

Chapter 1: Map Study

Very Short Questions

Question 1: What is a Flat land?

Answer: Land varying between 20 metres to 40 metres above sea level, is called flat land. This type of area has sufficient slope for natural drainage. This area is generally suitable for farming.

Question 2: What do you understand by the term Grid?

Answer: A Grid is a set of lines used to find the exact location of places on a map. Most maps use the grid formed by latitudes and longitudes to find places.

Question 3: What are ‘National Grid Reference’?

Answer: Grid lines are imaginary lines drawn on a survey map in red colour. The origin of the Grid is a point south-west of the map. The ‘National Grid Reference’ is used for indicating the correct position of a particular feature on the map.

Question 4: Describe the importance of colours on the toposheet?

Answer: The use of various colours are essential to show the various features on the toposheet e.g. the cultivated area is always shown by the yellow colour and the green colour on the toposheet, shows the forested and wooded area.

Question 5: What is a River system

Answer: Rivers generally rise on slopes and are joined by a large number of other small rivers or streams. The entire area drained by a river and its tributaries is called a river system.

Question 6: How is the importance of settlement reflected in a map?

Answer: The importance of settlement is reflected by its size and the number of routes which meet there.

Short Questions

Question 1: What is a —Topographical Map?

Answer: Topographical map gives detailed information about physical features and manmade features of a small area. Physical features are depicted by contours. Cultural or manmade features are represented by symbols called conventional signs.

Question 2: What is a scale?

Answer: A scale is very essential for a map because it represents a large area of a country on a small piece of paper. A scale is the ratio between any two points on a map to the corresponding distance between the same two points on the actual ground.

Question 3: What are the three methods of indicating scale on maps?

Answer: Three methods of indicating scale on maps are:

- (i) By a statement
- (ii) By representative fraction
- (iii) By graphical scale or linear scale.

Question 4: Convert the following scales into R.F.

Answer: If a scale is 2 cm., to 1 km., calculate the R.F.

$$\begin{aligned} \text{R.F.} &= \frac{\text{Distance on the map}}{\text{Distance of the ground}} \\ \frac{2 \text{ cm.}}{1 \text{ km.}} &= \frac{2 \text{ cm.}}{1000 \times 100 \text{ cm.}} \\ \frac{1}{50,000} &= 1 : 50,000 \end{aligned}$$

Question 5: Convert the following R.F., into scales.

Answer: If R.F., is 1 : 2,500,000 what is the scale (answer in centimeter and kilometer).

$$\begin{aligned} \text{R.F.} &= \frac{\text{Distance on the map}}{\text{Distance of the ground}} \\ &= \frac{1 \text{ cm.}}{2,500,000} \\ &= \frac{1 \text{ cm}}{25 \text{ km.}} \end{aligned}$$

Question 6: What do you mean by ‘Marginal Information’?

Answer: Marginal Information can be obtained from the margin of the sheet. The name of the state to which the area belongs is given at the top of the sheet. The year when the area was surveyed is also mentioned. The number of the sheet is given in the right hand top corner. The direction of the magnetic variation and true north position is also given in the right hand top corner.

Question 7: Why are directions on a map important?

Answer: Since mapping is primarily a science of whereabouts a student of geography should, therefore, be familiar with directions and also the methods of finding out directions on different occasions and in various circumstances.

Question 8: Mention the methods by which directions are located.

Answer: Some methods by which directions can be located are:

- (i) Angular Bearing
- (ii) By Magnetic Compass
- (iii) The Pole Star
- (iv) Sunrise and Sunset.

Long Questions

Question 1: In what ways is the scale represented on a map?

Answer: Representation of Map Scale: Map scales are represented in the three forms:

- (i) A Statement: This is the easiest method of describing a map scale. It is usually written on maps as 1 cm., to 10 km.
- (ii) A Ratio: In this method the map scale is expressed as a numeric ratio. The numerator represents the map distance and it is always expressed as a unit. The denominator represents the corresponding ground distance, i.e., one unit on the map is equivalent to a number of units on the ground.

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It is also known as ratio-scale or Representative Fraction (R.F.)

(iii) A Graph: In this method, scale is represented by means of a linear (line) graph. It consists of a straight line divided into a number of equal parts (primary and secondary) which are marked to show what these divisions represents on the actual ground.

Question 2: The distance is measured on the topographic map. There are two methods of measuring distance on the topo sheets,

- (i) Direct-method,
- (ii) Indirect method. Measuring

Straight distance is a direct method and measuring through a winding course is an indirect method. Explain both the methods.

