

I.C.S.E.
GEOGRAPHY
MAP PRACTICE BOOK
(WITH SOLUTIONS)

FOR CLASS X

SECTION A : INTERPRETATION OF TOPOGRAPHICAL MAPS
SECTION B : MAP OF INDIA

By
Manju Goel



GOYAL BROTHERS PRAKASHAN

CONTENTS

1. Section A : Interpretation of Topographical Maps	5 – 11
• Reading the Grid Reference		
• Conventional Signs and Symbols		
• Guidelines to Read Topographical Sheets		
• Study of Topographical Sheets 45 ^D / ₇ and 45 ^D / ₁₀		
• Sample Topo Sheet 45 ^D / ₇ , Eastings 92 to 01, Northings 73 to 83		
2. Assignments on Topo Sheets		
• Assignment 1 (Based on 45 ^D / ₇ , Eastings 77 to 85 and Northings 89 to 00)	12
• Assignment 2 (Based on 45 ^D / ₇ , Eastings 85 to 93 and Northings 89 to 00)	17
• Assignment 3 (Based on 45 ^D / ₇ , Eastings 93 to 01 and Northings 89 to 00)	23
• Assignment 4 (Based on 45 ^D / ₇ , Eastings 77 to 85 and Northings 80 to 91)	28
• Assignment 5 (Based on 45 ^D / ₇ , Eastings 85 to 93 and Northings 80 to 91)	33
• Assignment 6 (Based on 45 ^D / ₇ , Eastings 93 to 01 and Northings 80 to 91)	38
• Assignment 7 (Based on 45 ^D / ₇ , Eastings 77 to 85 and Northings 73 to 83)	43
• Assignment 8 (Based on 45 ^D / ₇ , Eastings 85 to 93 and Northings 73 to 83)	49
• Assignment 9 (Based on 45 ^D / ₇ , Eastings 93 to 01 and Northings 73 to 83)	54
• Assignment 10 (Based on 45 ^D / ₁₀ , Eastings 02 to 10 and Northings 17 to 28)	59
• Assignment 11 (Based on 45 ^D / ₁₀ , Eastings 10 to 18 and Northings 17 to 28)	65
• Assignment 12 (Based on 45 ^D / ₁₀ , Eastings 18 to 26 and Northings 17 to 28)	71
• Assignment 13 (Based on 45 ^D / ₁₀ , Eastings 02 to 10 and Northings 09 to 19)	76
• Assignment 14 (Based on 45 ^D / ₁₀ , Eastings 10 to 18 and Northings 09 to 19)	81
• Assignment 15 (Based on 45 ^D / ₁₀ , Eastings 18 to 26 and Northings 09 to 19)	86
• Assignment 16 (Based on 45 ^D / ₁₀ , Eastings 02 to 10 and Northings 01 to 11)	91
• Assignment 17 (Based on 45 ^D / ₁₀ , Eastings 10 to 18 and Northings 01 to 11)	96
• Assignment 18 (Based on 45 ^D / ₁₀ , Eastings 18 to 26 and Northings 01 to 11)	101
3. Section B : Map of India		
• Map Pointing Skills – Guidelines	106
• Assignment 1 (Based on Mountains and Plateaus)	107
• Assignment 2 (Based on Plains, Desert and Mt. Peaks)	108
• Assignment 3 (Based on Rivers)	109
• Assignment 4 (Based on Water Bodies, Latitude and Longitude)	110
• Assignment 5 (Based on Direction of Wind, Distribution of Minerals and Soils)	111
• Assignment 6 (Based on Cities and Population)	112
• Assignment 7 (Miscellaneous)	113
• Assignment 8 (Miscellaneous)	114
• Assignment 9 (Miscellaneous)	115
• Assignment 10 (Miscellaneous)	116
• Assignment 11 (Miscellaneous)	117
• Assignment 12 (Miscellaneous)	118
• Assignment 13 (Miscellaneous)	119
• Assignment 14 (Miscellaneous)	120
4. Map of India for Practice	121

SECTION A : INTERPRETATION OF TOPOGRAPHICAL MAPS

Introduction

A Topographic Map shows the surface of the earth in detail. These maps are also described as Scenery Maps and are based on the actual survey of the area. These maps are also known as 'Topographical Survey Sheet' or simply 'Topo-sheet'. Maps are drawn on a number of sheets where each sheet depicts details of only one particular part of the whole area. Joined sheets give complete picture of the entire area.

The main objective of drawing these maps is to present accurately the physical and cultural features, i.e., a particular area in detail. Through the study of the maps, one gets the knowledge of the entire area in the same way as he would have got it by visiting the area.

A topographical map is similar to a physical map as it shows different physical landscape features. However, it is different in the sense that it uses contour lines to show changes in the landscape. All topographical maps show two types of features:

- (a) **Physical features** : These include valleys, hills, plateaus, peaks, waterfalls, etc. These are shown with the help of contour lines, i.e., the lines that join places having the same height above mean sea level. The density of the contour lines determine the shape, height and gradient of a particular area with specific features.
- (b) **Cultural or Man-made features** : These include roads, railways, buildings, bridges, canals, etc. These are represented by symbols which are called conventional signs or symbols.

Reading the Grid Reference

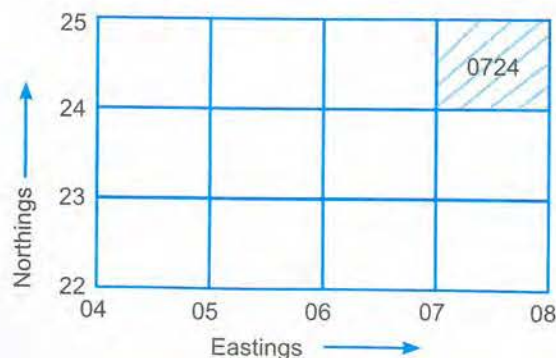
The following points, as per the convention, should be kept in mind while reading the grid reference.

- (a) The reading on the map is always taken with reference to the origin (SW corner of the map).
- (b) Eastings are always read to the East of the origin.
- (c) Northings are always read to the North of the origin.

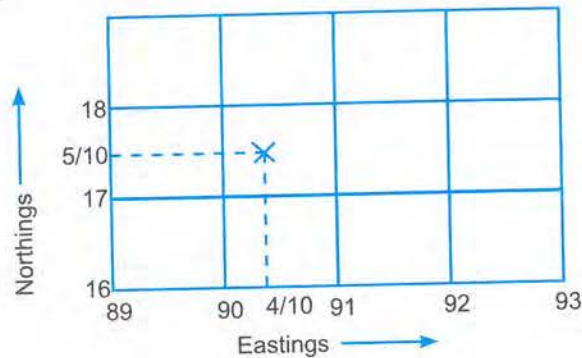
The grid can be read in two different ways:

- (i) Four figure grid reference giving location of an object.
- (ii) Six figure grid reference to pinpoint the exact position of the object.

Four Figure Grid Reference : In this, each gridline number refers to the next square, either across the map or up the map. In order to locate a particular grid square, one should first read along the bottom to find the eastings number. Then along the upside to find the northings number. The two sets of numbers give the four figure grid reference as shown in the figure.



Six Figure Grid Reference : In order to find the six figure grid reference, first divide the grid square on the topo sheet into 10 equal parts-vertically as well as horizontally. The first three figures are the Eastings and the last three are the Northings.



Suppose, the grid reference of a school in a particular area is 904175. In this grid reference, 904 is the value of eastings and 175 is the value of northings.

The most important thing to remember with six figure grid references is that we must always give the eastings values first, followed by the northings values.

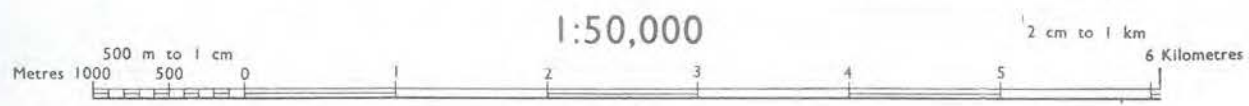
Conventional Signs and Symbols

Topographical maps use different signs and symbols to represent certain relief features and human activities. These are known as Conventional Signs and Symbols. They help in giving maximum information about a place or area. They are simple to read. Many of these signs and symbols are standardized and used throughout the world. The list of signs and symbols as well as their meanings is given in the key or legend of a map. A list of relevant conventional signs is given at the bottom of each topographical sheet so as to facilitate its study.

Legend : Various types of features such as physical features, i.e., hills, peaks, knolls, etc. are depicted by means of symbols in the form of a key or legend usually at the bottom of the map. With the help of given symbols we can read the map accurately, quickly and describe the relief, drainage, land use, transport, etc. Thus, maps have their own language in which the whole art of map reading lies. This is literally known as a **legend**.

Roads, metalled: according to importance; distance stone	
„ unmetalled: do. do. : bridge.	
Cart-track. Pack-track and pass. Foot-path with bridge.	
Bridges; with piers; without. Causeway. Ford or Ferry	
Streams: with track in bed; undefined. Canal	
Dams: masonry or rock-filled: earthwork. Weir	
River banks: shelving: steep. 3 to 6 metres ; over 6 metres	
„ dry with water channel: with island & rocks. Tidal river	
Submerged rocks. Shoal. Swamp. Reeds	
Wells: lined; unlined. Tube-well. Spring. Tanks: perennial: dry.	
Embankments: road or rail: tank. Broken ground	

Railways, broad gauge : double : single with station; under constrn.	
,, other gauges: do. : do. distance stone; do	
Light railway or tramway. Telegraph line. Cutting with tunnel. .	
Contours. with sub-features. Form-line. Rocky slopes. Cliffs. .	
Sand features:(1)flat,(2) sand-hills(permanent),(3)dunes(shifting) .	
Towns or Villages : inhabited;deserted. Fort.	
Huts: permanent; temporary. Tower. Antiquities.	
Temple. Chhatri. Church. Mosque. Idgañ. Tomb. Graves . .	
Lighthouse.Lightship.Buoys: lighted; unlighted. Anchorage	
Mine. Vine on trellis. Grass. Scrub	
Palms: palmyra;other. Plantain:Conifer.Bamboo.Other trees	
Boundary. international	
,, state: demarcated; undemarcated	
,, district; subdivn, tehsil or tāluk;village,forest . .	
Boundary pillars : surveyed ; unlocated; village trijunction . .	
Heights.triangulated: station: point	
Bench-mark: geodetic: tertiary: canal	
Post office. Telegraph office. Combined office. Police station.	
Bungalows: dāk or travellers : inspection. Rest-house	
Circuit house. Camping ground. Forest : reserved : protected . .	
Spaced names : administrative; locality: tribal	



Miscellaneous

- * 1. Stony waste — The land which is mostly covered with rock boulders and stones and where cultivation is not possible. It is shown as a white patch on the map.

- * 2. Sheet rock — A region which is mostly covered by a sheet of rock, shown in white. It is also printed so.

- * 3. Rock out crop — Subsoil is exposed in such areas and cultivation is not possible.

- * 4. Sand dunes — Sand features shown in brown on the map formed due to wind deposition in the desert region.

- * 5. Stone quarry — Its presence indicates the occupation of the people in the region. Also shows trade possibilities.

- * 6. Kiln (bricks) — A trade is also an employment source.

- * 7. Kiln (lime) — Its presence shows the trade possibilities and the people working in it.

The Following Signs are Simply Shown/Marked on the Map

1. Naka — An outpost where tax or toll is collected.
2. Piao — A place where drinking water is available.
3. Viaduct — A bridge like structure carrying railway or road across a valley or other low ground.
4. Shelving — Sloping gradually with reference to banks of a river.
5. Dungar — Hillock
6. Embankment — A bank or mound constructed along a tank or artificial lake to prevent flooding. Also, a raised construction built to carry a level road or railway over low-lying ground.
7. Khera — A village
8. Forest rest house — Used as accommodation for forest officers on duty.
9. Reserved forests — Forests where tree felling is prohibited by the governments concerned. On the map, it is shown with the help of the symbol R.F.

Guidelines to Read Topographical Sheets

1. Direction is a very important tool while reading a topographical map. On all the maps the directions are indicated by a North-South line. North always points towards true North.
2. Direction of the flow of river is determined by looking at spot heights which indicate the slope of the land.
3. To know on which side or bank of the river a place is situated, first locate the source of the river and orient yourself accordingly. Now, towards your right is the right bank and towards your left is the left bank.
4. Direction of a place can easily be located by means of the 'direction arrow'.
5. 'As the crow flies' phrase refers to the shortest distance between two given points. It can be measured directly by using the scale or with the help of a divider.
6. Distance of a curved road, river or canal can be measured with the help of paper strip or thread. Place the paper strip or thread on the linear scale and calculate the distance.
7. The scale of the map may be used to calculate the actual distance between two points on the ground. For example, if the distance between two points A and B on the map is 4 cm and the scale of the map is 2 cm to 1 km, then the distance between them on the ground is 2 km.

A scale can be expressed by Representative Fractions also. For example, R.F. = 1:50,000 means that 1 cm on the map represents a distance of 50,000 cm on the ground.

8. In topographical maps, each grid is drawn as per the scale 2 cm = 1 km. Therefore, area of each square is

$$2 \text{ cm} \times 2 \text{ cm (on the map)} = 1 \text{ km} \times 1 \text{ km (on the ground)}$$

$$\text{or } 4 \text{ sq cm (on the map)} = 1 \text{ sq km (on the ground)}$$

In case there are some incomplete squares, the area can be calculated as follows :

- Note the number of complete squares.
- Squares covered half are taken as 1/2.
- Squares covering less than half area are taken as 1/3.

- Squares covering more than half of the area are taken as 2/3.

All these estimated squares are added together and the sum is multiplied by the scale of the area.

9. The points at which the vertical and horizontal lines of the grid cross are called coordinates. The lines that move horizontally are known as Northings and the lines that move vertically are called Eastings. These Northings and Eastings cut across to form squares or grids.
10. The means of transport always depend on the type of relief and drainage pattern of a particular area.
11. Legend gives an idea about the constructional signs and symbols used in the topo sheet to represent the physical and man-made features.

Study of Topographical Sheets No. 45^D/₇ and 45^D/₁₀

The topographical sheet 45^D/₇ shows the western part of India along the Gujarat–Rajasthan border. It covers the area of Banas Kantha district of Gujarat and the Sirohi district of Rajasthan. It extends from 24°15' N in the South to 24°30' N in the north and from 72°15' E in the west to 72°30' E in the east.

In 1958-1960, this region was surveyed under the guidance of Dr. Prithvish Nag, the then Surveyor General of India. The map was first published in 1962, drawn on an inch scale. Later it was modified and updated on the scale of 1 : 50,000 or 2 cm : 1 km. Therefore, the eastings and northings are drawn 2 cm apart on the map to represent 1 km on the ground. The arbitrary grid are drawn in red colour.

The topo-sheet number 45^D/₁₀ covers a maximum portion of the Sirohi district of Rajasthan and some part of the Banas Kantha district of Gujarat. This region lies in western India on the borders of Rajasthan and Gujarat at the southern end of Aravalli Hills, immediately north-east of topo-sheet 45^D/₇. This region extends from 24°30' N in the south to 24°45' N in the north and from 72°30' E in the west to 72°45' E in the east.

Let us have a detailed study of these two topographical sheets frequently asked in your Board Exams. For the convenience sake we have taken the different extracts of the sheet. Each part of the sheet indicates the Eastings and Northings for the reference.

Instructions

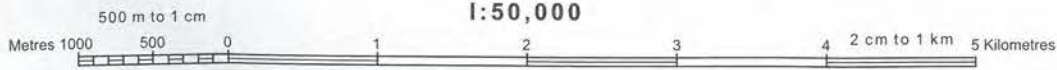
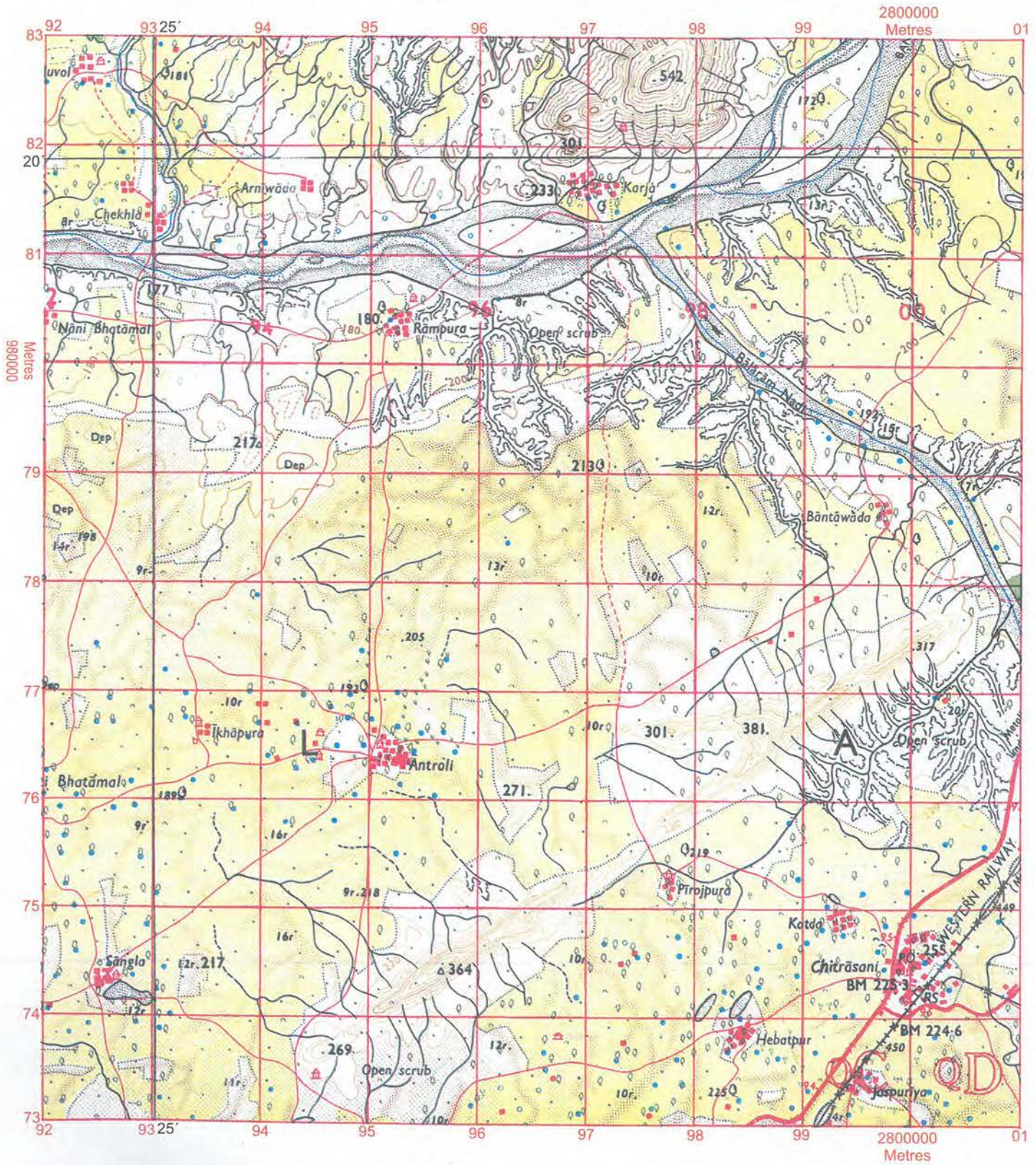
In your Board Exam you will be supplied with an extract of Topographical sheet (either from 45^D/₇ or 45^D/₁₀). Part 1 of the question paper consists of two questions (compulsory to answer).

