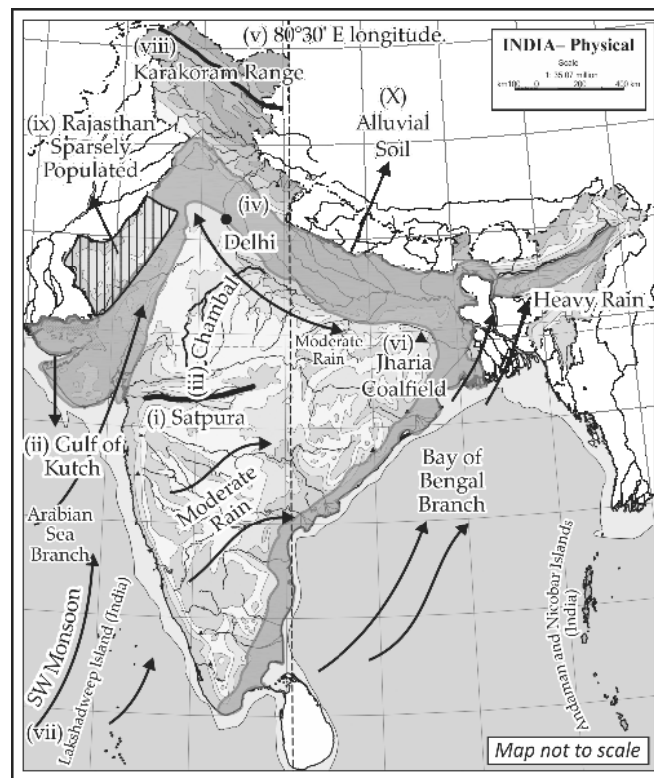
Side of each square :  $1 \times 5 = 5$  km

Total area = 15 sq. km

2. On the outline map of India provided:

- (i) Mark and label the *Satpura*. [1]
- (ii) Shade and label the *Gulf of Kutch*. [1]
- (iii) Mark and label the *River Chambal*. [1]
- (iv) Mark and label *Delhi*. [1]
- (v) Mark and label  $80^{\circ}30' E$  longitude. [1]
- (vi) Mark and label *Jharia coalfield*. [1]
- (vii) Mark with arrows and name the *Southwest Monsoon winds*. [1]
- (viii) Mark and label the *Karakoram Pass*. [1]
- (ix) Shade and label a *sparsely populated region in Western India*. [1]
- (x) Shade an area having *Alluvial soil*. [1]

Ans.



3. Choose the correct answer to the questions from the given options. [10]  
(Do not copy the questions, write the correct answer only.)
- (i) Which of the following area receives rain from the North East Monsoon?  
(a) Konkan coast (b) Ganga basin  
(c) Coromandel coast (d) Malabar coast
- (ii) Which is the most widespread soil of India?  
(a) Red soil (b) Alluvial soil  
(c) Laterite soil (d) Black soil
- (iii) Which type of forest is found mostly in the coastal areas of India?  
(a) Tropical Evergreen Forest  
(b) Tropical Desert Forest  
(c) Littoral Forest  
(d) Tropical Deciduous Forest
- (iv) Which of the following is a ground water source?  
(a) Pond (b) Lake  
(c) Spring (d) River
- (v) Copper is alloyed with Zinc to form:  
(a) Stainless steel (b) Brass  
(c) Bronze (d) Aluminium
- (vi) Hirakud dam is based on which of the following rivers?  
(a) River Godavari (b) River Mahanadi  
(c) River Krishna (d) River Narmada
- (vii) Which of the following is NOT a problem of Indian agriculture?  
(a) Dependence on monsoon  
(b) Small land holdings  
(c) Two main cropping seasons  
(d) Use of traditional methods of farming
- (viii) Which of the following is a basic/key industry?  
(a) Iron and steel industry  
(b) Silk industry  
(c) Electronic industry  
(d) Cotton textile industry
- (ix) Which of the following is a staple food grain of Indians?  
(a) Wheat (b) Rice  
(c) Gram (d) Arhar
- (x) Which of the following method of waste disposal is harmful?  
(a) Composting (b) Segregation  
(c) Dumping (d) Vermicomposting
- Ans. (i) Option (c) is correct.  
*Explanation:* The monsoon winds become weaker and start withdrawing from the country from north to south. These winds pick up moisture from the Bay of Bengal and give rainfall to the Coromandel coast.
- (ii) Option (b) is correct.  
*Explanation:* Alluvial soil is formed by depositions of silt by rivers and extremely fertile and soft. It is fine grained and widely spread in India. This soil occupies about 46% of the total land area.

