

08.07.2024.

Mini Arora

Sample Toposheet No. 1 (Solved)

Study the extract of the Survey of India Map sheet No. G43S7 (Printed on Page 4) and answer the following questions (Eastings 22-32 and 02-12 Northings)

1. (a) Give six figure reference of surveyed tree near Ganodara.

Ans. 280043/280042

(b) Lime kiln near Rampura.

Ans. 286088/285089

2. What type of drainage pattern is seen in a grid square?

(a) 2407.

Ans. Undefined/intermittent drainage pattern

(b) Identify settlement pattern in 2410.

Ans. Isolated

3. What does the following mean?

(a) Calculate the distance between Santarwada (2808) to Rampura (2809) along the cart track.

Ans. Map distance 4.4 cm

Scale of map= 2 cm = 1 km

Therefore 4.4 cm= 2.2 km

(b) Green patch in 2705.

Ans. Forested area

4. What type of landform is seen in this map extract? Justify.

Ans. It's a plain region with very gently sloping land towards the south.

It's a plain region as the altitude here is not more than 300 m and only few mounds are in NE.

5. (i) What does sluice mean? Give four figure reference of it.

(ii) What does the blue line in 2502 mean?

Ans. (i) A sliding gate or other device for controlling the flow of water from a dam. Four fig grid reference: 2502.

(ii) The blue line in it is a perennial canal.

6. Identify the settlement pattern in

(i) 3007

(ii) 2404

Ans. (i) Scattered/dispersed (ii) Nucleated

7. What does the following mean?

(i) Open scrub

(ii) What's the occupation done there?

Ans. (i) It's a type of desert vegetation where short stunted grass and shrubs are found.

(ii) Sheep or goat rearing

8. (i) What does 180 in grid 2804 mean?

(ii) Define the conventional sign associated with it.

Ans. (i) Its contour line of 180 m.

(ii) Contour line is a line joining places of equal altitude on topographical maps.

9. (i) What does blue colour in 2602 represent?

(ii) How is it formed?

Ans. (i) It is reservoir/dam on river Sipu.

(ii) By constructing earthen embankment across river Sipu.

10. What is covered tank? Why is it covered?

Ans. It's mainly a source of drinking water.

It is covered in order to prevent loss of water through evaporation and to prevent contamination of water.

11. In which direction is

(i) Rampura (2705) from Jhat (3008).

(ii) Panthawada (2611) from Mahudi Moti (2404)

Ans. (i) South-west

(ii) North-east.

12. What is contour interval? State its value.

Ans. The distance between two consecutive contour lines is termed as contour interval. Its value is 20 m.

13. (i) What is the general direction of Sipu river?

(ii) On which bank of is Rampura (2705) located?

Ans. (i) It is from NE to SW.