Question 1 – 20 marks on topo-sheet and **Question 2** – 10 marks on map of India.

In Question 1, you will be asked to answer 10 questions (of 2 marks each) based on given extract of topo-sheet. Read the questions carefully alongwith the topo-sheet and then one by one start answering the questions.

Question 2, is based on Map of India. You are asked to show the given 10 places (1 mark each) on the outline Map of India.

Part of Topo Sheet no 45 D/7: (Eastings: 92 to 01 and Northings: 73 to 83)



© Government of India
HEIGHTS & CONTOURS IN METRES
CONTOUR INTERVAL 20 METRES

Reading Sample Topo Sheet

Study the toposheet 45^D/₇ (Eastings 92 to 01 and Northings 73 to 83) printed on page number 10.

(a) Give the six-figure grid reference of

(i) Δ 364

(ii) The temple at Rampura

Ans. (i) 957744, 956744 (any one)

(ii) 954806

(b) Mention any two features seen in the map extract which show that the region has seasonal rainfall.

Ans. Dry streams, dry tanks, broken ground, dry water channel. (any two).

(c) Calculate the distance in kilometres along the cart-track linking Juvol (923826) and Arniwada (944817).

Ans. 2 km to 2.7 kms.

(d) Which is the chief form of irrigation shown in the map extract? Give an evidence to justify your answer.

Ans. Lined wells

Large no. of wells with blue dots.

(e) Give one reason to explain why the streams in grid square 9478 do not join a river. Identify another grid square in the map extract that has similar streams.

Ans. Sandy soil

The streams do not join main river because they seep into sand.

9676, 9677, 9375, 9378, 9674, 9776 (any one)

(f) What do the following represent :

(i) Black broken lines in 9575.

(ii) Black curved lines in 9879.

Ans. (i) Undefined streams or intermittent or disappearing streams.

(ii) Broken ground or broken land.

(g) Identify two landforms shown by the contours in grid square 9876.

Ans. Conical hill, ridge, steep, slope, col, saddle, spur watershed or water divide (any two), escarpment.

(h) (i) What is the general direction of the Balaram nadi?

(ii) Which bank of the main river does the Balaram nadi join?

Ans. (i) SE to NW

(ii) Left bank

(i) What is the main occupation of the people living in the area shown in the map extract? Give one reason to support your answer.

Ans. (i) Agriculture, cultivation or farming (any one)

(ii) Large no. of wells, yellow wash, coloured yellow.

(j) What is meant by scale of a map? What is the scale of the map extract provided to you?

Ans. (i) The scale of a map is the ratio between the distance on the map and the corresponding distance on the ground.

(ii) The scale of the map extract is 1 : 50,000 or 2 cm to 1 km or 1 cm to 500 m.

Assignment 1

Study the Topo Sheet No. 45 D/7 (Eastings 77 to 85, Northings 89 to 00) printed on page no. 13 and answer the following questions:

1. Give the six figure grid reference for the following :

(i) $\Delta 224$	(ii) Tanks near village Kuchawada
(iii) Surveyed tree near Ganodara village	(iv) Temple at village Santarwada



Ans. (i) 823942 (ii) 773952/776952
 (iii) 830923 (iv) 806968

2. Give the four figure grid reference for the following :

(i) Dry tank north of Santarwada	(ii) $\Delta 208$ north of Kuchawada
(iii) Lined well in village Agdol	(iv) Settlement Mahudi Moti

Ans. (i) 8097 (ii) 7796
 (iii) 7689 (iv) 7992

3. What is the meaning of the following symbols?

(i)  in grid square 8294	(ii) PO in grid square 8199
(iii) 3r in grid square 7895	(iv)  in grid square 7991

Ans. (i) A kiln for burning limestone (ii) Post Office
 (iii) Relative height of river bank 3 metres (iv) Tank with embankment

4. Give the directions of the following :

(i) Lime kiln (8397) from Mahudi Moti (7992)	(ii) Village Rampura (8293) from temple (7689)
(iii) Village Santarwada (8096) from village Kuchawada	(iv) Open Jungle (8091) from Open Scrub (8497)

Ans. (i) North East (ii) North East
 (iii) North East (iv) South West

5. Give reasons for the broken ground, in grid square 8190.

Ans. It is an arid region where top soil gets easily eroded due to flooding in the rainy season.

6. Find out the area in square kilometres of the region enclosed by Eastings 77 and 83 and Northings 92 and 97.

Ans. Area is 30 square kilometres

7. What is the length of the motorable track in south west part of the region (in kilometers)?

Ans. Approximately 5.25 km.

8. Find out one physical and one man-made feature in grid square 8192.

Ans. Broken ground and temple

Part of Topo Sheet no 45^D/₇ : (Easting: 77 to 85 and Northings: 89 to 00)



Metres
9900000

Metres
9900000

500 m to 1 cm
1:50,000
2 cm to 1 km
5 Kilometres

© Government of India
HEIGHTS & CONTOURS IN METRES
CONTOUR INTERVAL 20 METRES

9. In which quarter of the map extract do you expect the **lowest area** to be? Give reasons (any two).

Ans. South west quarter of the map is the lowest area because the river flows towards the south-west and spot heights are also decreasing in that direction.

10. Give two evidences to prove **poor rainfall** in the region.

Ans. Presence of open scrub and sand dunes.

11. What is the **main occupation** of the people living in this region?

Ans. Yellow wash indicates agriculture as the main occupation.

12. Find out the straight line distance between the following.

- (i) **Village Santarwada** (8096) and **village Atal** (8189) (ii) **Temple** (8192) and **temple** (7689)
(iii) **• 204** (7696) and **• 244** (8295)

Ans. (i) 7.5 km (ii) 5.75 km (iii) 6.25 km

13. What is the **direction of flow of water** in the Sarvo Nala?

Ans. South west to north east

14. Locate the **lowest and the highest spot height** on the given map and also find out their six figure grid reference.

Ans. Lowest = 175 (810899) Highest = 263 (846999)

15. Describe the **drainage pattern** in the grid squares 8194 and 8294.

Ans. 8194 - Dendritic pattern 8294 - Radial pattern

16. What does the **green colour** show in the map?

Ans. Forest area or open jungle

17. What does **lime kiln** in grid square 8294 indicate?

Ans. A kiln or furnace in which limestone is burnt. Its presence shows trade possibilities and people working in it.

18. What is the **main source of irrigation** in this region?

Ans. Lined wells (perennial)

19. State the **Eastings and Northings** of the area covered with sand dunes.

Ans. Eastings 76 to 81 and Northings 97 to 00

20. What does **black dotted lines** marked in the topo-sheet indicate?

Ans. It forms the boundary between the tehsils within a district.

21. What is the **depth of the dry tank** found close to the village Mahudi Moti?

Ans. Depth is 3 metres from surface to bottom

22. Find out **straight line distance** between the following:

(i) **Village Lakhnasar** from **Rampura**

(ii) **Lime kiln** (in 8189) and **lime kiln** (in 8396)

(iii) **Surveyed tree** in 8392 and **village Ganeshpura**

(iv) **Village Kuchawada** and **village Panthawada**

Ans. (i) 6.5 km. approximately (ii) 7.25 km. approximately
(iii) 3.5 km. approximately (iv) 6.0 km. approximately

23. What does the **brown wavy patch** in the north west corner of this topo-sheet indicate?

Ans. It indicates the sandy region having sand dunes.

24. Mention the **name of the Nala** on the eastern side of the river.

Ans. Mahadeviyo Nala

25. What is the **general drainage pattern** along the streams?

Ans. Dendritic drainage pattern

26. What **type of river** is flowing in the region?

Ans. Seasonal river having water in the rainy season only.

27. Name the **man-made feature** in grid 7991.

Ans. Dry tank with embankment

28. Name the **natural feature** in grid 7799.

Ans. Sand dunes

29. Give the **four figure grid reference of confluence of main river and Mahadeviyo Nala.**

Ans. 8189

30. What is **stony waste**? How is it shown on this map?

Ans. The land which is mostly covered with rock boulders and stones and whose cultivation is not possible. It is shown as a white patch on the map.

31. What does the term '**Khera**' mean given in grid square 8192?

Ans. The term Khera means a village.

32. Is the region shown on the map thinly populated or densely populated? Give reasons.

Ans. It is thinly populated as it shows less settlement. Most part of the map is sandy and dry, therefore, the region is not well developed.

33. What is the **difference between the relief features** of the northern and the southern part of this region?
- Ans. Northern part is sandy and dry having sand dunes. Whereas, the southern part is having seasonal river and forested area.
34. Which is the **most densely populated village** in the region?
- Ans. Panthawada village
35. In which part of the map we can find village Agdol?
- Ans. South west part of the map
36. What does **black straight vertical line** across the map indicate?
- Ans. Vertical straight line is the longitude.
37. What is the **pattern of settlement** in Panthawada village? Give reasons.
- Ans. Nucleated settlement, presence of permanent huts, Post office & Police Station.
38. Give reason, why the streams in grid square 7989 do not join a river.
- Ans. Due to the presence of sandy soil and poor rainfall.
39. What does **9r** near the **symbol of sand dunes** indicate?
- Ans. The relative height of sand dune is 9 metres.
40. On which **bank of the main river** does Mahadeviyo Nala join?
- Ans. It joins the main river from its left bank.
41. Why there is only one motorable road in the mapped area?
- Ans. Barren land and no important settlement discourage building of roads.
42. What does **dendritic or tree like drainage pattern** in grid square 8195 indicate?
- Ans. It confirms soft surface suitable for agriculture.
43. What may be the **main occupation of the people** living in village Atal (8189)?
- Ans. Settlements along the river bank indicate fishing as the main occupation.
44. Name the **most important perennial source of irrigation** shown on the map extract.
- Ans. Perennial lined wells and river water
45. What does **15r** (in grid 7795) written near the **dry tank symbol** indicate?
- Ans. Relative depth of perennial lined well is 15 metres.

Assignment 2

Study the Topo Sheet No. 45 D/7 (Eastings 85 to 93, Northings 89 to 00) printed on page no. 18 and answer the following questions:

1. Give the four figure grid reference for the following :

- (i) Village Gangudra (ii) Stony waste south of Sipu river
(iii) Joining point of Hanva and Varka Nalas (iv) $\Delta 277$ in the north eastern part

Ans. (i) 8793 (ii) 8596
(iii) 8693 (iv) 8998

2. Give the six figure grid reference for the following :

- (i) Dry tank in village Jegol (ii) Mosque near village Rajkot
(iii) Village Kotda (iv) $\bullet 256$ in open mixed jungle

Ans. (i) 858906 (ii) 894953
(iii) 856932 (iv) 925979

3. Give the direction of the following :

- (i) Gangudra from Rajkot (ii) Hariyawada from Bhilachal
(iii) Akoli from Bhadli (iv) Jhat from Talenagar

Ans. (i) South west (ii) South
(iii) North east (iv) North west

4. Find out the straight line distance between :

- (i) $\Delta 277$ and $\Delta 225$ (ii) Village Jhat and village Gangudra

Ans. (i) 4.5 Km (ii) 5.5 Km

5. State the drainage pattern in grid square 9295.

Ans. It shows Trellis pattern as the tributaries are meeting main river at right angles.

6. Find out the actual length of track between Jhat and Rajkot.

Ans. 5.25 Km. approximately

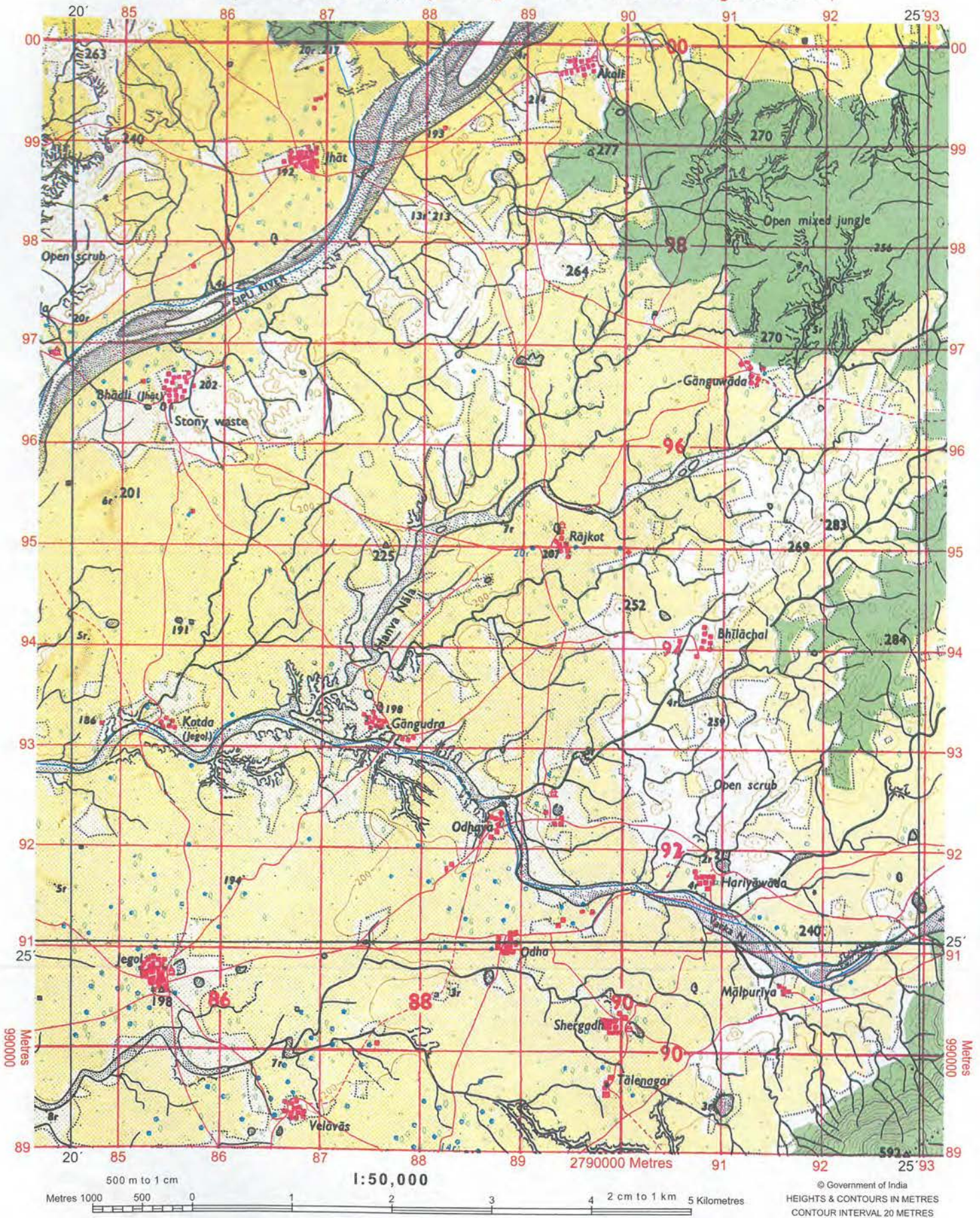
7. What does blue line within river channel Sipu indicate?

Ans. Dry river with water channel.

8. In which direction the river Sipu flows? Give reasons (any two).

Ans. River is flowing from north east to south west, because,
• Spot height is decreasing towards south west
• Black arrow indicates this direction,

Part of Topo Sheet no 45^D/₇ : (Eastings: 85 to 93 and Northings: 89 to 00)



500 m to 1 cm
 Metres 1000 500 0 1 2 3 4 5 Kilometres
 1:50,000
 2 cm to 1 km

© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

9. Find out the area in square kilometres, of the region enclosed by Eastings 87 to 92 and Northings 90 to 92.

Ans. 10 square kilometre

10. What is the meaning of the following conventional signs?

(i) 200 in grid square 8789

(ii) 7r in grid square 8689.