## (iii) Option (c) is correct.

**Explanation:** Littoral forests are found along the coasts and the mouth of the rivers which are affected by tides. It is also known as tidal or Mangrove forests.

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

**Explanation:** Groundwater sources are beneath the land surface and include springs and wells. A spring is a natural discharge point of subterranean water at the surface of the ground or directly into the bed of a stream, lake, or sea.

## (v) Option (b) is correct.

**Explanation:** Copper and zinc are metals and the alloy formed by these metals is known as Brass. In brass, the composition of copper is 60-80% and zinc 20-40% respectively. Brass is used in scientific instruments and it is highly malleable and has high tensile strength.

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

**Explanation:** Hirakud dam is built across the River Mahanadi, about fifteen kilometers from Sambalpur in Odisha. It is the first major multipurpose river valley project started after independence.

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

**Explanation:** The agricultural activities in India possible throughout the year begin with the onset on monsoon. The farmers grow different crops based on the availability of water. India has three different agricultural seasons.

## (viii) Option (a) is correct.

**Explanation:** Iron and steel industry is called the basic industry as most of the small and medium industries are dependent on it. This industry is also a major source of employment to a large number of people.

## (ix) Option (a) is correct.

**Explanation:** Rice is the first most important staple food in India. The second most important staple food in India is wheat. India has the largest area, about 45 million hectares, under rice cultivation in the world.

## (x) Option (c) is correct.

**Explanation:** Dumping waste is one of the conventional, inexpensive and widely used method of waste disposal. It is harmful for the environment as well as for humans and other living organisms.

## PART II

(50 marks)

(Attempt any five questions from this Part.)

4.(i) Name the seasons of India and mention the durations of each season. [2]

(ii) Why maximum rainfall in India occurs after the summer season? [2]

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

(a) The Malabar coast receives heavy rainfall in the

month of July but the Coromandel coast during this time remains comparatively dry.

(b) Punjab receives rainfall in winter season.

(c) Mumbai is warmer than Delhi in the month of December.

(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 in °C	21.0	21.9	24.3	27.2	28.0	26.4	26.1	25.4	26.0	26.0	23.8	21.2
Rainfall in cm	5.1	2.8	1.2	1.7	3.9	4.6	8.4	11.4	11.9	31.6	34.5	14.8

(a) Calculate the annual range of temperature of Station X.

(b) Name the wind that brings most of the rainfall to this station.

(c) On which coast of India is Station X located?

Ans.(i) There are four distinct seasons in India:

(a) The Cold Weather Season or Winter season : December to February

(b) The Hot Weather Season or Summer season : March to May

(c) The Rainy or the Monsoon Season : June to September

(d) Retreating Monsoon Season : October to November

(ii) (a) The Southwestern monsoons wind provides maximum rainfall in India. Due to differential heating and cooling of the land a high pressure is produced in the Indian Ocean. These moisture laded winds carry rain towards the end of the summer.

(b) Punjab gets rainfall in the winter months due to the western disturbances. This rainfall is beneficial for the cultivation of Rabi crops i.e., Wheat and Barley .