(ii) Right bank

14. *What type of climate is experienced here? Justify.*
 Ans. It has hot and dry climate with scanty and seasonal rainfall.
 Reasons: (i) There are sand dunes. (ii) All streams and tanks are dry.
 (iii) Presence of broken ground in grid square 2809 and other areas.
15. *What are the various modes of transportation in this region?*
 Ans. Cart track, pack track, district road and state highway
16. *What's the main occupation in this region? Justify.*
 Ans. Agriculture
 Major part is shaded in yellow wash suggests that.
17. *What does the following mean?*
 (i) White oval patch in Sipu river in grid 3009 and (ii) Blue line in river
 Ans. (i) River island (ii) Water channel
18. *Which civic facilities are available at Panthawada?*
 Ans. Post office, police station, metalled road and electricity supply
19. *Which is the most important settlement in this map extract? Justify.*
 Ans. Panthawada
 Because it has many civic facilities like Post office, Police Station, metalled road, electricity supply, etc.
20. *Which is the most common pattern of settlement? Justify.*
 Nucleated/compact / clustered settlement pattern
 Ans. Because most of the huts are seen very close to each other and people live in huts which are very close to each other.
21. *What is the most important mode of irrigation in this region? Justify.*
 Ans. Perennial lined wells. These are seen all over the map and are depicted by blue dots.
22. (i) *What is aqueduct?* (ii) *Give its four figure grid reference.*
 Ans. (i) It is an artificial channel for conveying water typically in the form of bridge. (ii) 2402
23. *What does following number mean?*
 (i) 174 in 2409? (ii) 181 in 2804?
 Ans. (i) Kilometer/distance stone (ii) Altitude of 181 m at which surveyed tree is present.
24. *What's the main religion here? Justify with any one grid number.*
 Ans. Hinduism
 There are many temples seen here, such as in grid square 2611, 3002.
25. *What type of drainage pattern is seen in*
 (i) 2606 (ii) 3110
 Ans. (i) Dendritic (ii) Trellised
26. (i) *Identify the settlement pattern of Santawada.* (ii) *What do red squares in 2404 mean?*
 Ans. (i) Nucleated (ii) Temporary hut
27. *What do black curve lines in 2809 mean? How is this feature formed?*
 Ans. They indicate broken ground formed by the excessive evaporation of water developing cracks in ground.
28. *Name two types of vegetations seen in the given map. Give their four figure grid reference.*
 Ans. (i) Open scrub: 2909 (ii) Open jungle: 2503
29. *What are the occupations of the people at Panthawada?*
 Ans. Agriculture and working for civic facilities like post office, police station, etc.
30. *What does lime in 2706 mean? State its function.*
 Ans. It's a lime kiln where lime is converted into quicklime.
31. *What is a brown patch in 2803? At what altitude is it present?*
 Ans. It's a sand dune. It is located at 196 m above the sea level.
32. (i) *What does 1:50,000 mean?* (ii) *Which scale is it?*
 Ans. (i) It means 1 unit on map equals 5000 units on ground. (ii) It is a representative fraction.
33. (i) *Which is the most widely used scale?* (ii) *State its one advantage.*
 Ans. (i) R.F. Scale (ii) It can be converted into verbal scale of our choice.

34. (i) What does stony waste mean? (ii) Give four figure of this feature.
 Ans. (i) It is land covered with rocks, boulders and stones. (ii) 3108
35. What does the following mean?
 (i) Black vertical line between Eastings 29 and 30 (ii) Black horizontal line between Northings 03 and 04
 Ans. (i) Line of longitude (ii) Line of longitude
36. (i) What is a grid square?
 Ans. It's a square formed by the intersection of eastings and Northings on a topographic map.
 (ii) What is the area enclosed by one grid square on ground?
 Ans. 1 sq.km.
37. Calculate the area enclosed between 23 to 27 Eastings and 02 to 07 Northings.
 Ans. Length = $27 - 23 = 4$ km. Breadth = $07 - 02 = 5$ km. Area = Length \times breadth = $4 \times 5 = 20$ sq.km.
38. Calculate the area enclosed by the entire map extract.
 Ans. Length = $32 - 22 = 10$ km. Breadth = $12 - 2 = 10$ km. Area = Length \times breadth = $10 \times 10 = 100$ sq.km
39. Calculate the north-south distance on ground from Easting 12 to 02.
 Ans. Map distance = 20 cm. Scale of map: 2 cm = 1 km
 Therefore, 20 cm = $20/2 = 10$ km.
40. Calculate the maximum east west distance on ground as seen here?
 Ans. Distance = 20 cm. Scale of map: 2 cm = 1 km. Therefore, 20 cm = $20/2 = 10$ km.
41. Give four figure reference of
 (i) Chhatra in north-east. (ii) Triangulated height 208.
 Ans. (i) 2911 (ii) 2208
42. What is the shortest ground distance between Kolda and Jegol?
 Ans. Map distance = 5 km. Scale of map 2 cm = 1 km. Therefore, ground distance = $5/2 = 2.5$ km
43. (i) What type of political boundary is seen in grid 2309? (ii) Why all the tanks in this map extract are dry?
 Ans. (i) Tehsil boundary
 (ii) It is due to hot and dry climate with scanty rainfall.
44. What is the general direction of slope here? Provide evidence.
 Ans. The land slopes in SW direction as we find the spot height decreasing in that direction (263 in NE to 184 in SW).
45. (i) What do you mean by the scale of map? (ii) Name the universally accepted scale of the map.
 Ans. (i) It is the ratio between the map distances to the ground distance.
 (ii) Representative Fraction that is R.F. Scale.
46. Write about the development of this region.
 Ans. This area is neither developed nor underdeveloped but developing.
 Reason: The main occupation is still agriculture which is primary occupation and civic facilities are not available in all settlements.
47. What does the following mean?
 (i) 3r in 2403 (ii) Diagonal feature seen in grid square 2403 with double embankment.
 Ans. (i) Relative height of embankment of dry tank is 3 m.
 Ans. (ii) It's a road like structure across a dam which is available only for the people of irrigation department for the inspection of dam.
48. What does 15 r written in grid square 2207 mean?
 Ans. Relative depth of a perennial lined well is 15 m.
49. Why the streams in 2408 are intermittent? (Not continuous) (ii) What it suggests about the climate of the region?
 Ans. (i) They are intermittent as they are flowing over a sandy area where water gets easily percolated. Moreover, they do not have enough water in them as this area is a dry desert.
 (ii) It suggests that the climate of this area is hot and dry with scanty rainfall.
50. What is index contour?
 Ans. Index contours are bold or thicker lines that appear at every fifth contour line. They generally indicate a prominent number which is multiple of 100.

