

GEOGRAPHY UNIT 4

TERRAIN ANALYSIS THROUGH MAPS

1. What are different types of maps? Give examples?
 - Large scale maps (represent small area) and Small scale maps (represent large area)
 - Large scale maps: (1) Topographic maps (2) Cadastral maps
 - Small scale maps: (1) Atlas maps (2) Wall maps
2. Differentiate physical and cultural maps?
 - Physical maps depicting natural features Eg. Soil; weather; climate; natural vegetation maps
 - Cultural maps depicting man made features Eg. Political; historic; military maps
3. What are topographic maps?
 - Large scale maps which depict in detail all natural and man made features on the surface of the earth.
 - These maps provide minute details of comparatively small areas.
4. How do topographic maps differ from other maps?
 - These maps contain important surface features such as the undulation of the terrain, rivers, other water bodies, forests, agricultural land, barren land, villages, towns, and transport and communication systems.
5. What are the uses of topographic maps?
 - To analyse the physical and cultural features of the terrain
 - For military operations and military maps
 - To identify and study natural as well as cultural resources of a region
 - For economic planning
 - For urban planning
6. Why did we give great importance for land survey in the preparation of maps?
 - Finding the precise location of the earth's surface feature is essential for the preparation of maps. Every inch on earth is measured with the help of survey instruments and maps are prepared based on these measurements.
7. Another name of topographic maps?
 - Toposheets
8. How many sheets are used to represent the whole world in the topographic maps? How is it?
 - 2222 sheets with same size and shape
 - 1800 sheets for regions between 60° latitude in the northern and southern hemispheres
 - 420 sheets for regions between 60° and 88° latitudes in both hemispheres
 - 2 sheets for both the poles
9. Based on which series India's toposheets are done? How many sheets are used for this? What is the scale?
 - India and adjoining countries map series
 - 1 to 105 sheets used
 - Scale prepared in 1:10,00,000 or 1: ten lakhs
10. What are called million sheets? Give example?
 - The million sheets are toposheets which represent the places having the area of 4° latitudinal and 4° longitudinal extend.
 - The scale prepared in 1:10,00,000
11. What are known as index numbers?
 - Each toposheet has given a number which explains the details of that toposheet. These numbers are known as index numbers. Eg: 45 D/10. In which 45 represents million sheet number, D represents degree sheet division and 10 sub division of the degree sheet.
12. Observe the figure 4.2, TB 55 and answer the following questions
 - (a) The parts of states that are included in toposheet number 45?
 - Rajasthan, Gujarat, Madhya pradesh, Haryana

- (b) The index number of toposheets which cover the state of Odisha
- 64,65,73,74
- (c) The states that are included in toposheet number 73?
- Orissa, Jharghand, Chatisgadh, Bengal
- (d) The index number of toposheets which cover the state of Karnataka?
- 47,48,56,57,58
- (e) The index numbers of toposheets which cover kerala ?
- 48,49,58
12. What are called degree sheets?
- Each of the million sheets is divided in to 16 parts are known as degree sheets.
- Each million sheet is divided in to 16 parts and numbered as A,B,..up to P
- Eg; 55 A, 55B,...etc
- The scale prepared in 1: 2,50,000
- Degree sheets represent 1° latitudinal and longitudinal extend
13. What is the sub division of degree sheets?
- Degree sheets are again sub divided in to 16 parts
- The latitudinal and longitudinal extend of each part is 15' (15 minutes)
- These parts are numbered as 1,2,...up to 16
- Eg; 55 D/2 55D/3.....up to 55D/16
14. What do you mean by 45 D/10?
- The area in the map included in the 45 th part of the million sheets of India and adjoining countries series map.
- This area belonged to 10 th part of D part in degree sheets
15. Observe the signs and symbols given in TB 57,58, and answer the following
- Draw the symbol for the following
Cart track, river, tube well, Spring, Linear settlements, Inspection Bungalow, Spot height
16. Find out the conventional colours used to represent information and complete table 4.2 in TB 59
17. What is the relevance of grid reference? What are called eastings and northings?
- It is difficult to show the precise location of minor geographical features in toposheets using latitudes and longitudes. To solve this difficulty north- south and east- west lines in red are incorporated in the toposheets. The north - south lines are called eastings and the east - west lines are called northings.
18. What are called as grid reference?
- The grid formed by the eastings and the northings are called grid reference.
Each grid with 2 cm width and breadth covers an area with 1 kilometer length and breadth on earth surface.
19. What are the characteristics of eastings?
- These are north - south lines
- Their value increases towards the east
- The value of the eastings immediately left to the geographic features is considered for identifying a location.
20. What are the features of Northings?
- These are lines drawn in the east - west direction
- Their value increases towards the north
- The value of the northings immediately to the south of the feature in the map is considered for identifying a location.

21. How can you find out 4-figure grid reference and 6-figure grid reference of different features?
 - In the 4- figure grid reference method, the value of the eastings to the immediate left of the feature is to be written. Then the value of the northing just south of the feature is to be written
 - In the 6 - figure grid reference method, the value of the easting to the left of it is to be written first. Then divide the area up to the next easting in to 10 equal parts and find the exact division on which the feature is located and write it next to the value of easting already found. Now three digit easting is ready. In such a way write the two digit northing and find exact division on the feature is located and write the third digit also. What is obtained is the exact 6 digit reference of the given object.
22. What is the use of the 4 and 6 digit grid reference?
 - 4 digit grid reference is used to locate comparatively larger features while 6 digit is used for smaller geographic features.
23. Solve the problem given in T.B 73 related to grid reference.
24. What are contour lines , contour values and contour interval?
 - Contours are imaginary lines drawn connecting places having equal elevation from the sea level. The respective altitude will be marked with each contour line. These are called contour values. The difference between the value of two adjacent contours is called contour interval. The contour interval in toposheets is generally 20 meters and on elevated land forms it will be 100 meters.
25. What are the things that can be assessed from the contour lines in topographic maps?
 - Altitude of the place; Nature of the slope; Shape of the landform
26. Explain the method that is used to assess the topography directly from the contours?
27. Explain the method that is used to assess the topography by tracing out the contour lines?
28. What are the factors considered in the assessment of inter visibility?
 - relief, slope of the region
29. Give examples for the application of inter visibility assessment?
 - Erecting electric posts, mobile, wireless transmission tower, etc..
30. Complete the table given in T.B 68 related to inter visibility?
31. List out the stages of toposheet interpretation?
 - Marginal information / Primary information
 - Physical / Natural features
 - Cultural / man made features
32. What are marginal information? List out the marginal information in the toposheets?
 - The general information given out side the margins in the topographic maps are called marginal / primary information
 - The toposheet number, name of the area, latitudes and longitudes, scale of the map, contour interval, values of northings and eastings, years of survey and publication, agency in charge of survey are the marginal information in the toposheets.
33. List out the physical features given in the toposheets?
 - Water bodies such as rivers, streams, wells, tube wells, springs etc..as well as different land forms
34. List out the cultural features given in the toposheets?
 - Settlements, different types of roads, boundaries, places of worship, agricultural lands, post office, police station, bridges, etc. are a few cultural features shown in toposheets.
35. How can we find out the location of a physical,cultural feature?
 - Their location can be found based on direction, grid reference method.
36. Solve the task given TB page 69, 71,

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