(c) Mumbai is hotter than Delhi because Mumbai is located on the shore of the sea. This

increases the specific heat capacity of the area and the presence of a large amount of water keeps the climate warmer in winter and cooler in summer.

- (iii) (a) The Malabar Coast is located on the western coastal plains where the South-West Monsoons strike first. Therefore, it gets heavy rain. Coromandel coast is on the eastern coastal plain which is on the rain shadow region usually gets less rainfall from North East Monsoons.
- (b) Punjab gets rainfall in the winter months due to the western disturbances. This rainfall is beneficial for the cultivation of Rabi crops *i.e.*, Wheat and Barley.
- (c) Mumbai is hotter than Delhi because Mumbai is located on the shore of the Sea. this increases the specific heat capacity of the area and the presence of a large amount of water keeps the climate warmer in winter and cooler in summer.
- (iv) (a) Annual range of temperature =  $(28.0 - 21.0)^{\circ}\text{C} = 7^{\circ}\text{C}$
- (b) The Retreating Monsoons
- (c) The station X lies on the eastern coast of the South India.

5. (i) (a) Mention any two causes of soil erosion in India. [2]
- (b) Name two soil conservation methods that may be practised in arid (dry) regions.
- (ii) Mention two characteristics of Black soil. [2]
- (iii) Name the soil: [3]
- (a) That is found on the summits of Eastern and Western Ghats.
- (b) That is suitable for dry farming.
- (c) That varies in texture.
- (iv) Give a geographical reason for each of the following: [3]
- (a) Terrace forming is an ideal soil conservation method for hilly areas.
- (b) Khadar soils are preferred over Bhangar soils.
- (c) Foothills of Himalayas have been affected by soil erosion.

- Ans. (i) (a) Deforestation and overgrazing.
- (b) Planting of shelter belts and Restrictions on overgrazing of animals.
- (ii) Main characteristics of black soil are:
- Black in colour due to its iron content
  - Clayey in nature
- (iii) (a) Laterite soil
- (b) Red soil
- (c) Alluvial soil

- (iv) (a) Terrace farming is the oldest soil conservation methods along the hill slopes. The slope of the hill is cut into a series of terraces. There is enough level land on terrace for cultivation. It checks the flow of water, promotes absorption of water by soil and thus reduces erosion.
- (b) Khadar soils are preferred to Bhangar soils as they consist of mainly fine silt and clay. They are very fertile as they are replenished every year by floods. On the other hand, the Bhangar soils contain pebbles and gravels and are coarse in nature.
- (c) The foothills of the Himalayas are prone to extreme soil erosion because of the less vegetation cover over there. There are not many plant or tree roots to hold the soil in place, which makes the foothills of the Himalayas prone to excessive soil erosion.

6. (i) State two ways in which forests help in protecting the environment. [2]
- (ii) Mention two ways in which Tropical Desert vegetation has adapted to its environment. [2]
- (iii) (a) In which natural vegetation belt is Sundari tree found? [3]
- (b) Why is the Tropical Deciduous Forest commercially the most exploited forest belt of India? (Two points)
- (iv) (a) Name one region in India where Tropical Evergreen Forest is found. [3]
- (b) Mention the temperature and rainfall conditions found suitable for its growth.

- Ans. (i) (a) Forests help control or reduce the risk of soil erosion, landslides and avalanches.
- (b) It is home to various organisms and thus helps in promoting biodiversity.
- (ii) • The trees are less dense and small in size but their roots are thick and long so that they can use the underground water in the best possible manner.
- Their thick barks prevent excess evaporation.
- (iii) (a) Littoral or Tidal forests
- (b) The tropical deciduous forest is commercially most exploited forest belt in India:
- as they yield valuable timber
  - provide variety of forest products
- (iv) (a) The Tropical Evergreen forests are found in the Western side of Western Ghats.
- (b) These forests grow in the region with 200 cm of rainfall,  $24^{\circ}\text{C}$  of temperature and with humidity more than 70 percent.