Sample Toposheet No. 2 (Solved)

Study the extract of the Survey of India Map sheet No. G43S10 (Printed on Page 8) and answer the following questions (Eastings 62-72 and 12-22 Northings).

1 (a) Give six figure reference of well with relative depth 12 m.

Ans. 697131/967132

(b) Police Station near Mount Abu

Ans. 685215

2. (a) What type of landform is seen in 2215?

Ans. Saddle

(b) Identify the settlement pattern in 2214.

Ans. Isolated

3. What does the following mean?

(a) Rocky knob in 6813

Ans. It's a protruding part of a rock overlooking a hilly region.

(b) What are the possible occupations in major part of the region enclosed by the map?

Ans. Forestry and animal rearing.

4. Transport helps in communication, and trade. In which part of the map extract is it not well developed?

Ans. It has not developed much in Northern part of the region except near Abu.

5. Identify the settlement pattern in grid square.

(i) 6312

Ans. (i) Scattered/dispersed

(ii) 6919

(ii) Nucleated

6. What does the following mean?

(i) Causeway in grid 6414

Ans. (i) It's a raised metalled road.

(ii) What's is its purpose?

(ii) It's purpose is to cross a stream or river when they are flooded.

7. (i) What does falls 15 m mean?

Ans. (i) It's a waterfall of height 15m.

(ii) Provide its four figure grid reference for it.

(ii) 6718

8. (i) What does blue colour in grid square 6719 represent? (ii) How is it formed?

Ans. (i) It's a perennial tank. (ii) It's a natural depression where many streams bring water when they are flooded.

9. What is protected forest?

Ans. It's a forest where forestry, animal rearing, etc. are allowed and entry to general public is allowed with special permission.

10. In which direction is

(i) Vashishthi Ashram from St. Mary's school?

Ans. (i) South-west

(ii) Abu from Kachuli Dungar?

(ii) North-east

11. What are form lines?

Ans. These are brown broken lines drawn on topography maps which join the places of approximately equal altitude. They are usually drawn in oval shape.

12. What suggest Abu a tourist destination?

Ans. The presence of waterfalls, sunset point in 6621 and mountainous area with cool and pleasant climate suggest Abu as a tourist destination.

13. Why there is lack of transport in NW region?

Ans. (i) It is due to hilly terrain and forested area.

(ii) It is difficult to construct roads in hilly region and moreover deforestation is generally not recommended for development.

14. What type of climate is experienced here in this entire region? Justify.

Ans. It has hot and dry climate with moderate and seasonal rainfall.

Reasons: (i) There are forests and perennial tanks suggesting moderate rainfall.