Answer:

(i) To measure the straight distance: To measure the shortest distance between two points on the topographic map along a straight line can be done easily with the help of a pair of divider. Keep the two pointed ends of the divider over line or two points which has to be measured and then carefully keep on scale. Note down the distance on the map in centimeters; then either with the help of the graphical scale which is provided below the topo sheets or by using the statement scale distance can be measured in kilometers and meters.

e.g., two places are 5.6 km., apart on the map.

The scale is given 2 cm. = 1 km.

1 cm. = $\frac{1}{2}$ km. 5.6 cm. = $\frac{1}{2} \times 5.6$
= 2.8 km.

(ii) To measure winding course: To measure a winding course route is complicated. It has to be measured with the help of a strip of paper or thread e.g., to measure a river in a toposheets take a piece of thread makes a knot on one end. At the end of thread (close to knot) mark the point with pen at which you will begin to measure (point A). Put the thread along the line touching as far as possible to measure and keep on marking with ink at turn still the last point. Stretch the thread on the scale line, you will get the ground distance in kilometres and metres, writing the unit of measurement is always important e.g., if the distance calculated between two points is 3.3 km. If asked in kilometers the answer would be 3km., 300m. If asked in metres the answer would be 3300 meters.

Question 3: Into How many categories maps been classified?

Answer: On the basis of their size maps can be classified as large scale maps and small scale maps.
Large Scale Maps

i) Topographical Maps – These maps are prepared after a careful and accurate survey of the area. This maps are useful for planning, defense, tourist, etc.

ii) Cadastral Maps: these maps provide complete details of an area such as a boundaries of properties and individual building. These maps are used to demarcate the boundaries of fields and buildings to register the ownership of landed property.

Small Scale Maps-

i Wall Map- These maps are meant to represent large areas that could be viewed at a glance. They show the features like railways, roads, physical, political, relief. Temperature, population, industries and vegetation.

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- ii Atlas Map- These maps are drawn on a smaller scale and are used to represent a whole country on a single sheet. Since the maps are drawn on smaller scale they give a condensed and generalised picture of different areas of the world. The features generally shown by Atlas maps include relief, drainage, vegetation, soils, crops, minerals, industries, populations, cities, etc.
- iii Physical Maps –These maps provide details about the natural features of an area or a country.
- iv Political maps –These maps portray different countries of the world along with their states, national and international boundaries, political units and administrative divisions, etc.
- v Thematic maps-These maps show a particular feature or theme of the area like vegetation, climate, population density, etc. All types of cultural maps, most of the atlas maps ,industrial maps, agricultural maps, military maps, linguistic maps fall in this category.

Question 4: (i) What is the importance of a Relief Map.
 (ii) How can we show occupations by the evidences of names or by inference of relief features?

Answer:



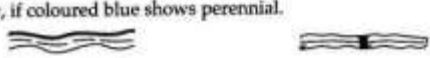





- ii) The study of relief features requires careful handling. It is a bird’s eye view of the entire. area where hills, plateau, and down lands are shown clearly. The gap between, two hills is marked. Maximum heights may be located and denoted with grid reference.
- iii) The following list shows the occupations by the evidence of names or by inference of relief features.

Evidences or Inferences of Relief	Amplification of Occupations
(i)Forest-green patch	Forestry
(ii)Yellow colour and orchards	Agriculture
(iii)Pastures and meadows or scrub	Cattle grazing or sheep rearing
(iv)Quarries and mines	Quarrying and mining

Question 5: Mention the important features of a river valley.

Answer: The shape of contours enables to identify the different features of a river valley. The important features of a river valley are as follows:
 Direction of river: It can be found out by studying the general slope of the land. A river always flows from a higher level to lower level, so in whichever direction the land is sloping the river will flow in that direction all the small streams also join the river in the same direction.

Features of a river :

- (a) Seasonal non-perennial streams—These dry up in summers and occur in rainy season specially in arid region. 
- (b) Stream (nallah) or nads. 
- (c) River (dry) if speckled shows dry, if coloured blue shows perennial. 
- (d) River dry with water channel. 
- (e) River with islands and Rocks. 
- (f) Disappearing Streams. 
- (g) Confluence is where the tributary meets the main river. 
- (h) Meander is a bend in the river flowing through a plain. 
- (i) Broken ground—Generally found along the banks of a stream or river in arid regions where the top soil gets easily eroded due to flooding during rainy season. This type of land is uncultivable. 
- (j) River Bank steep 3r metres. 