(iii) Stony waste in grid square 8596.

(iv) 3r in grid square 9089

Ans. (i) Contour of 200 m. height

(ii) Relative height of river bank is 7m.

(iii) Barren land having stones

(iv) Relative height of embankment is 3m.

11. Give reason why some of the land in the area shown on the map is not cultivated?

Ans. Because some tract of land is barren and the presence of sand dunes makes cultivation difficult.

12. What is the main mode of irrigation throughout the year in the region represented by the map?

Ans. Main mode of irrigation is perennial lined wells and river water. A number of blue dots can be seen on the map. The river has a narrow channel of water.

13. Give six figure grid reference of the following :

(i) $\Delta 225$ in the central part of this extract of topo-sheet

(ii) Village Odhava

(iii) 3r near village Odha

(iv) Temple in village Jegol

Ans. (i) 877950


(ii) 888923


(iii) 884906

(iv) 856907

14. State the meaning of the following symbols :

(i) $\bullet 252$ (in 9094)

(ii) Surveyed tree  (in 9090)

(iii) Permanent hut  in 9190

(iv) Broken land  (in 8989)

Ans. (i) It shows spot height i.e., the actual height above the mean sea level.

(ii) Surveyed trees have numbers on their trunks. They serve as landmarks and are not allowed to be cut.

(iii) These are the dwellings where people live permanently.

(iv) It is found along the banks of stream where the top soil gets easily eroded due to flooding during rainy season.

15. Name any two natural features in grid square 8597.

Ans. Sipe river and its tributary
Yellow washie, cultivable land

16. State two man-made features in village Rajkot.

Ans. Permanent huts and mosque

17. What does the tank in grid 9189 indicate?

Ans. It indicates a seasonal or dry tank with rock filled embankment.

18. What is the general pattern of settlement in the region?

Ans. Most part of the region has nucleated settlement.

19. What does the black straight line (horizontal) across the map indicate?

Ans. It is the latitude drawn from west to east.

20. What type of rainfall is experienced in the region shown in the map extract? Justify your answer giving one reason.

Ans. Seasonal rainfall. Evidences include, dry tanks, dry water channels or rivers, sand features, broken grounds

21. What are the brown lines drawn in grid square 9293? What do they show?

Ans. These are the contours. Contour is an imaginary line drawn on a map joining places of equal elevation.


22. What do so many contour (brown colour) lines drawn so close together in grid square 9289 indicate about the topography?

Ans. It indicates hilly region having very steep slopes.

23. Draw the conventional symbols showing:

(i) Tank (dry)

(ii) Perennial wells

Ans. (i) 

(ii) 

24. What is the meaning of the following conventional signs?

(i) Brown lines in grid square 8696

(ii) ● in grid square 8590

Ans. (i) Contour lines joining places of equal height.
(ii) Perennial lined well

25. Give the direction of the following:

- (i) **Village Bhadli** (Jhat) (8596) from **Jegol** (8590)
- (ii) **Open Mixed Jungle** (9198) from **open scrub** (9192)

Ans. (i) North (ii) North East

26. Find out the straight line distance between the following:

- (i) **Temple** (8992) and **mosque** (8995)
- (ii) **●264** (8997) from **●256** (9297)

Ans. (i) 2.75 km. approximately (ii) 3 km. approximately

27. State the **direction of flow of water** in Varka Nala. Give one reason.

Ans. It flows from South East to North West, because the spot height is decreasing from east to west part of the map.

28. What does the **symbol**  all over the map extract show?

Ans. It shows deciduous trees found all over the region.

29. Give the direction of the following:

- (i) **Village Velavas** (8689) from **village Odhava** (8892)
- (ii) **Kotda** (8593) from **Gangudra** (8793)

Ans. (i) South West
(ii) West

30. What do the **brown dots** in grid square 8699 indicate?

Ans. It indicates sandy desert with sand dunes.

31. Measure the **actual distance** between **Bhadli** (8596) and **Gangudra**.

Ans. 5 Km. approximately

32. South eastern part of the map extract shows hilly region in green colour. What does it mean?

Ans. Hilly region has dense forests where people may be engaged in lumbering or forestry.

33. What is meant by **relative height 3r** written on the map extract in grid square 8890.

Ans. It means that the concerned place is higher by 3 metres than its natural place or surrounding areas.

34. What do **red dotted lines** in grid square 8593 show?

Ans. It shows pack-track (gagdandi) made by constant use by men or animals to travel.

35. What does the **black arrow in river Sipu** in grid square 8697 indicate?

Ans. It shows the direction of the flow of river water.

36. Name at least **three man-made features** in grid square 8992.

Ans. Permanent huts, temple and cart track.

37. State the **type of Nala** in grid square 8589.

Ans. Non-perennial Nala or seasonal Nala.

38. Where do you **find wasteland** in this map extract?

Ans. White patches show wasteland in North West and South East.

39. In which part of the map **main occupation** is forestry and lumbering?

Ans. Green coloured region in North Eastern and South Eastern part.

40. How the **settlements** are linked with each other in this region?

Ans. Settlements are linked by cart tracks or foot paths only.

41. What is the **average height** of hilly region?

Ans. The hills in this region rise steeply from 200 m. and have peaks exceeding 500 metres.

42. Why there are no **metalled roads** in this region?

Ans. Because the region is sandy and the lowland is not perfectly flat. It has an undulating surface as shown by small enclosed contours indicating low hills.

43. Is this region easily accessible from other parts of India? Give reasons (any two).

Ans. There are no roads or railway lines in the entire area. This means that the region is not easily accessible.

44. Is there any possibility of **lumbering on a commercial scale** in this region?

Ans. No, because this region does not have transport facilities.

45. Name any **two natural features** in each of the following grid squares.

(i) 8992

(ii) 8597

(iii) 9297

Ans. (i) Sandy region and disappearing streams

(ii) Sandy region and Sipu river

(iii) Open mixed jungle and broken land.

Assignment 3

Study the Topo Sheet No. 45 ^D/₇ (Eastings 93 to 01, and Northings 89 to 00) printed on page no. 24 and answer the following questions:

1. Give four figure grid reference for the following:

(i) Village Methipura

(iii) • 438 in the south west corner

(ii) Village Padar in north eastern part

(iv) Δ 349 in the north

Ans. (i) 9793

(ii) 9899

(iii) 9390

(iv) 9799

2. Give the direction of the following

(i) Methipura from Padar

(iii) Temple (9795) from Methipura

(ii) Dhibri (9795) from Deri (9392)

(iv) Jasor hill from Vavdhara (9592)

Ans. (i) South West

(ii) North East

(iii) North

(iv) South East

3. Draw the conventional symbol for the following:

(i) Seasonal river

(ii) State boundary

Ans. (i) 

(ii) 

4. Find out the actual length of the following:

(i) Track between Deri and Methipura villages

(ii) North to south length of the map

Ans. (i) 4 km approximately

(ii) 11 km

5. Find out two physical and two man-made features in the grid square 9899.

Ans. Physical features - Seasonal streams and green wash (forest)
Man-made features - Permanent huts and temple

6. What is the location of the Jasor Hill on map extract?

Ans. Southeastern part of the map.

7. Give the drainage pattern in the grid square 9896. Give reason to justify your answer.

Ans. Trellis pattern as the streams are joining main river at right angles.

8. What is the settlement pattern in grid square 9792?

Ans. Scattered or dispersed settlement.

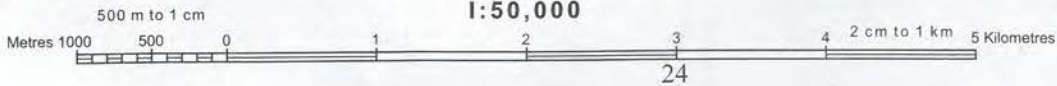
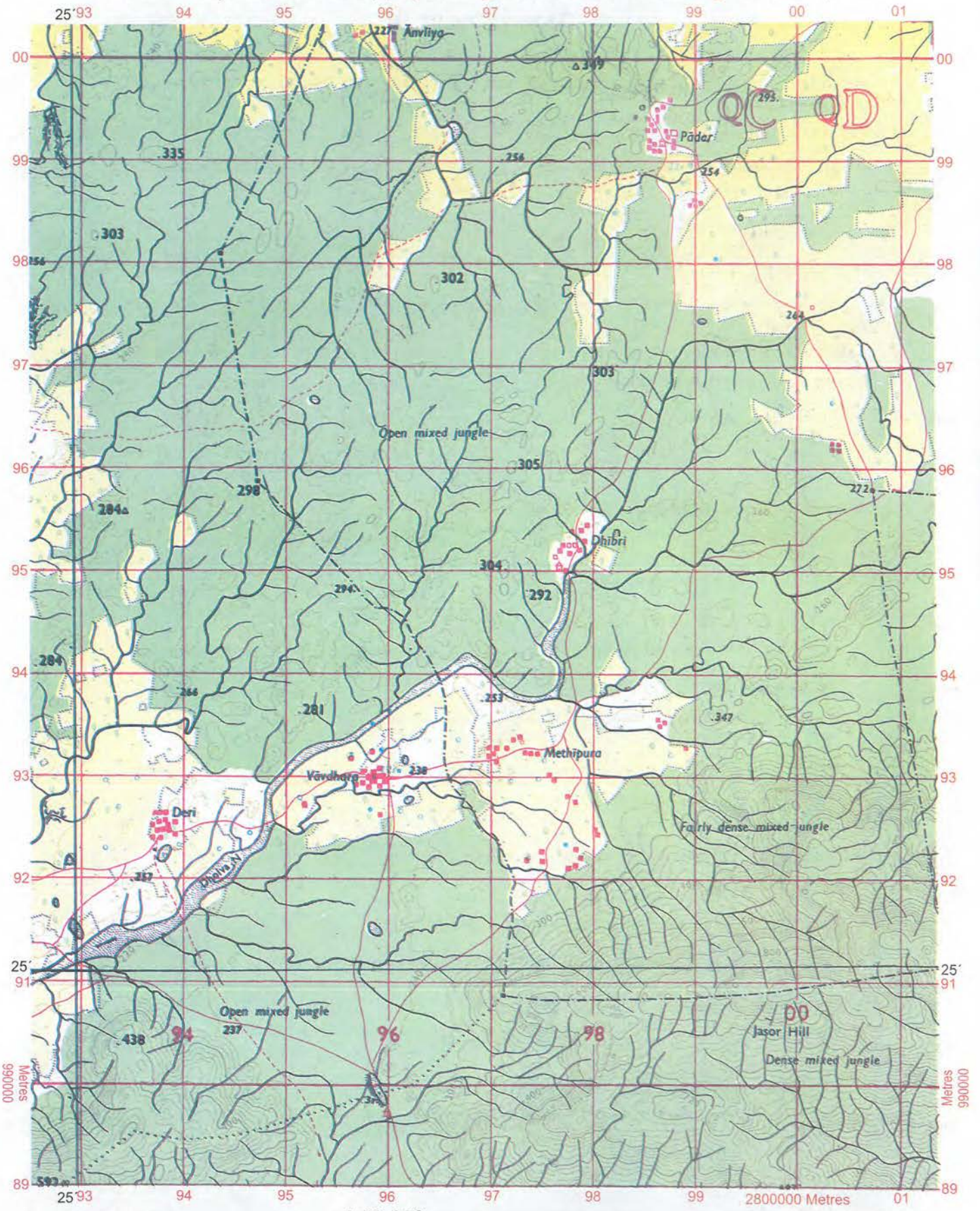
9. What is the direction of water flow in the Dholva Nala? Give some evidence to support your answer.

Ans. North east to south west as shown by black arrow in the Nala.

10. What is the height of the contours in grid square 0094?

Ans. 260 metres.

Part of Topo Sheet no 45^D/₇ : (Eastings: 93 to 01 and Northings: 89 to 00)



© Government of India
HEIGHTS & CONTOURS IN METRES
CONTOUR INTERVAL 20 METRES

11. What does **yellow colour** show in the map?

Ans. It shows cultivable land.

12. What do so many **contour lines so close together** in the extract indicate about the topography?

Ans. Very steep hilly land and presence of conical hills.

13. Give two **reasons** for the **presence of footpath** in the south western part of the map.

Ans. • Steep and rugged terrain makes construction of roads difficult.
• It may be created by people who depend on forest produce.

14. How can we **draw a climatic inference** from a topo-sheet?

Ans. Presence of dry river or dry tank indicates that the area experiences scanty rainfall with dry weather.

15. What **occupations** do the people follow in **highland areas** shown in the map extract?

Ans. Forestry as the main occupation. Pastures may be fit for grazing.

16. What **type of drainage pattern** is to be seen in the grid square 9390? Justify your answer.

Ans. Radial drainage pattern. Streams are flowing outward forming a pattern like the spokes of a wheel.

17. What does the **white patch** in grid square 9893 indicate?

Ans. Rocky area or bad land, hence uncultivable.

18. What does **3r written in the tank** in grid square 9589 indicate?

Ans. Relative height of the tank is 3 metres above sea level.

19. Calculate the **area in square kilometers**, of the region enclosed by Eastings 96 to 99 and Northings 92 to 99.

Ans. Since $2\text{ cm} = 1\text{ km}$, the total area is 21.5 sq. km .

20. Give the **drainage pattern** in the

(i) grid square 9790

(ii) grid square 9891

Ans. (i) Radial drainage pattern (ii) Radial drainage pattern

21. State the **importance of forests** in this region.

Ans. Undulating hills support dry deciduous forests in this region. It is rich in floral diversity, particularly medicinal plants.

22. What are the **different means of irrigation** in this region? Give at least **two reasons** to support your answer.

Ans. Blue round dots represent perennial lined wells and Dholva Nala has water available in the rainy season.

23. How the **occupation of the people** of an area can be inferred? Give two examples from the map extract.

Ans. Yellow colour indicates cultivable land suitable for farming.
Mountainous region in green shows lumbering or forestry occupation

24. What **type of relief feature** is present in grid square 9389? Justify your answer.

Ans. Watershed which separates the tributaries draining towards
one side of it from those draining towards the other side.

25. Identify the **landforms shown by the contours** in grid square 9990. Give evidence to support your answer.

Ans. It shows the conical hill with steep slopes and a
broad base. Contours are almost circular with peak
of the hill as their centre.

26. Give **four figure grid reference** for the following:

- (i) South western part of **Dholva Nala with black arrow**
- (ii) • **335** in north west
- (iii) **State boundary** meets the **Tehsil boundary**

Ans. (i) 9391 (ii) 9399 (iii) 9790

27. What does the **green colour** in grid square 0098 indicate?

Ans. Light green colour shows grasslands and shrubs.

28. How do the people cross Dholva Nala?

Ans. Through footpath and cart track

29. What do **black curved lines** in grid square 0089 show?

Ans. Seasonal streams

30. What do **brown circles** in grid square 9798 indicate?

Ans. This shows the low lying hills.

31. Why the **water flow in Dholva Nala** is from North East to South West?

Ans. In this map extract spot height is decreasing from north-
east to south west. Water always flow from highlands to lowlands.