(ii) Streams and tanks are dry suggest the area has hot and dry climate.

(iii) Presence of broken ground in 2808 and other areas.

15. What type of landform is seen in the following grid square?

(i) 6713

(ii) 6512

Ans. (i) Hill

(ii) Plain

16. What's the main occupation in major part of this region? Justify.

Ans. Forestry and animal rearing are the main occupation.

Reason : It is because of the reason that major part is shaded with green wash which indicates the presence of forest.

17. What does the following mean?

(i) Red square in grid 6221 in northern part

(ii) Black dots in river in grid square 6912

Ans. (i) Permanent hut.

(ii) Load/sediment

18. Which civic facilities are for people in grid square 6413?

Ans. Metalled road and canal

19. Which is the most important settlement in this map extract? Justify.

Ans. Abu

Reason : Because it has Post office, Police Station, metalled road, school, etc.

20. Which part of the map extract is least developed and why?

Ans. North-western region

Reason: It has forest and hilly region where settlements and civic facilities are difficult to develop.

21. What is the most important mode of irrigation in grid square 6812? Justify.

Ans. Perennial lined wells

Reason : These are seen depicted by blue dots.

22. Write the slope of the land in 6816 in west and east direction.

Ans. It's steeper in north-western direction than in eastern direction.

23. What does following number mean?

(i) Green line with black dots in 6919

(ii) Brackish in 6317

Ans. (i) Forest boundary

(ii) Well water is saline or salty.

24. What's the main religion here? Justify with any one grid number.

Ans. Hinduism

Reason : We can say this as many temples seen here such as in grid square 6719.

25. What type of drainage pattern is seen in the following grid square?

(i) 6219

(ii) 6917

Ans. (i) Trellised

(ii) Radial

26. (i) Identify the settlement pattern of Abu.

(ii) Identify the settlement pattern in grid square 7012.

Ans. (i) Nucleated

(ii) Scattered

27. What do brown lines along with white patch in 6817 mean?

Ans. Hachures. These parallel lines used in hill-shading on maps, their closeness indicating steepness of gradient.

28. Name two types of vegetation seen in the given map. Give their four figure grid reference.

Ans. (i) Fairly Dense mixed jungle: 6215. (ii) Open mixed jungle: 6713

Dense mixed jungle with bamboo: 6418 / 6518/6716

29. What are the occupations of the people in grid square 6414?

Ans. (i) Agriculture as yellow shade is seen.

(ii) Forestry and animal rearing as green shade is seen.

30. What does 12 r in 6913 mean? State its function of the feature.

Ans. Relative depth of perennial lined well is 12 m. It supplies water for irrigation and domestic use to people of scattered settlement.

31. In which direction does a river of south eastern region flow? Justify.

Ans. It flows in south-west direction.

Reason : The altitude of the region decreases in that direction.

32. (i) What does 2 cm to 1 km mean?

(ii) Which scale is it?

Ans. (i) It means 2 cm on map equals to 1 km on ground.

(ii) It is verbal/statement scale.

33. State the limitation of verbal scale? Name other two scales.

Ans. It is not understood if the unit mentioned is not known to the people.

Other two scales used are R.F. Scale and Linear / Graphical Scale.

34. State two benefits of linear scale and one limitation of this scale.

Ans. (i) Even short distances can easily be measured with the help of linear scale.

(ii) If the map is photographically enlarged or reduced the linear scale is also enlarged or reduced in the same ratio and remains true to the map.

Limitation: It requires time and proficiency in drawing a graphic scale.

35. What does the following mean?

(i) 5 r in 6318

(ii) 11 r in 6614

Ans. (i) Relative height of bank of stream is 5 m.

(ii) Relative depth of perennial lined well is 11 m.

* If r is written in black, it's always relative height, if it's in blue, it's always depth.)

36. What are eastings and northings?

Ans. Eastings: Red colour vertical lines drawn on topographic maps whose number increase from west to east are eastings.

Northings: Red colour horizontal lines drawn on topographic maps whose number increase from south to north are northings.