7. (i) Give a reason for each of the following:
- (a) Agriculture sector in India needs the support of irrigation. [2]
- (b) Well irrigation is a popular means of irrigation in Northern India.

- (ii) Distinguish between *inundation canal* and *perennial canal*. [2]
- (iii) (a) Where in India is *tank irrigation* most widely used? [3]  
 (b) Give *one* factor that has led to its popularity in the region mentioned by you.  
 (c) Mention *one* advantage of using tank as a means of irrigation.
- (iv) (a) What is *Rainwater Harvesting*? [3]  
 (b) Give *two* ways in which *Rainwater Harvesting* is important for India.

Ans. (i) (a) A major part of India is located in the tropical and sub-tropical region. Being a hot country, with seasonal and irregular rainfall, irrigation is needed to carry on agricultural activities during dry periods.  
 (b) Well irrigation is widely practiced in Northern India due to the presence of high level of ground water. Moreover, soft nature of rocks make digging of tube wells easy.

(ii)

Inundation Canals	Perennial Canals
Inundation canal have water in them when excess water flows into them during rainy seasons.	Perennial canals have water in them throughout the year as they draw out water from perennial sources.

- (iii) (a) Deccan region (Andhra Pradesh/Tamil Nadu/Karnataka)  
 (b) Deccan Plateau is made up of hard impermeable rock which does not allow the rainwater to percolate underground. The Deccan Plateau is highly dissected and so has many natural hollows and depressions.  
 (c) One advantage of tank irrigation is that it is an inexpensive and cost-effective method of irrigation.
- (iv) (a) It is the technique of collecting rain, flood and underground water and then using it according to one's requirement.  
 (b) Rainwater Harvesting helps to meet the increasing demand for water.  
 • It helps to check surface run-off that chokes the drain.  
 • It also recharges ground water resource.

- 8.(i) (a) Name the state of India that leads in the production of *Manganese*. [2]  
 (b) What is the importance of *Manganese* for the *Iron and Steel industry*?
- (ii) Why is *conventional source of energy* not considered an *ecofriendly source of energy*? [2]
- (iii) (a) How is *Bhakra Nangal dam* beneficial for Punjab? [3]

- (b) Name *two* states where coal is mined in abundance.  
 (c) Mention *one* advantage of using wind energy.
- (iv) Name the following: [3]  
 (a) A mineral used to *generate nuclear energy*.  
 (b) The *non-conventional energy source* that has the *most widespread potential usage* in India.  
 (c) An *offshore oil field of India*.
- Ans. (i) (a) Madhya Pradesh is the leading producer of Manganese in India.  
 (b) Manganese makes the steel tough, hard and rust resistant.
- (ii) The conventional source of energy are not considered as an eco-friendly source of energy:  
 • They are exhaustible sources of energy.  
 • They produce waste materials and cause pollution.  
 • They are expensive. (Any Two Points)
- (iii) (a) The main aim of the Bhakra-Nangal dam is to harness the water of river Sutlej for the benefit of the state of Punjab. It also aims to provide irrigation and generate electricity.  
 (b) Jharia and Bokaro coal fields are most important due to the abundance.  
 (c) Wind energy is renewable and plentiful.
- (iv) (a) Uranium is a mineral used to generate nuclear energy.  
 (b) Solar energy is the most widespread non-conventional source of energy in India.  
 (c) Mumbai high

- 9.(i) Differentiate between *Intensive farming* and *Extensive farming*. [2]
- (ii) Mention *two* problems faced by the India farmers. [2]
- (iii) (a) Give *one* advantage of *transplantation method* of sowing rice. [3]  
 (b) What is '*Ginning*'?  
 (c) Name *any two* pulses grown in India.
- (iv) (a) What is meant by '*Retting*'? [3]  
 (b) What kind of soil is required for the cultivation of tea?  
 (c) Why is pruning necessary for tea plant?