32. Give the name of the following **symbols** :





- (i) 
- (ii) 
- (iii) 

Ans. (i) Temple (ii) Temporary hut (iii) Contours

33. State the **spot height** in the following grid square :

- (i) 9993
- (ii) 9593
- (iii) 9999

Ans. (i) 347 (ii) 281 (iii) 295

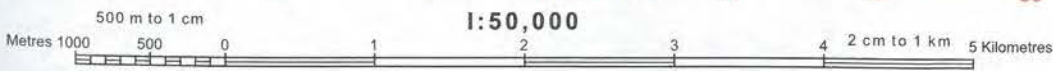
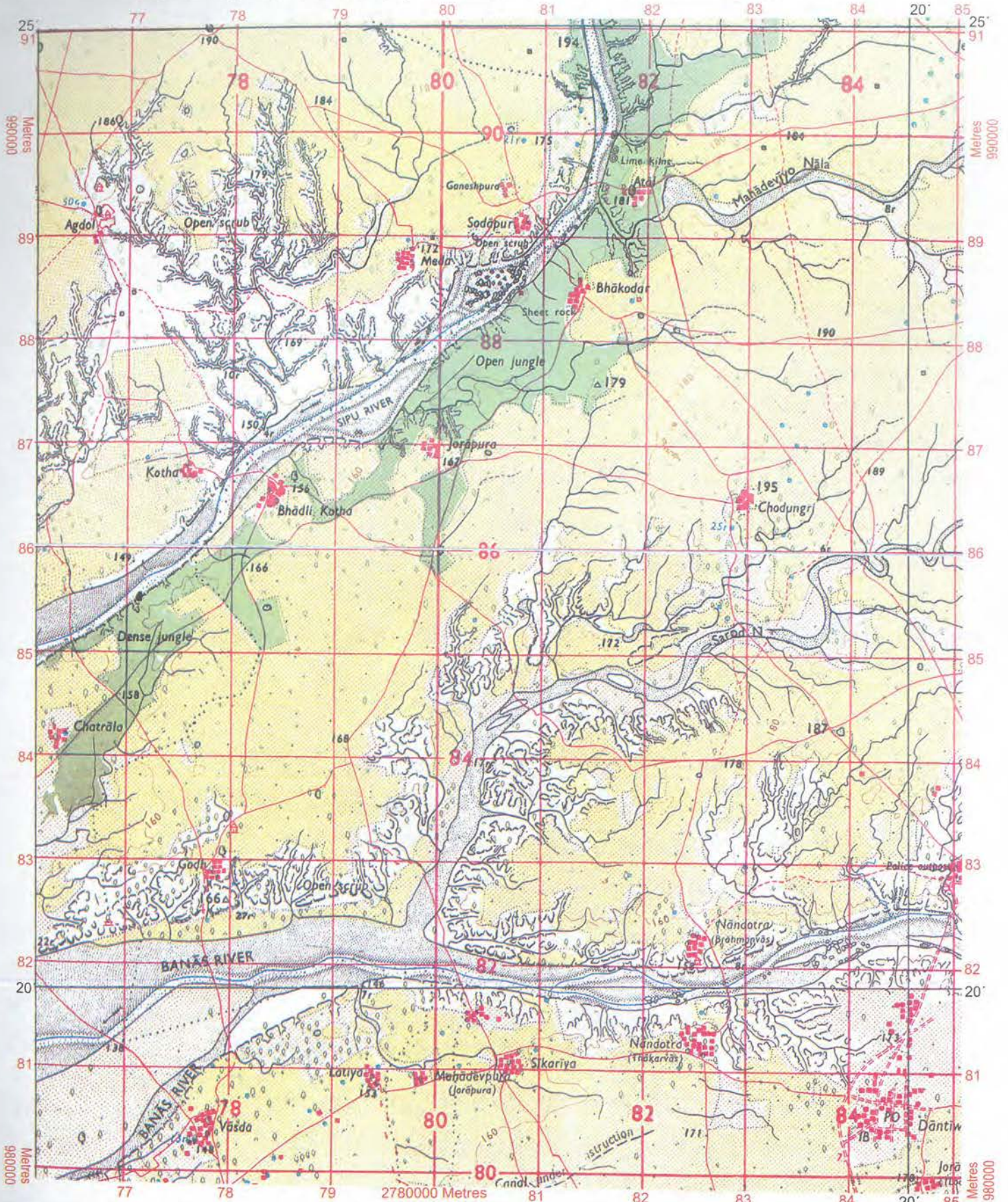
34. What is the **actual distance** between **village Dhibri** and **Padar**?
- Ans. 4.25 Km. approximately.
35. What is the **maximum height of relief features** given in this map extract? Give evidence.
- Ans. Maximum height of the land is 800 metres as shown by contours in grid square 9991.
36. What do **brown lines drawn close to each other** in grid square 9991 indicate?
- Ans. These indicate steep hills (Tasar Hill).
37. Why is there no **settlement in the southern part** of the region?
- Ans. Most part is covered with dense mixed jungle, thus not habitable.
38. What is the **lowest spot height** in this map extract? Mention the grid reference.
- Ans. Lowest spot height is 237 in grid square 9490.
39. Is Dholva Nala having water flow throughout the year? Give evidence.
- Ans. No, it is seasonal having water in the rainy season only. It is white with black dots. It is not blue in colour.
40. What is meant by **22r** written in grid square 9898?
- Ans. The relative depth of perennial well is 22 metres.
41. What type of **drainage pattern** is seen in grid square 9896? Give proof of your answer.
- Ans. Trellised pattern showing parallel streams joining the main river at right angles.
42. What are the **conventional signs** (any two) located at the points the six figure grid reference of which are :
- (i) 995985 (ii) 958964
- Ans. (i)  Dry tank  cart track
(ii)  seasonal stream  contours
43. Why contour lines are very close to each other in grid square 9790? What does it show?
- Ans. It shows steep slope with v-shaped valleys.
44. State **two man-made features** in grid square 9689.
- Ans. cart track and temple
45. Which is the **highest trigonometrical station**? State the height and the grid number where it is located.
- Ans. 4349. It is located in grid square 9799.

Assignment 4

Study the Topo Sheet No. 45 D₇ (Eastings 77 to 85 and Northings 80 to 91) printed on page no. 29 and answer the following questions:

1. What is the meaning of the following symbols?
- (i) IB in grid square 8480
Ans. (i) Inspection Bungalow
- (ii) 8r in grid square 8282
Ans. (ii) Relative height of river bank is 8 metres.
2. Give the four figure grid reference for the following:
- (i) Dense jungle in the western part
Ans. (i) 7785
- (ii) Δ 179 near open jungle
Ans. (ii) 8187
3. Give six figure grid reference for the following:
- (i) PO in Southeast
Ans. (i) 844806
- (ii) Lined well in village Latiya
Ans. (ii) 792808
4. State the drainage pattern in grid square 8381.
Ans. Dendritic drainage pattern
5. List the modes of transport you find in the map extract.
Ans. Cart track, unmetalled road, pack track.
6. Is the area likely to develop in the future? Give reasons.
Ans. Yes, because it has Post Office, IB and canal under construction.
7. What is the main occupation of people shown in the map? State another occupation of people in grid square 8189.
Ans. Agriculture is the main occupation. Other occupations are construction and lime making in lime kilns (8189).
8. What inference can be drawn from the black lines found along the river in grid square 8084?
Ans. Black lines indicate broken ground caused due to gully erosion along the river banks. The area has seasonal rainfall.
9. What is the slope of the area given in the map extract? Give reasons for your answer.
Ans. Slope is towards south to south west, because Sipi river flows south west as indicated by black arrow.
10. Describe the relief of the area.
Ans. Mainly a plain level land. Sipi and Banas rivers flow with its tributaries. Both rivers have perennial narrow water channel.
11. If you walk downstream along the Banas river, which features would you see on your left and which features would you see on your right?
Ans. Left - Deciduous trees, broken ground, canal under construction
Right - Sarod Nala, broken ground and open scrub.

Part of Topo Sheet no 45D/7 : (Eastings: 77 to 85 and Northings: 80 to 91)



1:50,000

© Government of India
HEIGHTS & CONTOURS IN METRES
CONTOUR INTERVAL 20 METRES

12. State two differences between the Sipu river and the Mahadeviyo Nala.

- Ans. (i) River has perennial channel but Nala is completely dry.
(ii) River is broad, whereas Nala is narrow.

13. What is the compass direction of Bhakodar (8188) from Chodungri (8386)?

Ans. North West

14. What is the geographical name that you would give to the general pattern of settlement in the region shown on the map? Give a reason for your answer.

Ans. Nucleated because permanent huts are clustered.

15. Find out the actual distance to be travelled between the following:

(i) Length of track between Lime Kiln (8189) and Bhadli Kotha (7886)

(ii) Length of track between Sikariya (8081) and Nandotra (8282)

Ans. (i) 6.5 km approximately (ii) 3.75 km approximately

16. What is the blue line running through the Banas river? What does it indicate?

Ans. It indicates that the river is not totally dry. It has water in the rainy season.

17. Give the direction of the following:

(i) Village Atal (8189) from village Kotha (7786)

(ii) Village Vasda (7780) from village Godh (7782)

Ans. (i) North East direction (ii) South direction

18. Why do we find more settlement along the main river? Give two reasons.

Ans. (i) Availability of water for cultivation
(ii) Easier for communication e.g. Travelling to other towns

19. Find out the total length of the tehsil boundaries which pass through the Sipu and Banas rivers.

Ans. 19 km approximately

20. Find out the general flow of Sipu and the Banas rivers. Give evidence to prove your answer.

Ans. Rivers are flowing from north-east to south west as shown by black arrows. Spot height is also decreasing in this direction.

21. What does $\Delta 179$ written in grid square 8187 indicate? What is meant by it?

Ans. It shows triangulated height i.e., the height of a point surveyed by the triangulation method.

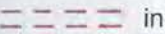
22. What do black dotted lines (dash) in grid square 8388 indicate?


Ans. It shows undefined river streams

23. What does **black symbol** in the shape of tree in grid square 8189 indicate?

Ans. Surveyed tree. It is used as a landmark.

24. What is the meaning of the following symbol?

(i)  in grid square 8481

(ii)  in grid square 7987

Ans. (i) Unmetalled road

(ii) Water channel in river bed

25. Give the meaning of figure **180** written in grid square 8287.

Ans. Contour i.e. an imaginary line joining places having height of 180 metres.

26. State three advantages that settlement in south east (south of river Banas) has over other settlements in the region.

Ans. (i) Inspection Bungalow

(ii) Post Office

(iii) Unmetalled road and close to canal under construction.

27. What is the meaning of the following?

(i) **White coloured area** in grid square 8383

(ii) **Open scrub** in north west

Ans. (i) Uncultivated land or bad land.

(ii) Open dry land with scrub as the vegetation.

28. Give the **brief description** about the soil found in this region.

Ans. Large part of land is sandy, with broken ground near water courses

29. Measure the **actual distance** between the following:

(i) Village Medo and village Atal

(ii) Temple at Agdol and village Chatrala

Ans. (i) 2.5 km approximately

(ii) 6.5 km approximately

30. Give **two reasons** to explain why the streams in grid square 8280 do not join the main river.

Ans. (i) Due to presence of sandy soil which is porous.

(ii) Poor or scanty rainfall.

31. What does **black dotted lines** in grid square 7781 indicate?

Ans. It shows the Tehsil boundary.

32. What type of **drainage pattern** is present in grid square

(i) 8381

(ii) 7889?

Ans. (i) Dendritic pattern

(ii) Dendritic pattern

33. What does the **green colour** along the left bank of Sipu River indicate?

Ans. It has open and dense jungle suitable for forestry and lumbering.

34. What may be the **occupation of the people** living in Bhakodar settlement?

Ans. People may be dependant on forest produce or forestry.

They must be practising primitive agriculture also.

35. Name the **geographical feature** in the middle of the river in grid square 8382 represented by white patches.

Ans. It represents an island or rocky surface.

36. Name **three rivers** in the map extract and distinguish between them.

Ans. Sipu - has more sediment and perennial water channel

Banas - main river in south with more sediment & perennial water channel.

Mahadviyo Nala - tributary of Sipu river, totally dry.

37. What **kind of vegetation** is found in the map extract?

Ans. Tropical deciduous forests and thorny shrubs, except few areas along Sipu river have dense jungle or forests.

38. State the **chief mode of irrigation** in the map extract. Which other mode of irrigation is likely to develop in the future?

Ans. Perennial wells and water channel, canal under construction

39. Give the **four figure grid reference** of the following:

(i) Ganeshpura

(ii) Nandotra

Ans. (i) 8089

(ii) 8281/8282

40. Sipu river has a perennial channel, whereas, Mahadviyo Nala is completely dry. Give any one reason for it.

Ans. Because it gets water in the rainy season and seasonal streams are joining.

41. Find out the **length of the metalled road** in the south eastern part of the map.

Ans. It is approximately 4 km long unmetalled road.

42. Find out the **straight line map distance** between:

(i) Bhakodar (8188) and Godh (7782)

(ii) Chodungri (8386) and Vasda (7780)

Ans. (i) 6.5 km approximately

(ii) 8 km. approximately

43. Name any **two man-made features** present in grid square 8480.

Ans. Inspection Bungalow and Post Office.

44. What does the **black circles in Sipu river** in grid square 8088 indicate?

Ans. It indicates shoal (submerged rock) i.e., an area of shallow water

45. Why there is no **motorable road** on the western and north western part of map extract?

Ans. Because of broken land or bad land present in the region.

Assignment 5

Study the Topo Sheet No. 45 D/7 (Eastings 85 to 93 and Northings 80 to 91) printed on page no. 34 and answer the following questions:

1. Give the **direction** of the following:

- (i) Settlement Dantiwada (8582) from Nani Bhatamal (9280)
- (ii) Settlement Jegol (8590) from Ratanpur

Ans. (i) West direction (ii) North west direction

2. Measure **straight line distance** between the following :

- (i) Mosque (9282) and temple (9080)
- (ii) Marwada (8685) and Police Outpost (8482)

Ans. (i) 3 km approximately (ii) 2.5 km approximately

3. What **type of rainfall** is experienced in the region shown in the map extract? Justify your answer giving one reason.

Ans. Presence of dry streams indicate seasonal rainfall

4. What is the **main relief feature** seen in grid square 9284?

Ans. Conical hill or conical peak with height 522 metres

5. State the **pattern of human settlement** in grid square 8989. Justify your answer.

Ans. Linear settlement. Huts are in a line on one side of the cart track.

6. What inference even be drawn about the **general occupation of the people** of the region shown in the western half of the map extract? Give one reason to justify your answer.

Ans. Agriculture is the main occupation.
Reason: presence of yellow wash and perennial lined wells.

7. Calculate the **distance** in km along the cart track between Velavas (8689) and Ranol (8888).

Ans. 2 km approximately.

8. Give the **four figure grid reference** for the following:

- (i) **Village Chekhla** in the southern part
- (ii) **Village Jegol** in the north western part

Ans. (i) 9281 (ii) 8590

9. Give the **six figure grid reference** for the following :

- (i) **8r point** near Chekhla
- (ii) **Temple** in village Ranavas

Ans. (i) 923813 (ii) 907805

10. What is the meaning of the following symbols?

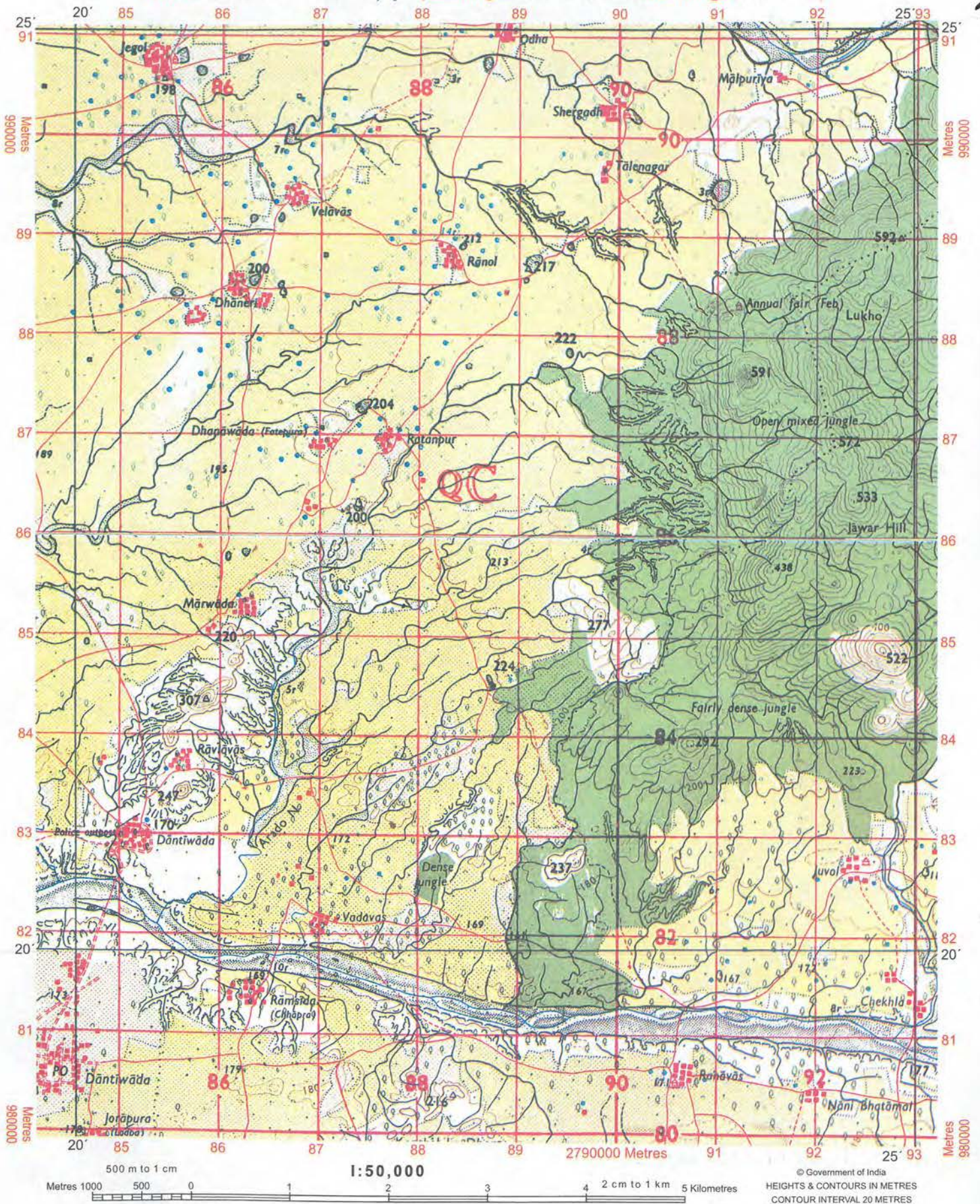
- (i)  in grid square (9182)
- (ii)  in the northwest corner

Ans. (i) Seasonal stream (ii) Dry river

11. State the **main source of irrigation** of Dhanawada (Fatepura).

Ans. Perennial lined wells

Part of Topo Sheet no 45^D/₇ : (Eastings: 85 to 93 and Northings: 80 to 91)



12. Prove that seasonal rainfall is experienced in the region shown in the map extract. Justify your answer giving one reason.

Ans. Rivers are dry with a narrow water channel indicating seasonal rainfall. Cart tracks are running right across the river.

13. Name at least two man-made features in grid square

(i) 8688

(ii) 8582

Ans. (i) Permanent huts, cart tracks (ii) Unmetalled road, permanent huts

14. Name at least two natural features in grid square

(i) 8690

(ii) 9288

Ans. (i) Undefined stream, sandy soil (ii) Seasonal streams, forest region

15. What is the general slope of the land, especially in the forested areas? Give evidence.

Ans. Land is sloping from NE to SW. In NE the spot height is 592 and in SW the lowest point is 159 in grid square 8681.

16. What are the modes of irrigation found in the area? Give reasons for their abundance.

Ans. Perennial lined wells because the area gets seasonal rainfall and it has a high water table.