37. Calculate the area enclosed between 65 to 70 eastings and 12 to 15 northings.

Ans. Length = $70 - 65 = 5$ km. Breadth = $15 - 12 = 3$ km. Area = Length \times breadth = $5 \times 3 = 15$ sq.km.

38. Calculate the ground distance from 63 to 68 eastings.

Ans. Map distance: 10 cm. Scale of map: 2 cm = 1km. Therefore, 10 cm = $10/2 = 5$ km.

39. (i) Explain the meaning of a number written in brown in grid square 6617.

Ans. It's an index contour of 800 m.

(ii) Define the term mentioned by you in above.

Ans. Index contours are bold or thicker lines that appear at every fifth contour line.

40. Calculate the difference in highest altitude in this map extract and the altitude in grid square 6421.

Ans. $1401 - 501 = 900$ m

41. What type of mode of transportation is seen and how is it formed?


(i) In grid square 6518

Ans. Foot path is formed by walking of people.


(ii) In grid square 6919

Ans. Pack track is formed by feet movement of people on land.

42. What does the following mean?

(i)  in grid square 6514

Ans. Relative height of embankment is 6 m.

(ii)  in grid square 6921

Ans. Chhatri

43. (i) Which medical facility is available in grid square 6821?

Ans. Veterinary hospital

(ii) What religious structure is seen in this grid?

Ans. Temple

44. What is fire line? Is it seen in this map extract?

Ans. Fire line is a cleared patch of forest where trees are purposely cut to avoid the spread of fire.
It's not seen in this map extract.

45. (i) What natural feature is seen in grid 6221?

Ans. Broken ground / dry streams/barren land

(ii) Name one man-made feature which is seen in grid 6921.

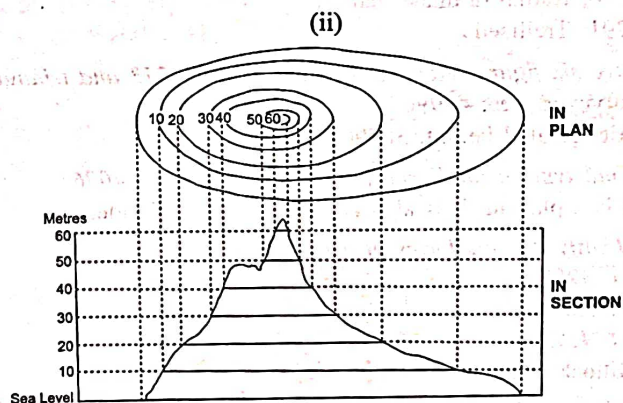
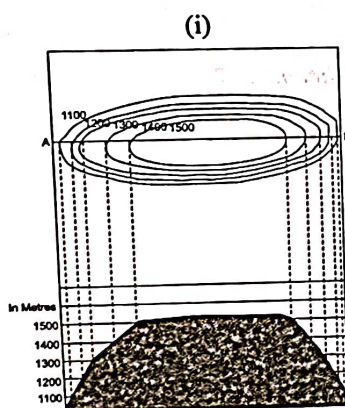
Ans. Chhatri and temple

46. Name any two man-made and two natural features seen in grid square 6912.

Ans. Natural: Dry river bed and barren land

Man-made features: Perennial lined wells and permanent huts


47. Identify the natural feature shown below.



Ans. (i) Plateau (ii) Conical hill

48. What is the general settlement pattern seen in this map extract?

Ans. Scattered

(ii) What does  in grid square 6721 mean?

Ans. Tombs

49. If a person were to cycle 10 km an hour, how much time it would take to cover east west distance in a straight line.

Ans. Distance = 10 km. Speed is 10 km/hr. Therefore, Time = Distance / Speed = 1 hour.

50. Calculate the shortest distance between Shri Vashishthi ashram to Gautam Maharishi Mandir. Show calculations.

Ans. Map distance = 4.2 cm

Scale of map = 2 cm = 1 km

Therefore, 4.2 cm = $4.2/2 = 2.1$ km

Last page