Ans. (i)

Intensive Farming	Extensive Farming
(i) It is practised in the regions where the density of population is high.	(i) It is practiced in the areas of sparse population.
(ii) There is an excessive use of fertilizers to get maximum yields.	(ii) Machinery is used.

- (ii) Dependence on rainfall: Indian farmers are dependent to a large extent on the monsoons which are uncertain, and unreliable.

Fragmented Holdings: The small holdings of the farmers do not encourage modern methods of farming, like use of scientific cultivation, improved implements and seeds. A lot of time, labour and power are wasted on small holdings as returns are poor.

- (iii) (a) Transplantation method enables to select only healthy seedlings for the rice plants.  
 (b) Ginning is the process in which the cotton seeds are separated from fibre.  
 (c) Pulses grown in India are Chana, Tur, etc.  
 (iv) (a) Retting is the process in which jute fibre is separated from the stalk by submerging it in a pool of gently flowing clear water.  
 (b) A well drained fertile loam is best suited for the tea plant.  
 (c) Pruning is done to encourage the growth of new leaves.

10. (i) How are the industries important for India? (Two points) [2]

(ii) State the difference between Agro based industry and Forest based industry. Give one example for each type of industry. [2]

(iii) (a) What has made Mumbai an important centre for cotton textile production? (Write any two points) [3]

(b) Why are the petrochemical products in great demand?

(iv) (a) Mention two problems faced by the sugar industry of India. [3]

(b) Where is Tata Steel located?

(c) Why is the Silk industry losing the market in recent times?

Ans. (i) Importance of industries in India:

- Industrialisation helps in modernizing agriculture, which is the main occupation of people of India.
- Industries help in increasing our exports and thus maintain a favourable balance of trade.

(ii)

Agro-based Industry	Forest-based Industry
<ul style="list-style-type: none"> <li>• These industries depend on agricultural products for their raw material.</li> </ul>	<ul style="list-style-type: none"> <li>• These industries obtained their raw materials from the plant kingdom, such as trees, bushes, grasses etc.\</li> </ul>
<ul style="list-style-type: none"> <li>• e.g., Sugar and Cotton</li> </ul>	<ul style="list-style-type: none"> <li>• e.g., Paper, Furniture</li> </ul>

(iii) (a) The factors favoured for the development of cotton textile production in Mumbai:

- Favourable climatic conditions specially the humid climate.
- The port facility helps in the import of long staple cotton and machinery as well as the export of the finished product.

(b) The petrochemical products are in great demand because:

- They are cost effective, economic and cheap.
- Raw materials are easily available.

(iv) (a) The problems of sugar industry:

- Price of sugarcane is fixed by the government so farmers are dissatisfied.
- Industry is seasonal in character as sugarcane is available only at the time of harvest and the crushing season is short. Therefore, cost of production is high.

(b) Tata Iron and Steel Company is located at Tatanagar near Jamshedpur in Jharkhand.

(c) The competition from artificial and synthetic materials is the main problems of the Indian silk industry.

11. (i) Why is it important to have a well develop means of transport in India? [2]

(ii) "Though an expensive mode of transport, Airways is gaining popularity in India. " Explain giving two reasons. [2]

(iii) (a) Why are South Indian rivers not ideal for inland water transport? [3]

(b) Mention two advantages of waterways.

(iv) (a) Why are roadways considered more important than any other means of transport? [3]

(b) Mention two advantages of using railways as means of transport.

Ans. (i) It is important to have a well developed transport in India:

- An efficient system of transport provides the basic strength to the national economy and an important link between production and consumption of goods.
- The growth of transport facilities accelerates the process of industrialisation and urbanization.

(ii) Airways is gaining popularity in India:

- It is the fastest and most comfortable mode of transportation.
- It can cover difficult terrains like mountains, deserts, forest an oceans with ease.

(iii) (a) Most of the peninsular rivers are seasonal which dry up during summer.