17. What is the contour interval in this map extract?

Ans. Contour interval is 20 metres.

18. State the general direction of Ardo Nadi. What does the blue line in the Ardo Nadi indicate?

Ans. Direction is from NE to SW. Blue line indicates perennial water channel.

19. What does 7r in grid square 8689 indicate?

Ans. Relative depth of perennial lined well is 7 metres from surface to the bottom.

20. Give one reason to explain why the streams in grid square 8782 do not join the main river.

Ans. Due to the presence of porous sandy soil water in stream is less.

21. What is the small white patch in the river in grid square 8981?

Ans. Rocky area or bad land.

22. What may be the main occupation of the people living in open mixed jungle in north east?

Ans. Forestry and lumbering may be the main occupation.

23. Give three reasons for the presence of only footpaths in the green wash.

Ans. (i) Construction of roads is difficult in the hilly region.
(ii) Footpaths are created by people to collect forest products.
(iii) To go to temple and Annual Fair, footpath is created by people.

24. What do so many contour lines so close together in the grid square 9185 indicate?

Ans. Conical hills with steep slopes

25. What does figure 180 (in brown colour) written in grid square 9182 indicate?

Ans. It is a contour line. It is an imaginary line drawn on map joining places 180 metres above sea level.

26. Name the geographical feature represented by white patches in the middle of the river.

Ans. White patches in the middle of the river represent islands, rocks or stones. It is a bad land.

27. Mention the actual distance between the following:

(i) Vedavas (8782) and Juvol (9282)

(ii) Vedavas (8782) and Ranavas (9080)

Ans. (i) 6.5 km approximately

(ii) 5 km approximately

28. What is a causeway? Name the grid square having causeway of unmetalled road.

Ans. It is a raised road or platform across minor stream. 8582.

29. Mention the grid square having dry tank with embankments in the north eastern part of map extract.

Ans. Grid square 9189.

30. State the settlement pattern in grid square 8990. What inference can you draw from this pattern?

Ans. Linear as people prefer to live along cart track to reach farms easily.

31. In which quarter of the map extract do you expect the lowest area to be? Why?

Ans. South west quarter of the map because all water bodies flow towards SW and spot heights are also decreasing towards SW.

32. What special feature is depicted by the contour pattern in the grid square 9185?

Ans. Conical hill with steep slopes

33. State the direction of the following:

(i) Open mixed jungle from Marwada

(ii) Δ 217 from Arado Nadi

Ans. (i) North East direction

(ii) North East direction

34. In what two ways does the river bed of Arado Nadi convey that it flows through a region of seasonal rainfall?

Ans. We can see an exposed broad sandy river bed and a thin water channel. A cart track is going through river bed.

35. State the meaning of the following :

(i) Dendritic drainage pattern (in 9182)

(ii) Pack track (in 9282)

Ans. (i) Rivers and its tributaries make a pattern like veins of a leaf.

(ii) Path made by constant use by men or animals to travel.

36. Which relief feature do you find in the grid square 9286? What other relief features are seen in the map?
- Ans. It shows a saddle. Other relief features are, mountains, hills, seasonal rivers and V-shaped valleys etc.
37. State two man-made features in grid square 8582.
- Ans. Temple and permanent huts.
38. State two physical features in grid square 9281.
- Ans. Dry river with thin water channel.
Cultivable land.
39. From which part of the map, the seasonal streams are originating? Give reason.
- Ans. Most of the seasonal streams are originating from the north eastern mountainous region due to greater height.
40. If a person living in village Shergadh wants to go to see the Annual Fair which is held every year in the month of February, then in which direction he will go?
- Ans. From Shergadh the person will go to the South East direction.
41. What is the main vegetation found in dense jungle in grid square 8882? Give one reason.
- Ans. Tropical deciduous forest as the region receives very little rainfall or seasonal rainfall.
42. Which is the chief form of irrigation shown in the map extract? Give some evidence to justify your answer.
- Ans. Chief form of irrigation is perennial lined wells. It is clear from the presence of blue circles all over the map.
43. Describe the natural hill features in the grid square 9187 and 9284.
- Ans. 9187 - Hachured circular contour lines show depression below higher elevation (591). 9284 - Circular contours show conical hill with steep slope.
44. Give the meaning of figure 200 written in grid square 9083. Why is it close to 292 point?
- Ans. Contour joining places of height of 200 metres above sea level.
292 shows the height of that point above mean sea level. So, it is very close.
45. Calculate straight line distance between 860810 and 920880.
- Ans. 9.25 km approximately.

Assignment 6

Study the Topo Sheet No. 45 D/7 (Eastings 93 to 01 and Northings 80 to 91) printed on page no. 39 and answer the following questions:

1. Give the direction of the following :

(i) Village Rampura (9580) from $\Delta 268$ (9483)

(ii) Spot height $\bullet 466$ (9386) from $\bullet 542$ (9782)

Ans. (i) South direction

(ii) North west direction

2. Describe the general relief in the region enclosed by Eastings 96 to 01 and Northings 88 to 91.

Ans. Mountainous region with steep slopes, conical hills, gorges and V-shaped valleys, dense mixed jungles. It has many river streams.

3. Describe two natural feature and one man-made feature in grid square 9782.

Ans. Natural - conical hill and radial drainage pattern. Man-made - Temple

4. Give examples of the following in this region :

(i) Two means of transport

(ii) Two occupations of the people

Ans. (i) Cart track and Park track

(ii) Agriculture and forestry

5. State the straight line distance between temple (in 9580) and temple (in 9782).

Ans. 2.5 Km approximately.

6. What is the drainage pattern in grid square 9386? Justify your answer.

Ans. Radial pattern as the streams are flowing in all directions

7. What is the direction of water flow in Khariya Nadi? Give two reasons to justify your answer.

Ans. NW to SE. Contour line 220 in NW and 200 in SE. Spot height in NW is $\bullet 259$ and in SE it is $\bullet 218$.

8. State the type of settlement in the area enclosing the Eastings 94 to 98 and Northings 86 to 88.

Ans. Scattered or dispersed settlement.

9. What are the conventional signs (any two) located at the points, the six figure grid reference of which are :

(i) 950834

(ii) 964862

Ans. (i) $\Delta 268$ (Triangulated height)

(ii) ft (Temple)

10. Give six figure grid reference for the following :

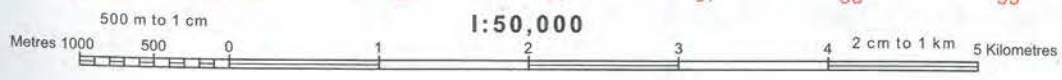
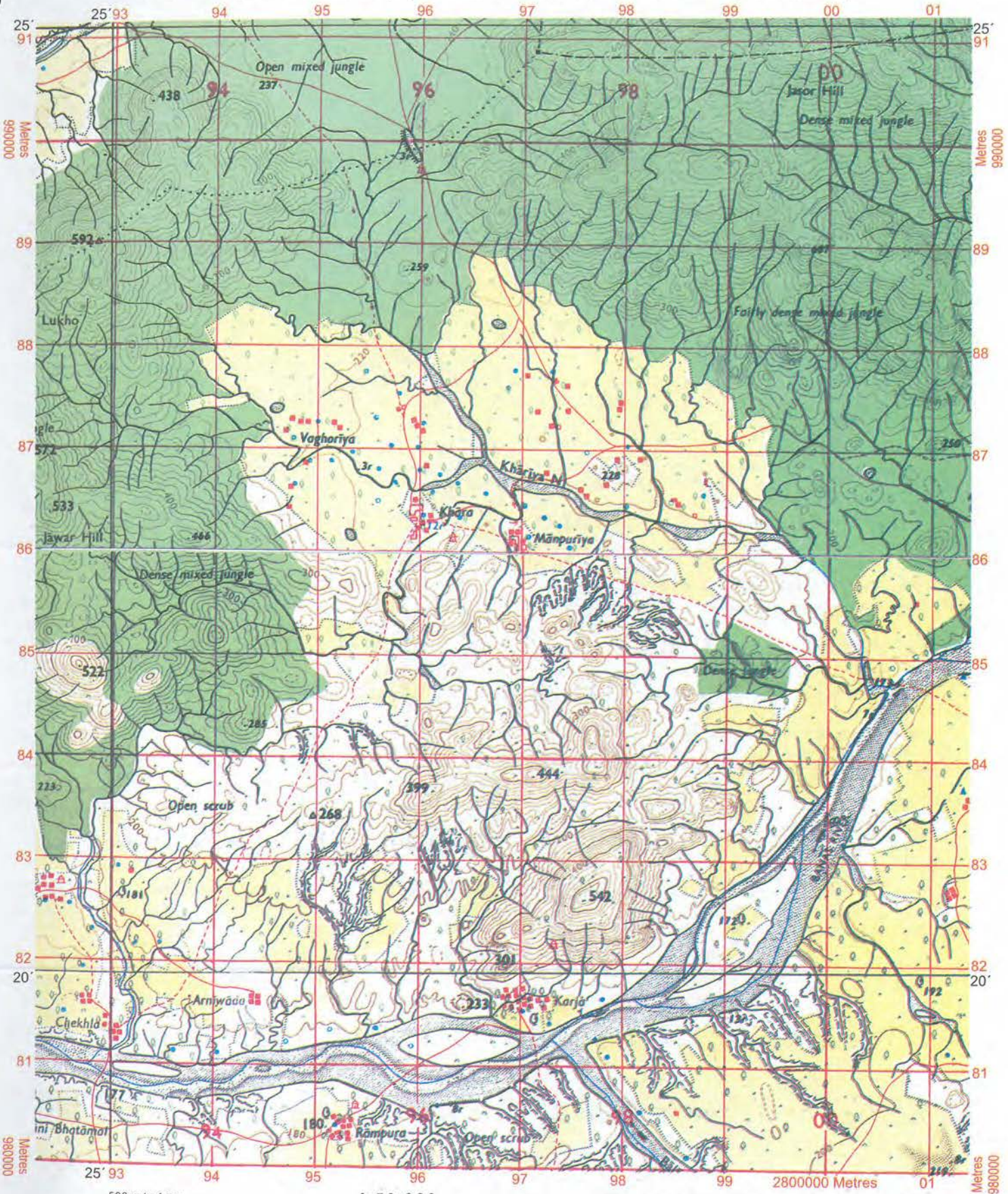
(i) Temple north of Kharja settlement

(ii) 13r in south eastern part of Banas river.

Ans. (i) 974822

(ii) 992815

Part of Topo Sheet no 45^D/₇ : (Eastings: 93 to 01 and Northings: 80 to 91)



© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

11. Give four figure grid reference for the following :

(i) Arniwada settlement

(ii) Village Chekhla

Ans. (i) 9481 (ii) 9381

12. Measure the actual distance (Pack track) between Chekhla (9381) and Khara (9686).

Ans. (i) 6.5 Km approximately.

13. Give examples of the following in this region :

(i) Two means of irrigation

(ii) Two places of worship

Ans. (i) Wells and water channel (ii) Temples near Khara & Rampura

14. What is the straight line distance between Karja (9781) and Manpuriya settlement (9786)?

Ans. 4.5 Km approximately.

15. What is meant by settlement? Where do we find thick settlement in this map extract?

Ans. Settlement is a group of human dwellings in urban and rural areas. Thickly settled areas are fertile plains and wide river valleys.

16. What do small curved lines in black colour in grid square 9582 indicate?

Ans. It indicates broken ground. It is formed due to weathering, extremes of heat and cold etc. along seasonal river's banks.

17. What inference can be drawn about the general occupation of the people of the region shown in yellow colour?

Ans. Yellow wash indicates cultivable land. Perennial lined wells provide irrigation and agriculture is the main occupation here.

18. What does red line (in dash) mean, given in grid square 9885?

Ans. Pack track or foot path.

19. What does the island in Banas river in grid square 9681 indicate?

Ans. Specially in lower course the deposited river load is indicated by islands and rocks. It is prominent if river is dry.

20. State the direction of flow of water in the Banas river. Give one evidence to prove your answer.

Ans. From northeast to southwest indicated by black arrows in 9983.

21. Why are the contours drawn very close to each other in grid square 9782?

Ans. It has steep slope with conical hill at 542 metres height.

22. State the drainage pattern shown in grid 9782. Justify your answer.

Ans. Radial drainage as the streams are flowing in all directions.

23. What do the blue dots in grid square 9587 show?

Ans. Blue dots represent perennial lined wells.

24. What does 3r written in the tank in grid square 9589 indicate?

Ans. Relative height of embankment of the tank is 3 metres.

25. State two natural features in grid square 9980.

Ans. Broken ground and seasonal streams.

26. State two man-made features in grid square 9580.

Ans. Permanent huts and temple.

27. What do the dark colours contours 200 and 400 in between Eastings 97 to 99 and Northings 82 to 84 indicate?

Ans. These are index contours, thickened at regular intervals (every 5th line).

28. What does the red square in grid 0085 indicate?

Ans. It represents permanent hut.

29. What is represented by the red line across Banas river in grid square 9681? What is its use?

Ans. It is a cart track used to cross the river.

30. What is spot height? State the meaning of ●687 in grid square 9988.

Ans. It refers to the height of a point on the ground above mean sea level. ●687 shows that the place is 687 metres above mean sea level.

31. Why is there no cart track or pack track between Eastings 96 to 99 and Northings 82 to 85?

Ans. The presence of contours indicate that it is a mountainous region with steep slopes. People use sideways to move in different directions.

32. What is the general slope of land in the northern part? Give reasons for your answer.

Ans. Slope is towards south. There is hilly region in the north from which many rivers originate and flow towards south & join Kharaya black.

33. What is indicated by the black arrow given in grid square 9880?

Ans. It indicates that the tributary of Banas river is flowing from south to north or from southeast to north west.

34. What can you say about the streams flowing in this region?

Ans. In this region numerous streams are originating from the hilly areas. These are seasonal streams having soft soil easily eroded by water.

35. State the pattern of vegetation in grid square 9680. Why is it found there?

Ans. Scrub is a vegetation found in regions with less than 100 cms. of rainfall. Therefore it indicates a dry region.

36. What is the **drainage pattern** in grid square 0089? Explain.

Ans. Trellised drainage pattern with streams flowing parallel to each other and joining main stream at right angles.

37. Describe the **type of settlement** in village Vaghoriya.

Ans. Dispersed settlement. It is the rural settlement in which people live in cottages scattered over a large area.


38. Give two reasons for the absence of settlements in the area shown with green wash.

Ans. (i) Inaccessible forests,
(ii) Steep mountain slopes.

39. What is a **shoal**? State the grid square where it is found in this map extract.

Ans. It is a rocky area in shallow water. It is shown in grid square 9781.

40. What is the meaning of the following symbols?

(i)  in grid square 9584

(ii) White area in grid square 9483

Ans. (i) Farm lines

(ii) Bad land with scrub

41. State the **contour height** written in grid square 0088.

Ans. 600 metres

42. State one **natural** and one **man-made** feature in grid square 9489.

Ans. Natural feature - Seasonal streams.
Man-made feature - Tehsil boundary.

43. State the actual length of **state boundary** as shown in the map extract.

Ans. 5 km approximately.

44. Which is the highest **trigonometrical station**? State the height and the grid number where it is located.

Ans. $\Delta 268$ located in grid square 9483.

45. What indicates that village Manpuriya has both permanent huts and temporary huts?

Ans. It shows symbols of both permanent huts and temporary huts.

Assignment 7

Study the Topo Sheet No. 45 D/7 (Eastings 77 to 85 and Northings 73 to 83) printed on page no. 44 and answer the following questions:

1. Give four figure grid reference for the following:

(i) Hill in the south

(ii) Depression in south east

Ans. (i) 7975

(ii) 8274/8375

2. Give the directions of the following:

(i) Nilpur (8379) from Nandotra (8282)

(ii) Nilpur (8379) from Bhakar (8076)

Ans. (i) South East

(ii) North East

3. What is the direct distance in km between Kheda (8077) and Sikariya (8181)?

Ans. 3.25 km approximately

4. What is the distance in km along the cart track from Latiya (7980) to Bhakar (8076)?

Ans. 5 km approximately

5. What is the meaning of the following?

(i) Dep in grid square 8274

(ii) PO in grid square 8480

Ans. (i) Depression

(ii) Post Office

6. Give the six figure grid reference for the following:

(i) $\Delta 168$

(ii) $\Delta 169$

Ans. (i) 812786

(ii) 781779

7. Give reason why some of the land in the area shown on the map is not cultivated?

Ans. Some part of land is not cultivated because it is barren and broken by numerous streams flowing over it, especially in the northern part along Banas River.

