Chapter 1: Geography as a Discipline

Exercises — Exercises

Q1 Which one of the following scholars coined the term 'Geography'?
(a) Herodotus
(b) Eratosthenes
(c) Galileo
(d) Aristotle

(b) Eratosthenes. The term was first coined by Eratosthenes, a Greek scholar (276-194 BC), from the Greek roots geo (earth) and graphos (description), meaning description of the earth.

Q2 Which one of the following features can be termed as a 'physical feature'?
(a) Port
(b) Road
(c) Plain
(d) Water park

(c) Plain. A plain is a natural landform. Ports, roads and water parks are cultural features created by human beings.

Q3 Make correct pairs from the following two columns and mark the correct option.
1. Meteorology 2. Demography 3. Sociology 4. Pedology
A. Population Geography B. Soil Geography C. Climatology D. Social Geography
(a) 1B, 2C, 3A, 4D
(b) 1A, 2D, 3B, 4C
(c) 1D, 2B, 3C, 4A
(d) 1C, 2A, 3D, 4B

(d) 1C, 2A, 3D, 4B. Meteorology (weather) pairs with Climatology, Demography (population) with Population Geography, Sociology (society) with Social Geography, and Pedology (soils) with Soil Geography.

Q4 Which one of the following questions is related to cause-effect relationship?
(a) Why
(b) Where
(c) What
(d) When

(a) Why. 'What' and 'where' only identify and locate features. The question 'why' seeks explanation and causal relationships between features, processes and phenomena, which made geography a scientific discipline.

Q5 Which one of the following disciplines attempts temporal synthesis?
(a) Sociology
(b) Geography
(c) Anthropology
(d) History

(d) History. Geography attempts spatial synthesis, while history attempts temporal synthesis, that is, it integrates events across time.

Q6 What important cultural features do you observe while going to school? Are they similar or dissimilar? Should they be included in the study of geography or not? If yes, why?

On the way to school one may see roads, houses, shops, markets, bridges, railway lines and bus stops. They are dissimilar, varying from place to place. They should be included in geography, because they are cultural features created by human beings, and studying them shows how people use and modify their physical environment.

Q7 You have seen a tennis ball, a cricket ball, an orange and a pumpkin. Which one amongst these resembles the shape of the earth? Why have you chosen this particular item to describe the shape of the earth?

The orange resembles the earth best. The earth is nearly spherical but slightly flattened at the poles and bulging at the equator, and so is an orange. A tennis or cricket ball is a perfect sphere, and a pumpkin is flattened too much, so the orange is the closest match.

Q8 Do you celebrate Van Mahotsava in your school? Why do we plant so many trees? How do the trees maintain ecological balance?

Van Mahotsava is the annual tree-planting festival, celebrated in many schools. We plant trees because they provide oxygen, food, timber and shelter, prevent soil erosion and bring rainfall. Trees sustain animals, birds and micro-organisms through food chains, absorb carbon dioxide and release oxygen, and so keep ecological balance in the biosphere.

Q9 You have seen elephants, deer, earthworms, trees and grasses. Where do they live or grow? What is the name given to this sphere? Can you describe some of the important features of this sphere?

They live and grow on the land, in soil and air near the earth's surface, in the zone where life exists. This sphere is the biosphere. It includes all life forms, including human beings, and their sustaining mechanisms such as food chains, ecological parameters and ecological balance, linked closely with the lithosphere, atmosphere and hydrosphere.

Q10 How much time do you take to reach your school from your house? Had the school been located across the road from your house, how much time would you have taken to reach school? What is the effect of the distance between your residence and the school on the time taken in commuting? Can you convert time into space and vice versa?

If the school is, say, 3 km away, it may take about 15 minutes by bus. Across the road, it would take only a minute or two. Greater distance means more commuting time, so time depends on space and the means of transport. Yes, space and time can be converted into each other: place A can be called 1,500 km from place B, or two hours away by plane or seventeen hours away by a fast train. This is why time is the fourth dimension of geography.

Q11 You observe every day in your surroundings that there is variation in natural as well as cultural phenomena. All the trees are not of the same variety. All the birds and animals you see, are different. All these different elements are found on the earth. Can you now argue that geography is the study of 'areal differentiation'?

Yes. The earth's surface varies in its physical features, such as mountains, plains, plateaus, oceans and deserts, and in cultural features, such as villages, cities, roads and ports. Some phenomena are similar while many are dissimilar, so geography came to be seen as the study of areal differentiation, that is, of all phenomena that vary over space. Geographers study not only these variations but also their associations with the factors that cause them. For example, cropping patterns differ from region to region because of differences in soils, climate, market demand, the farmer's capacity to invest and available technology. Geography thus describes differences over the earth's surface and explains them through cause and effect relationships, which also helps foresee future phenomena. Hartshorne and Hettner also defined geography as the study of areal differentiation. Hence the argument is justified.

Q12 You have already studied geography, history, civics and economics as parts of social studies. Attempt an integration of these disciplines highlighting their interface.

Geography is a discipline of synthesis that draws its data from natural and social sciences, and it links closely with history, civics (political science) and economics. History: geography attempts spatial synthesis and history temporal synthesis, and spatial factors shape history. The Himalayas protected India but their passes gave routes to invaders, and navigation technology helped Europeans colonise Asia and Africa. Every historical event can be interpreted geographically, and geographical features change through time. Civics or political science: political geography studies boundaries, relations between neighbouring political units, delimitation of constituencies and elections; spatial depth and size have given countries defence and strategic strength. Economics: economic geography studies agriculture, industry, trade, transport and tourism, which depend on resources such as soil, climate and minerals. Thus all these disciplines study different aspects of reality, and geography integrates them to understand reality in totality with a spatial perspective.