(b) The advantages of waterways are:

- They are the cheapest means of transport to carry heavy and bulky goods.
- They are fuel efficient and an environmental- friendly means of transport.

(iv) (a) Roadways are considered as the important means of transportation:

- Roads are comparatively easier and cheaper to construct and maintain.
- Roads can negotiate steep slope and sharp turns and provides door to door services.

(b) The two advantages of railways are:

- Railways have helped in developing tourism.
- It is the main mode of transport for freight and passengers.

12.(i) Why should *waste management* be practiced in every school? [2]

(ii) Mention one advantage and one disadvantages of dumping of waste. [2]

(iii) Briefly answer the following: [3]

(a) How is *segregation* of the waste helpful?

(b) Mention one way in which we can *reuse* waste.

(c) Mention one benefit of *Composting*.

(iv) (a) How is *recycling* of waste helpful? Give an example of recycling of waste. [3]

(b) Mention any one initiative taken by the Government to manage waste.

Ans. (i) It is very important for the proper waste disposal and management of waste by applying the 3R – Reduce, Reuse and Recycle.

(1) Reducing means lessening the amount of trash/garbage produced and reusing of paper for all kinds.

(2) Reducing, reusing, recycling and waste material will improve the economic and environmental performance of the school.

(ii) The advantage of dumping waste is this is the conventional, inexpensive and widely used method of waste disposal.

The disadvantage of this method is that the solid waste materials which are left in the open give out bad odour and are the breeding grounds for mosquitoes, flies and other harmful bacteria which causes a variety of diseases.

(iii) (a) Segregation of waste is the first and important step of safe disposal of waste for an effective waste management. Waste Segregation causes lesser pollution.

(b) Old tyres can be reused for making shoes, chappals etc.

(c) Compost is a way of Recycling and Reuse of organic waste. It not only reduces waste accumulation but also increases plant growth.

(iv) (a) Recycling of waste reduces the consumption of raw materials and energy usage and also reduces air and water pollution. It is the key component of modern waste reduction procedure.

e.g., Paper: It would save our forest if less trees were cut. Paper can be recycled by selling them to be used again.

(b) One of the initiatives taken by the government to manage waste is through the following programmes:

- Swachh Bharat Mission', 'National Water Mission' and 'Waste to Wealth Mission'.



5.	<p>What will be the output of the following code snippet?</p> <pre>message= "World Peace" print(message[-2::-2])</pre>	(1)
6.	<p>What will be the output of the following code?</p> <pre>tuple1 = (1, 2, 3) tuple2 = tuple1 tuple1 += (4,) print(tuple1 == tuple2)</pre> <p>(A) True (B) False (C) tuple1 (D) Error</p>	(1)
7.	<p>If my_dict is a dictionary as defined below, then which of the following statements will raise an exception?</p> <pre>my_dict = {'apple': 10, 'banana': 20, 'orange': 30}</pre> <p>(A) my_dict.get('orange') (B) print(my_dict['apple', 'banana']) (C) my_dict['apple']=20 (D) print(str(my_dict))</p>	(1)
8.	<p>What does the list.remove(x) method do in Python?</p> <p>(A) Removes the element at index x from the list (B) Removes the first occurrence of value x from the list (C) Removes all occurrences of value x from the list (D) Removes the last occurrence of value x from the list</p>	(1)
9.	<p>If a table which has one Primary key and two alternate keys. How many Candidate keys will this table have?</p> <p>(A) 1 (B) 2 (C) 3 (D) 4</p>	(1)
10.	<p>Write the missing statement to complete the following code:</p> <pre>file = open("example.txt", "r") data = file.read(100) _____ #Move the file pointer to the beginning of the file next_data = file.read(50) file.close()</pre>	(1)
11.	<p>State whether the following statement is True or False: The <b>finally</b> block in Python is executed only if no exception occurs in the <b>try</b> block.</p>	(1)