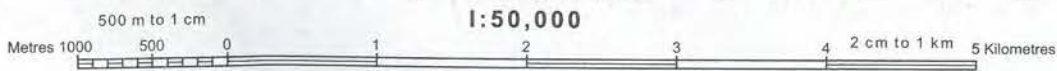
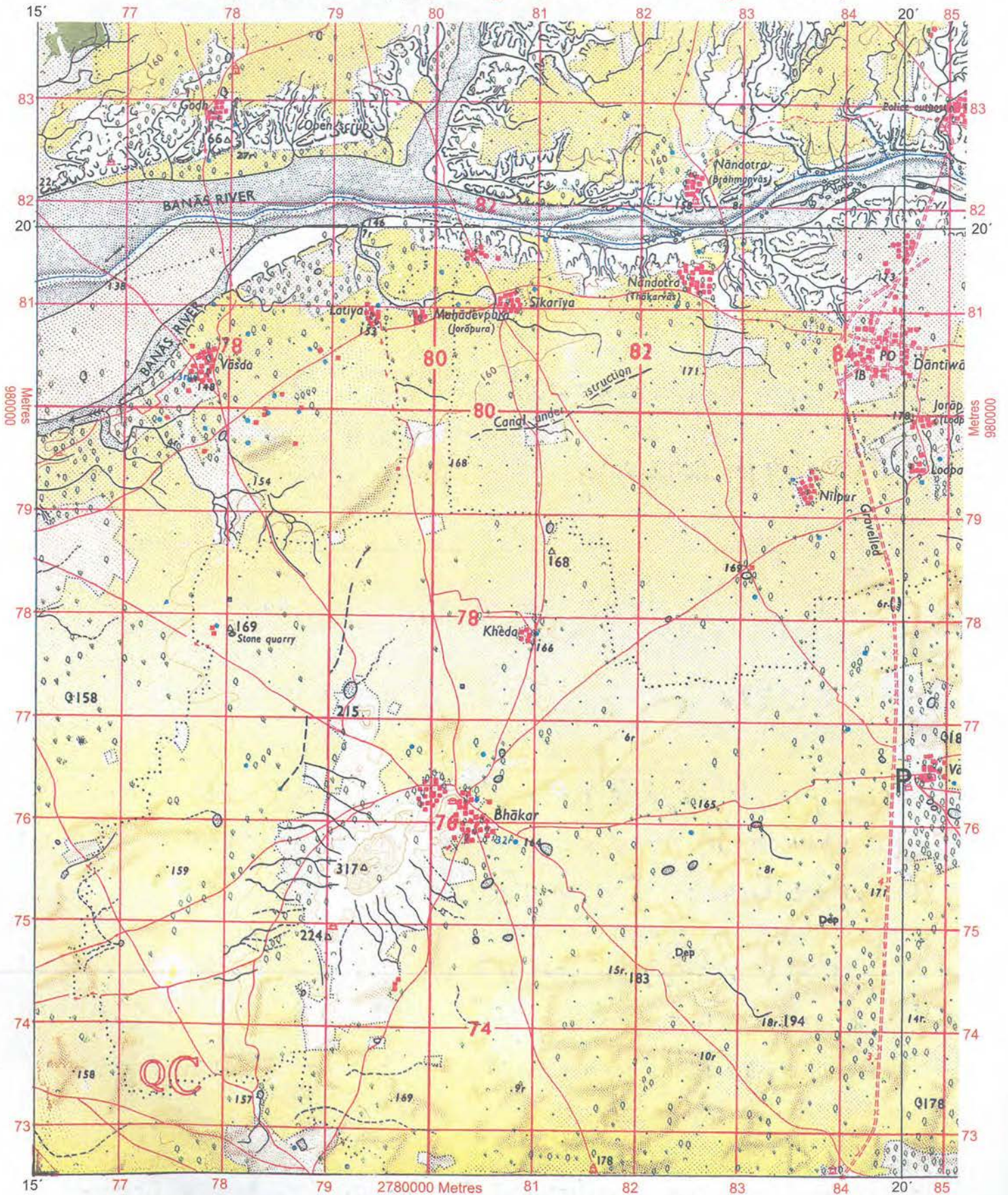
8. What is the most widespread mode of transport used by the people? Give one reason.

Ans. Map shows a wide network of red lines representing cart tracks as the most widespread mode of transport. There is only one unmetalled road on the eastern part running from N to S.

9. Give the drainage pattern in the grid square 7975. Justify your answer.

Ans. Radial pattern as the streams are flowing outward in all directions forming a pattern like the spokes of a wheel.

Part of Topo Sheet no 45^D/₇: (Eastings: 77 to 85 and Northings: 73 to 83)



© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

10. What is the geographical name that you would give to the general pattern of settlements in the region shown on the map? Justify your answer.

Ans. Most part of the land has nucleated settlement. Red colour permanent huts are shown in clusters with Post office, temple, mosque etc.

11. Give two physical features in grid square 7975.

Ans. Two physical features are:
(i) Triangulation height 317.
(ii) Conical hills indicated by circular contours.

12. State two man-made features in grid square 8076.

Ans. Cart track
Permanent huts

13. Find out the straight line ground distance between:

(i) Vasda (7780) and Δ 178 (8473)

(ii) Δ 169 and Δ 317

Ans. (i) 10 km approximately (ii) 2.75 km - approximately

14. What does 10r written in grid square 8273 indicate?

Ans. It indicates that the relative height of sand dune is 10 metres.

15. What is the meaning of the following symbols:

(i) IB in grid square 8480

(ii) Dotted black line in grid square 8277

Ans. (i) Inspection Bungalow (ii) Tehsil Boundary

16. Give six figure grid reference for the following:

(i) Stone quarry near Δ 169

(ii) A tomb in Bhakar settlement.

Ans. (i) 781778 (ii) 803763

17. Give the direction of the following:

(i) Stone quarry (7877) from Kheda (8077)

(ii) Village Godh (7782) from Latiya (7980)

Ans. (i) West direction (ii) North west direction

18. Measure the length of canal in km between Eastings 80 to 83 and Northings 79 to 81 and describe the effect on the life of people of this area, when it is completed.

Ans. Length of canal is 2 km approximately. After completion it would provide a good source of water to the people living in nearby villages. It would lead to an extensive use of land for agriculture.

19. Name any two **physical features** in grid square 7973.

Ans. Sand dunes and undefined streams.

20. Give one reason to explain why the streams in grid square 8280 do not join a river.

Ans. Presence of sandy porous soil do not allow water to flow freely.

21. State two reasons for the absence of human habitation in south eastern part of the map extract.

Ans. The region is sandy with depressions, The land is unsuitable for cultivation or any other activity. Water is not available.

22. Name the **type of rainfall** experienced in the region shown in the map extract. Give a reason to support your answer.

Ans. Seasonal rainfall. Undefined streams and sandy region is present.

23. What is the **blue line** running through the Banas river? What does it indicate?

Ans. It is a perennial narrow water channel. Rest part of the river is dry indicating seasonal rainfall.

24. What is meant by a **gravelled road** as shown in the eastern part of the map.

Ans. A gravel road is a type of unpaved road surfaced with gravel. It may be referred to as unmetalled road.

25. What does the **black circle** in grid square 7977 indicate?

Ans. It is a dry tank.

26. Give the **meaning** of the following symbols:

(i) 18r in the grid square 8374

(ii) ● in grid square 7780

Ans. (i) Relative height of sand dune 15m (ii) Perennial lined well

27. What is meant by **perennial lined well**? Name any one grid square near Nandotra (north of Banas river) where it is found.

Ans. Perennial lined well is a pucca well lined with bricks and cement. It is filled with water throughout the year. Grid square 8282.

28. Give the **direction** of the following:

(i) Village Nilpur (8379) from Vasda (7780)

(ii) ● 171 (8280) from temple (7883)

Ans. (i) South East direction

(ii) _____

29. Find out the **straight line distance** between temple (7883) and Vasda (7780).

Ans. 3 km approximately.

30. Give the six figure grid reference for the following:

(i) Police Outpost in northeast

(ii) Temple north of Godh village

Ans. (i) 849830 (ii) 781834

31. What does figure 168 in grid square 8079 indicate? Give the meaning of it.

Ans. It indicates spot height 168 metres. Spot height is the height of a particular point above the mean sea level.

32. What is indicated by green symbols shown in grid square 7881?

Ans. It indicates presence of dry deciduous trees.

33. What is the drainage pattern shown in grid square 8381? Explain.

Ans. It is the dendritic drainage pattern. In this tree like pattern, the main river is like the trunk and the tributary streams join it like the branches of a tree.

34. What is indicated by red square in grid square 8378?

Ans. It shows permanent tank.

35. Identify the correct six figure grid reference for the following :

(i) 27r near village Godh (775822, 778825, 778828)

(ii) IB east of gravelled road (844804, 842804, 842815)

Ans. (i) 782825 (ii) 842804

36. Give the direction of the following:

(i) Dep (8274) from Bhakar

(ii) Sand dune (7879) from Latiya (7980)

Ans. (i) South East direction (ii) South west direction

37. What does red lines at spot height 169 in grid square 8378 indicate?

Ans. It shows that there are cart tracks in all directions which are used for transportation purposes.

38. What special feature is shown in river bed in grid square 8382?

Ans. It shows shallow river bed. It has dry surface with island, rocks and stones.

39. What is indicated by figure 160 written in grid square 8080? What is brown line?

Ans. It indicates spot height 160 metres. Brown line is the contour line joining places of equal height above sea level.

40. What is the direction of Banas river? Give two evidence to prove your answer.

Ans. Banas river is flowing from North East to South West.
i) Direction of black arrow is south west part of river
ii) Spot height is decreasing towards south west.

41. What is indicated by red squares shown in grid square 7974?

Ans. It indicates permanent huts in linear settlement.

42. What is the spot height at kheda settlement?

Ans. Spot height is 166 metres above sea level.

43. State two man-made features and one natural feature in grid square 8480.

Ans. Man-made features - Unmetalled road and Inspection Bunglow
Natural feature - Sandy region with open scrub vegetation

44. What does the red symbol near $\Delta 224$ (7974) indicate?

Ans. It is the symbol of Chhatra i.e. elevated dome shaped pavilions

45. What is the difference between $\Delta 169$ in 7975 and $\bullet 169$ in 8378?

Ans. $\Delta 169$ in 7977 is the triangulated height. It means that it has been correctly measured.
 $\bullet 169$ in 8378 is the spot height. It means that it has been estimated from the value of adjacent contours.

Assignment 8

Study the Topo Sheet No. 45 D/7 (Eastings 85 to 93 and Northings 73 to 83) printed on page no. 50 and answer the following questions:

- Give six figure grid reference for the following :
 - 207 in the south east
 - Mosque in Juvol

Ans. (i) 907768 (ii) 925827
- What is the **direct distance** in kms between Ranavas (9080) and Vaghrol (8476)?

Ans. 7 Km approximately.
- What is the **actual distance** along the cart track from Ranavas (9080) to Juvol (9282)?

Ans. 3-25 km approximately.
- Give the **directions** of the following :
 - Ranavas (9080) from Ravlavas (8583)
 - Vadavas (8782) from Juvol (9282)

Ans. (i) South East direction (ii) South West direction
- What is the **meaning** of the following?
 - 30r in grid square 8777
 - 180 in brown in grid square 9279

Ans. (i) Relative depth of bored well is 30m. (ii) Contours line of 180 metres
- List two **modes of transport** shown in the map extract.

Ans. (i) Cart track (ii) Pack track
- What **type of rainfall** is experienced in the region shown in the map extract? Justify your answer giving one reason.

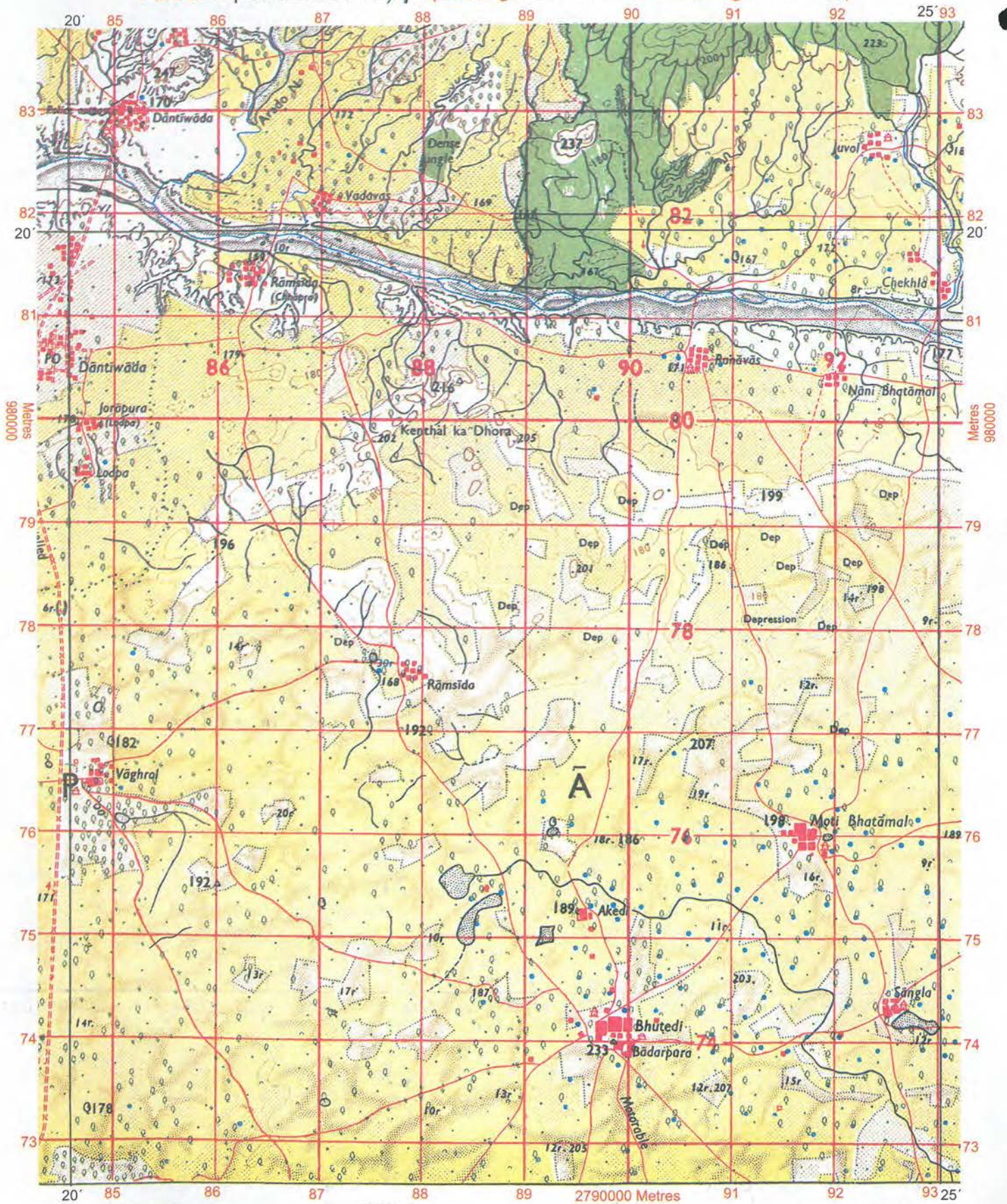
Ans. Seasonal rainfall.
Presence of dry streams and tanks.
- What is the **main occupation** of the people living in the area shown in the map extract? Give one reason to support your answer.

Ans. Agriculture as the region has yellow wash indicating cultivable land.
- What is meant by $\Delta 192$?

Ans. It means triangulated height is 192 metres.
- Give the meaning of **Dep** written in grid square 8977.

Ans. It shows depression often found in sandy regions at the top of dune.

Part of Topo Sheet no 45D/7 : (Eastings: 85 to 93 and Northings: 73 to 83)



500 m to 1 cm
 1:50,000
 2 cm to 1 km 5 Kilometres

© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

11. Give four figure grid reference for the following:

(i) Settlement Davitiwada north of Nala

(ii) Depression near Kenthal ka Dhora

Ans. (i) 8582

(ii) 8879

12. Give the drainage pattern in the grid square 8780. Justify your answer.

Ans. (i) Dendritic drainage pattern like branches of tree. It is found on flat land.

13. Draw symbols to represent the following features on topographical map :

(i) Confluence : Meeting of tributary and main river

(ii) Seasonal tank/dry tank

Ans. (i) 

(ii) 

14. Give at least two man-made features in the grid square 8582.

Ans. (i) Unmetalled road

(ii) Permanent kule

15. Give at least two natural features in the grid square 9074.

Ans. (i) Sand dunes

(ii) Trees

16. Give the settlement pattern in the grid square 9282. Explain.

Ans. It shows linear settlement. It develops on either side of a river or road.

17. Find out the direct ground distance from Vaghrol (8576) and Vadavas (8782).

Ans. 6 km approximately.

18. Explain hill features in grid square 8880.

Ans. It has a conical hill having triangulated height of 216 metres.

19. In this region of map extract, some streams started to flow from their origin point but disappeared after a few kilometres, why? Give two reasons.

Ans. Presence of sandy soil which is porous and absorb water. Region gets poor rainfall or seasonal rainfall.

20. In which part of the map we find a gravelled road?

Ans. South western part of the map.

21. What does the blue dot in grid square 8874 indicate?

Ans. The blue dot in grid square 8874 indicates - Perennial lined well.

22. Give the meaning of the symbol 10r in grid square 8681.

Ans. It means that the relative height of river bank is 10 metres.

23. What is meant by 8r near Chakhla village (9281)?

Ans. Relative height of river bank is 8 metres.

24. What is the **contour height** in grid square 9078?

Ans. In grid square 9078, the contour height is 180 metres above sea level.

25. State the type of **drainage pattern** in grid square 8880. Justify your answer.

Ans. Trellised pattern. Due to alternating layers of hard and soft rocks, streams join main rivers at right angles forming a trellis.

26. What is the **main pattern of transport** around the settlement Bhutedi (9074)?

Ans. Radial pattern of transport as the cart tracks are going in all directions. In southern side, it has one motorable track.

27. What is the **relative depth** of dry tank near Sangla settlement?

Ans. Relative depth of dry tank is 12 metres.

28. What do the following represent?

(i) **Black broken lines** in 8581

(ii) **Black curved lines** in 8779

Ans. (i) Broken ground.
(ii) Disappearing streams.

29. What is the **actual map distance** between Juvol (9282) and Vadavas (8782)?

Ans. 5.5 km approximately.

30. Mention any **two natural features** found in grid square 8978.

Ans. Uncultivable land and depression (sandy region)

31. What is the meaning of the following symbols?

(i) **Red lines** in grid square 8974

(ii) **Black tree** in grid square 8976

Ans. (i) Cart tracks
(ii) Surveyed tree.

32. State the **shortest cart track distance** between Bhutedi (8974) and Ranavas (9080).

Ans. 7.5 km approximately

33. Mention two **man-made features** in grid square 9080.

Ans. Permanent huts and temple.

34. What **type of settlement** is found in grid square 9281?

Ans. Scattered settlement.

35. Mention the factors which provide evidence that the region in the map extract is a rural region.

Ans. • No metalled roads only cart tracks.
• Main source of water - lined perennial wells
• Lack of amenities like hospitals, telephone lines etc.

36. What does the **black curved line** in the south east corner of the map indicate? State the direction of it with evidence.

Ans. It is a seasonal stream having water in the rainy season. It is flowing from SE corner towards NW, and draining into the tank. It is indicated by the decreasing relative height from East to West.

37. What is the **total length** of Nala (water body) shown in the map extract?

Ans. 9 km approximately.

38. State the **meaning of the symbols** in green in the grid square 8576.

Ans. Dry deciduous trees found in the areas having seasonal rainfall.


39. State the **directions of the streams** flowing in between Eastings 86 to 93 and Northings 81 to 83. Give evidence.


Ans. Streams are flowing from North-east to South-west, because spot height is decreasing towards the west.

40. How Ranavas (9080) is linked with Nani Bhatamal (9280)?

Ans. Through cart track.

41. What is the **meaning** of the following symbols?

(i)  in grid square 8978

(ii)  in grid square 9179

Ans. (i) Depression - a hollow in sand hill (ii) Forn lines indicating height of area

42. Give **four figure grid reference** for the following :

(i) Village Moti Bhatamal

(ii) Village Akedi

Ans. (i) 9175/76

(ii) 8975

43. State the **direction** of the following :

(i) Temple in Moti Bhatamal (9175) from temple in Ranavas (9080).

(ii) Village Chekhla (9381) from Vadavas (8782)

Ans. (i) South-east direction

(ii) South-east direction

44. Give the **drainage pattern** in the grid square 8983. What does the green patch in the grid square indicate?

Ans. Dendritic drainage pattern. Green colour indicates that the area has forests, trees, shrubs etc.

45. In grid square 8881, the streams are joining the Nala at right angles. What does it show?

Ans. Streams are flowing from North to South. The streams are showing Trellis drainage patterns.

Assignment 9

Study the Topo Sheet No. 45 D/7 (Eastings 93 to 01 and Northings 73 to 83) printed on page no. 55 and answer the following questions:

- What is the meaning of the following symbols?
 - 13r in grid square 9981
 - 10r in grid square 9778

Ans. (i) Relative height of river bank - 13 metres (ii) Relative height of sand dune - 10 metres
- What is the direct distance between Antroli (9576) and Chitrasani (9974)?

Ans. 5.25 km approximately
- Give the directions of the following :
 - Bantawada (9978) from Arniwada (9481)
 - Ikhapura (9376) from Antroli (9576)

Ans. (i) South - east (ii) North - west
- What is the distance in km along the pack track from Karja (9781) to Pirojpura (9775)?

Ans. 6.5 km approximately
- Give four figure grid reference for the following :
 - Tomb west of village Antroli
 - Village Hebatpur in the south eastern part

Ans. (i) 9476 (ii) 9873
- Give six figure grid reference for the following :
 - Temple in village Antroli
 - Temple north of Village Rampura

Ans. (i) 952765 (ii) 955805
- Give the meaning of the following :
 - Open blue circle in 9481
 - Red square in 9977

Ans. (i) Perennial unlined well (ii) Permanent hut
- What is the type of relief found in the following grid locations?
 - 9782
 - 9679

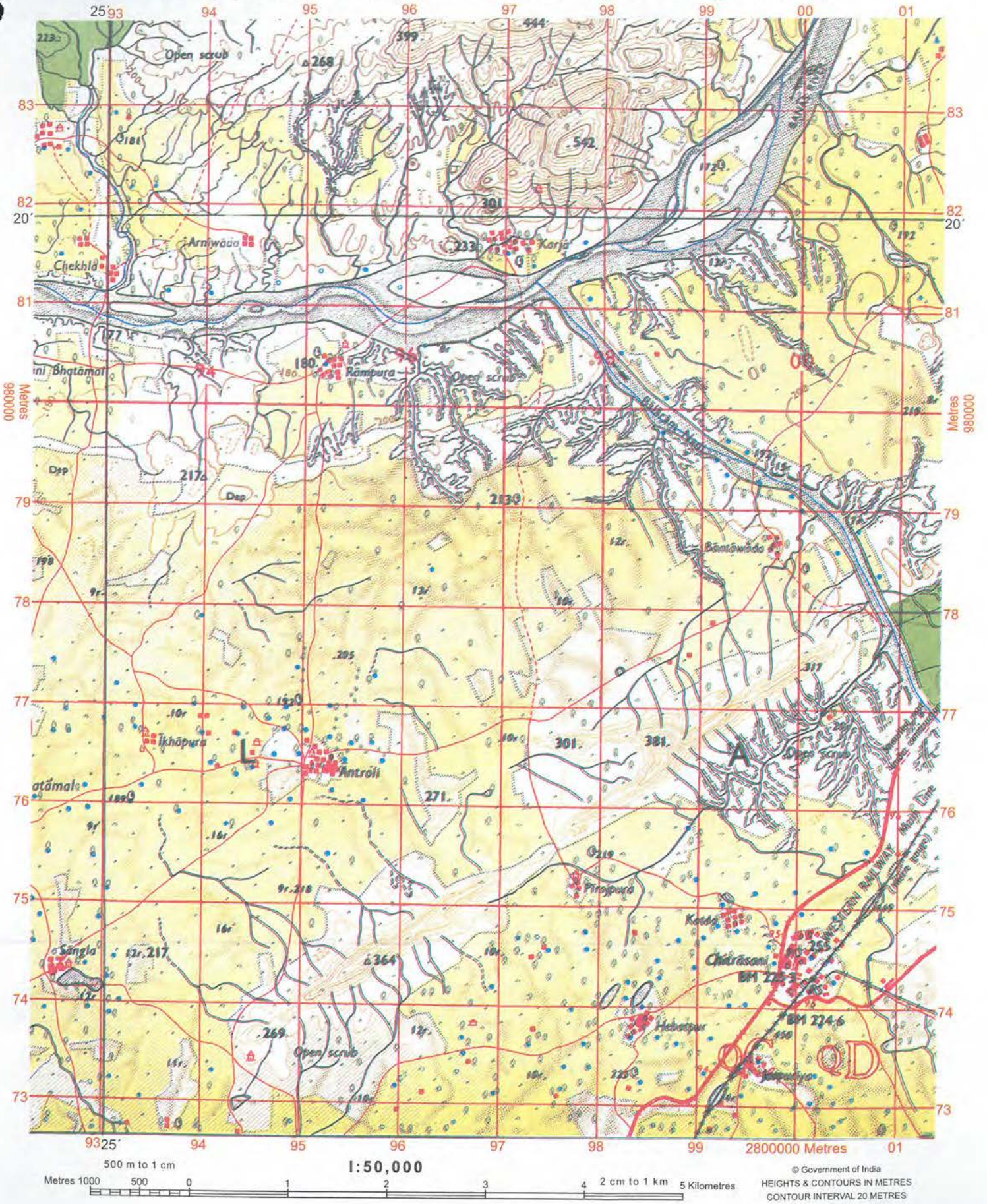
Ans. (i) Hills with steep slopes (ii) Broken ground
- State the drainage pattern in grid square 9782. Explain the main features of it.

Ans. Radial drainage - the streams spread out in all directions like spokes of a wheel. It is seen where a conical hill exists.
- List the modes of transport you find in the map extract.

Ans. Cart track, pack track, metalled road, railway line.
- What are the modes of irrigation found in the area?

Ans. Perennial lined wells, tube wells, perennial unlined wells.

Part of Topo Sheet no 45^D/₇ : (Eastings: 93 to 01 and Northings: 73 to 83)



12. Give one reason to explain why the streams in grid square 9478 do not join a river. Identify another grid square in the map extract that has similar streams.
- Ans. This region has sandy soil and due to less rainfall volume of water in streams is less. Other similar stream is in grid square 9577.
13. Identify two landforms shown by the contours in grid square 9876.
- Ans. Conical hill and watershed.
14. What is the general direction of Balram Nadi in the south-eastern part of the map extract. Give one evidence.
- Ans. SE to NW as indicated by black arrow in grid square 9880.
15. What is the meaning of the following :
- (i) $\Delta 217$ (ii) White coloured area in grid square 9483
- Ans. (i) Triangulated height is 217 metres. (ii) Uncultivable land or waste land.
16. Give the direction of the following :
- (i) Chekhla village (9381) from Bantawada (9978) (ii) Open scrub from Jaspuriya (9973)
- Ans. (i) North-west (ii) North-west
17. What is the straight line distance between Railway Station (0074) and Rampura (9580)?
- Ans. 8 km approximately
18. What do the following represent?
- (i) Black broken lines in 9575 (ii) Black curved lines in 9879
- Ans. (i) Disappearing streams (ii) Broken ground
19. Which is the highest trigonometrical station? State the height and grid where it is located.
- Ans. Highest trigonometrical station is $\Delta 364$.
It is located in grid square 9574. Height is 364 metres.
20. What is the reason for the presence of many islands in the bed of the Banas river?
- Ans. There are many islands in the bed of the river because of seasonal rainfall and narrow perennial water channels.
21. What kind of settlement pattern do you find in 9476? What can you infer from the presence of this type of settlement pattern?
- Ans. Dispersed settlement because people live in their own farms.
22. What type of relief is found in grid square 9578?
- Ans. Sand dunes and sand hills.
23. What does PO mean as written in grid square 0074?
- Ans. It represents Post Office.

24. In grid square 9379, there is a number 217. What does this indicate?

Ans. Triangulated height which has been calculated using trigonometry.

25. In what way is the **pattern of settlement** in grid square 9476 different from that in grid square 9580?

Ans. 9476 has dispersed settlement as people live on their farms.
9580 has nucleated settlement and huts are clustered together forming townships.

26. What is the total length of **Western Railway** in south east corner of the map extract? How do you calculate it?

Ans. Scale of the map states that 2 cm = 1 km. Total length of railway line is 8 cm or 4 km.

(2 cm = 1 km, hence 8 cm = 4 km.)

27. Find out the **length of the ridge** from 9574 to 0077 in kilometres.

Ans. 7 km approximately.

28. What is the **actual track distance** between Antroli (9576) and Bantawada (9978)?

Ans. 6 km approximately.

29. State **two landmarks** given in grid square 0074.

Ans. PO: Post Office RS: Railway Station

30. What is indicated by **two black oval shaped circles** shown on grid square 9874?

Ans. These are dry tanks or having water only in rainy season.

31. State two **natural features** found in the grid square 9882.

Ans. Disappearing streams and hills with steep slopes.

32. State two **man-made features** shown in grid square 9576.

Ans. Temple and permanent huts.

33. State two **main means of transport** in the south eastern part of map extract.

Ans. Metalled road and Western Railway

34. Give **six figure grid reference** for the following :

(i) $\Delta 364$ along the ridge in the south

(ii) Surveyed tree south of village Karja.

Ans. (i) 957745

(ii) 972815

35. What is the **general slope of the area** in northern half of the map extract? Give evidence.

Ans. Slope is towards west, because both Banas and Balrao Nadi meet in the eastern part and flow towards west.

36. Explain the **nature of the river Banas**.

Ans. River is dry and flow towards west. Presence of sediments and broken ground indicate that it is in the middle course.

37. Give direction of surveyed tree 213 (9779) from surveyed tree 225 (9873).

Ans. North west.

38. What is the actual length of the metalled road from grid square 9873 to grid square 0176?

Ans. 5.5 km approximately.

39. Which is the most important settlement in this map extract. Give any two reasons.

Ans. Chitrasani. It has advantages of good transport facilities i.e. metalled road and railway line. It also has Post Office.

40. Describe the relief in grid square 9782.

Ans. Region is hilly with steep slopes. Contour height is 400 metres. Height of conical hill is 542 metres. It has radial drainage pattern with disappearing streams. It also has the escarpment.

41. Which is the biggest settlement north of the Banas river?

Ans. Karja settlement.

42. Name one region shown on the map which is unsuitable for the cultivation of crops.

Ans. White coloured region is barren land e.g. grid square 9776.

43. What type of rainfall is experienced in the region shown in the map extract? Justify your answer giving one reason.

Ans. Seasonal rainfall as the streams and rivers are seasonal with low water levels.

44. Why do you find limited cultivation in the map extract? Give two reasons for your answer.

Ans. Due to seasonal rainfall most of land is unsuitable for cultivation. Large part of land is sandy with sand dunes or sand mountains.

45. What difference do you observe in the pattern of drainage in grid square 9573 and the drainage in grid square 9381?

Ans. 9573 has trellis drainage pattern.
9381 has dendritic drainage pattern.

Assignment 10

Study the Topo Sheet No. 45 D/10 (Eastings 02 to 10 and Northings 17 to 28) printed on page no. 60 and answer the following questions:

- (i) Give **four figure grid reference** for the settlement of Bhamra.
(ii) Give **six figure grid reference** for the temple in the settlement of Jolpur.

Ans. (i) 0420 (ii) 079188

- What does the **blue coloured circle** in the grid square 0619 represent?

Ans. Perennial lined well.

- What is the **compass direction** of the following:

(i) Dantarai from Jolpur

(ii) Dhad Talao from Bhamra

Ans. (i) North-west (ii) North-east

- What is the difference between the **pattern of settlements** in 0725 and the settlement of Idarla?

Ans. 0725 has dispersed or scattered settlement.
Idarla has nucleated or compact settlement.

- What is the **value of the contour line** in square 0426?

Ans. The value of contour line is 300 metres above mean sea level.

- Mention any **two factors** which provide **evidence** that the region in the map extract is a rural region.

Ans. Main occupation is agriculture.
No metalled road only cart tracks.

- How does the feature indicated by the **black curves** in grid square 0721 show that rainfall in this region is seasonal?

Ans. It is the broken land or barren land. Broken ground is the result of weathering caused by alternate wet and dry periods which indicates seasonal rainfall.

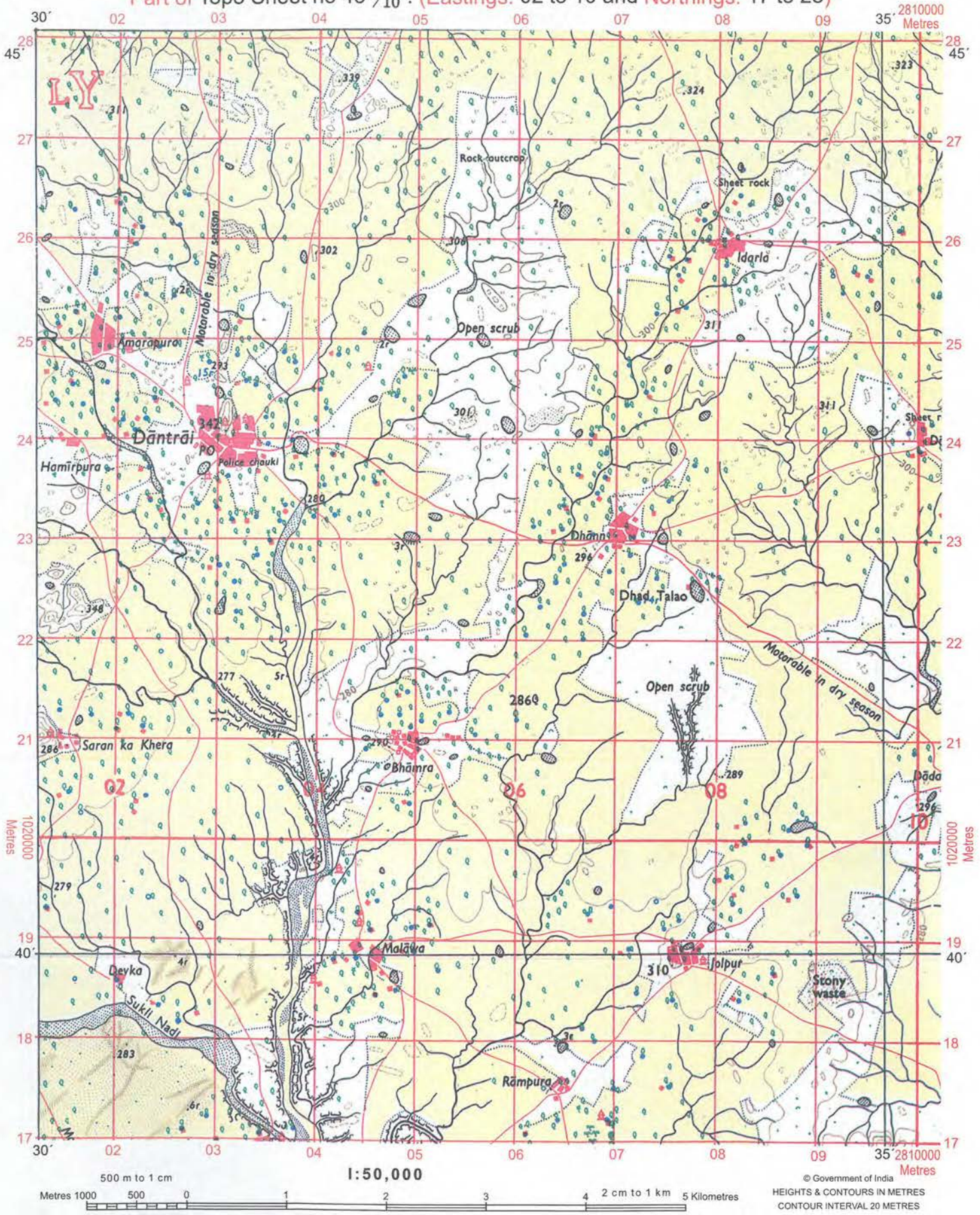
- Name two **natural features** in grid square 0527.

Ans. Barren land and seasonal streams.

- Name two features which make Dantarai a more important settlement than the other settlements in the map extract.

Ans. Dantarai is a more important settlement due to the presence of Post Office and Police Chalki.

Part of Topo Sheet no 45^D/₁₀ : (Eastings: 02 to 10 and Northings: 17 to 28)



© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

10. What is meant by the following?

- (i) **Black vertical line** between Eastings 09 and 10 (ii) **302** in grid square 0325

Ans. (i) Line of longitude 35°
(ii) Spot height of 302 metres above mean sea level.

11. Name two **man-made features** in grid square 0225.

Ans. Permanent huts and cart tracks.

12. What is the **distance** in km **along the cart track** from Bhamra (0420) to Idarla (0825)?

Ans. 6.5 km approximately.

13. Find out the **area of fairly dense scrub** south of Sukli Nadi in the western part of the map extract.

Ans. 1 Sq. km.

14. What is meant by **3r** written in grid square 0617?

Ans. Relative height of tank with embankment is 3 metres.

15. State the **drainage pattern** in grid square 0319.

Ans. Dendritic pattern of drainage.

16. What is the **meaning** of the following symbols?

- (i) **4r** in grid square 0218 (ii)  in grid square 0226

Ans. (i) Relative height of sand dune 4 metres (ii) Permanent hut

17. Measure the **actual track distance** between Dhann and Idarla.

Ans. 4 km approximately.

18. Find out the **direction** of Saran Ka Khera from Dantrai.

Ans. South West direction.

19. Calculate the **area of the region** which lies to the south of Northings 21 in square kilometres.

Ans. Area of the region is 36 Sq. km. as per the scale given.

20. Give reasons why there are so many **lined wells** in the region represented by map extract.

Ans. The region has underground water and high water table. Dry tanks and rivers have made it necessary to dig wells for irrigation.

21. Name the **largest settlement** shown on the map and mention the special communication facility it enjoys unlike other villages in the map.

Ans. Dantrai is the largest settlement. Special communication facility it enjoys is Post Offices.

22. Name two natural features found in grid square 0520.

Ans. Seasonal stream, and trees.

23. What is the straight line distance between the temple in village Jolpur and the temple in village Bhamra?

Ans. 3.5 km. approximately.

24. Give six figure grid reference for the following:


(i) Temple in Jolpur

(ii) Temple in South east of Rampura

Ans. (i) 078189

(ii) 068173

25. What is the meaning of the following?

(i)  in grid square 0820

(ii) 'Motorable in dry season' in south east

Ans. (i) Natural dry tank

(ii) Cart track submerged in rainy season.

26. Give the direction of the following:

(i) Dhann (0723) from Bhamra (0521)

(ii) Jolpur (0718) from Dhann (0723)

Ans. (i) North East

(ii) South East

27. What is the difference between 6r in 0217 and 5r in grid square 0318?

Ans. 6r - Relative height of sand dune is 6 metres.

5r - Relative height of river bank is 5 metres.

28. What kind of settlement pattern do you find between Eastings 02 to 04 and Northings 23 to 25? What inference can you draw about the development of this type of settlement?

Ans. Nucleated or clustered settlement. It is well connected to all other places and has facilities like Post Office and Police Chalki. It is well developed having permanent huts.

29. What are the modes of irrigation found in the area?

Ans. Sukli Nadi and its tributary, perennial wells and tanks.

30. Why is there no water in Sukli Nadi?

Ans. This region gets only seasonal rainfall. Therefore, most part of the year Sukli Nadi is dry.

31. What kind of climate do you infer from the nature of streams and tanks present in the region?

Ans. The region experiences hot and dry climate with the short rainy season.

32. What is the **settlement pattern** in the grid square 0819? Give evidences.

Ans. Scattered or dispersed settlement. Permanent huts are scattered in the region. These are not clustered.

33. State one **man made feature** in grid square 0723 which indicates that people are religious.

Ans. Temple in Dhann settlement.

34. What is the **meaning** of the following symbols?

(i) PO

Ans. (i) Post Office

(ii) 

(ii) Disappearing streams

35. Give the **four figure grid reference** for the following:

(i) Village Malawa in the south

Ans. (i) 0418

(ii) Dhad Talao towards the east

(ii) 0722

36. Find out the **direction** of the following:

(i) **Sheet Rock** (0826) from **Rock Outcrop** (0526)

Ans. (i) East direction

(ii) **Stony waste** (0918) from **Rampura** (0617)

(ii) North East direction

37. Mention the **highest** and the **lowest points** on the map? Find out the **straight line distance** between them in km.

Ans. Highest point - 342 (0224)
Lowest point - 277 (0321). Distance is 2.5 km approximately.

38. Measure the **actual track distance** between Rampura and Jolpur (0718).

Ans. 2 km approximately.

39. What is meant by **open scrub** as shown in the grid square 0721?

Ans. Scrub is a vegetation found in regions with less than 100 cm of rainfall. It indicates dry region having desert and semi-desert conditions having grasses, herbs and geophytes.

40. What do the **symbol of tree** in black colour in grid square 0621 indicate?

Ans. Surveyed tree shown in black colour. It serves as a prominent survey point. It serves as a landmark. It is not permitted to cut.

41. What does the **brown dots** in grid square 0217 indicate?

Ans. It indicates sandy region with sand dunes or mounds of sand.

42. What is the **meaning** of the following symbols?

(i) 2r in the northwest corner

(ii) ● in the grid square 0423

- Ans. (i) Relative height of stream is 2 metres.
(ii) Perennial lined well.

43. What is the **general slope** of the area? Give reasons for your answer.

- Ans. The slope of the area is towards south. Main river flows towards south as indicated by growing width of the river in southward direction. The highest point - 342 is in the North and extreme south - 283 metres indicates this fact.

44. Which is the **main occupation** followed by people living in this region? Which additional occupation is likely to be followed by people?

- Ans. Agriculture is the main occupation as indicated by yellow colour. The additional occupation followed by the people is cattle rearing.

45. Find out the **direction** of the Bhamra village from the temple in grid square 0324.

- Ans. The direction of the Bhamra village from the temple is south east.

Assignment 11

Study the Topo Sheet No. 45 D/10 (Eastings 10 to 18 and Northings 17 to 28) printed on page no. 66 and answer the following questions:

1. Name and give the **four figure grid reference** of a settlement where the people of the region meet at least once a year.

Ans. Grid 1528. People meet in Annual Fair held in March.

2. What do the following mean?

(i) 6r in grid square 1218

(ii) PS in grid square 1622

Ans. (i) Relative height or depth of contour (ii) Police station

3. Mention **two factors** which support that the **rainfall** in the region shown in the map extract is seasonal.

Ans. Presence of causeways, dry rivers, broken land and brackish indicate seasonal rainfall in the region.

4. Give the **six figure grid reference** for the following:

(i) ●351 in the north

(ii) 294 east of Nagani settlement

Ans. (i) 154273

(ii) 132244

5. What is the **total length** in km of the metalled road found in the map?

Ans. 1 km approximately.

6. What is the **distance** in metres of the pack track from Nagani (1224) to the place where it crosses another pack track? Show calculation.

Ans. According to the given scale 2 cm = 1 km. Hence the distance of 8 cm = 4 km or 4000 metres.

7. Give the **directions** of the following:

(i) Mohabbatgarh (1717) from Pamera (1622)

(ii) Dadarla (1020) from Nagani (1224)

Ans. (i) South East direction.

(ii) South West direction.

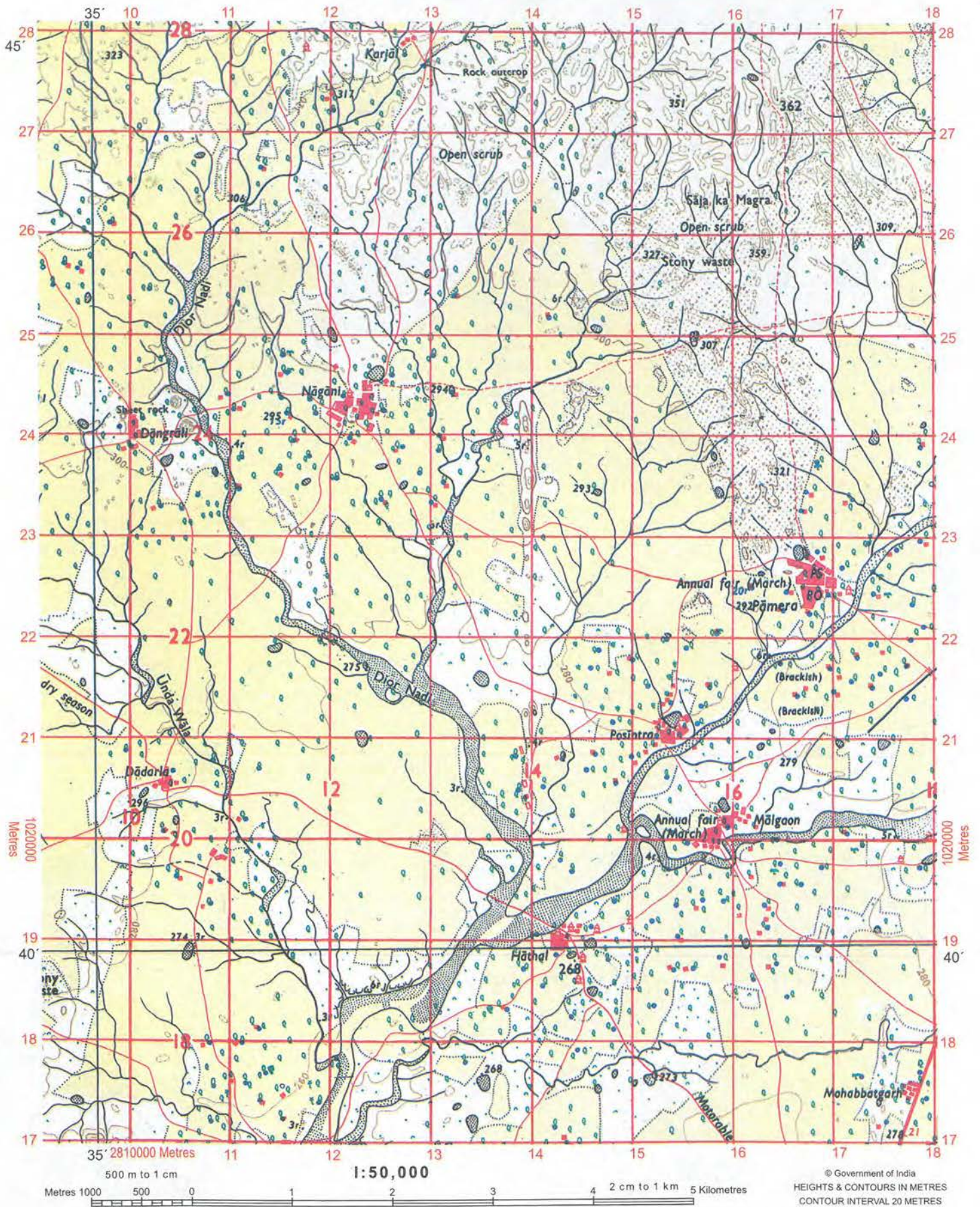
8. What is the **settlement pattern** in grid square 1717?

Ans. Linear settlements

9. Which is the **chief mode of irrigation** found in the area? Give reasons for the abundance of this mode of irrigation.

Ans. Perennial lined wells. This is because the area receives

Part of Topo Sheet no 45 D/10 : (Eastings: 10 to 18 and Northings: 17 to 28)



© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

Seasonal rainfall and water table is high. Rivers have water in the rainy season only.

10. What is the main mode of transport as shown on the map?

Ans. Cart track. South-east corner has 1 km long metalled road.

11. What is the general slope of the land? Give two reasons to support your answer.

Ans. North to south as indicated by spot heights and flow of rivers.

12. Identify the drainage pattern in grid square 1422.

Ans. Dendritic drainage pattern.

13. Which part of the map extract is not suitable for agriculture? Give reason.

Ans. Northern part because white colour indicates uncultivable dry land. This slopy land is eroded by streams flowing in this region.

14. What is the meaning of the following conventional signs?

(i) 294 in grid square 1324

(ii) Stony waste in grid square 1525

Ans. (i) Prominent surveyed tree 294 (ii) Fragment rock pieces & dry land

15. Give the directions of the following:

(i) Settlement Nagani (1224) from Open Scrub (1326)

(ii) Village Mohabbatgarh (1717) from village Hathal (1418)

Ans. (i) South west direction (ii) South East direction

16. Find out distance in km between settlement Dangrali and Malgaon (1620).

Ans. Direct distance between the two settlements is approximately 14 cm. This is equal to 7 km according to the given scale.

17. Locate the highest and lowest point on the map and also give four figure grid reference.

Ans. Highest point - spot height 362 (grid 1627)
Lowest point - Contour of 260m (grid 1117)

18. Give two man-made features shown in grid square 1224.

Ans. Permanent huts and temple.

19. What type of trees are found in the region given in map extract? Give any one reason.

Ans. Deciduous trees with open scrub i.e. desert or semi-desert type of vegetation. This is because of seasonal rainfall.

20. Name two main rivers found in the region.

Ans. Pior Nadi and its tributary Undo wala.

21. Why there is no water in the rivers?

Ans. There is no water in the river as this area receives only seasonal rainfall, which is also very less.

22. What is the difference between the relief in the northern and southern part of the map?

Ans. Northern part has high relief, comprises of hills. Southern part has low relief, comprises of plains.

23. Name the geographical feature represented by white patch in grid square 1221 in the middle of the river.

Ans. It represents an island, rock or big stone.

24. What is indicated by 20r written in blue in grid square 1622?

Ans. It shows that the depth of unlined well is 20 metres.

25. Find out the area of uncultivated land between Eastings 14 to 18 and Northings 24 to 28. Show calculation.

Ans. On the map each grid square measure 2 cm x 2 cm or 1 km x 1 km. Therefore, the area of each square is 1 sq. km. Here, the number of squares are 16, therefore, total area is 16 sq. km.

26. Give the six figure grid reference for the following:

(i) A dry tank south of Hathal village

(ii) ●362 in the north eastern part

Ans. (i) 144189

(ii) 165274

27. What is the meaning of the following?

(i) 5r in grid square 1720

(ii) 320 in grid square 1127

Ans. (i) Relative height of river bank is 5 metres.

(ii) Contour height of 320 metres.

28. Give the direction of the following:

(i) Dangrali (1024) from Nagani (1224)

(ii) Temple (1419) from Temple (1224)

Ans. (i) West direction

(ii) South east direction

29. Give the **drainage pattern** in grid square 1626.

Ans. Trellis drainage pattern.

30. What is meant by the term '**brackish**' written in grid square 1621?

Ans. Brackish written beside a lined well shows that the water of that well is salty and unfit of drinking and cultivation. Arid regions have high salt content in water due to excessive evaporation.

31. Find out **two natural features** in grid square 1525.

Ans. Stony waste and disappearing streams.

32. What is the **straight line distance** between Nagani (1224) and Hathal (1419).

Ans. 5.5 km approximately.

33. Give the **meaning** of the following:

(i) **Blue dots** south of village Malgaon

(ii) **Rock outcrop** in grid square 1327

Ans. (i) Perennial lined wells

(ii) Scanty desert type vegetation where rocks are cropped out.

34. State the **differences between the two rivers** found in this region, i.e., Dior Nadi and Unda Nala.

Ans. Dior Nadi is broader and has more sediments. Unda Nala is narrow with less sediment. It is tributary of Dior Nadi.

35. Give **four figure grid reference** for the following:

(i) Saja ka Magra

(ii) Canal east of Brackish

Ans. (i) 1526/1626

(ii) 1721

36. Give **six figure grid reference** for the following:

(i) **Dry tank** north of Posintra

(ii) **Spot height 296** south of Dadarla

Ans. (i) 154212

(ii) 107204

37. Give the **meaning** of the following:

(i) **6r** in grid square 1218

(ii) **Sheet rock** in grid square 1024

Ans. (i) Relative height of river banks

(ii) Well polished hard rocks (exposed)

38. Find out **indirect distance** in km along the cart track from settlement Nagani (1224) to Posintra (1521).

Ans. 5 km approximately.

39. State the **drainage pattern** in grid square:

(i) 1017

(ii) 1727

Ans. (i) Dendritic pattern

(ii) Trellised pattern

40. Draw the **symbols** for the following:

(i) Dry tank with embankments

(ii) Dry river bed

Ans. (i) 

(ii) 

41. State **two man-made features** in grid square 1419.

Ans. Permanent huts and temples.

42. State **two natural features** shown in grid square 1024.

Ans. Sheet rock and Dier Nadi.

43. State the **three modes of irrigation** found in this area.

Ans. Perennial lined wells, tanks and canal are the three modes of irrigation found in this area.

44. What according to you is the **main religion** of the people of village Hathal? Give evidence.

Ans. Probably Hindu is the main religion of the people living in village Hathal. This is indicated by the presence of three temples in village Hathal.

45. Name **two settlements** where Annual Fair is held in March.

Ans. Village Pamera and Village Malgaon.

Assignment 12

Study the Topo Sheet No. 45 D₁₀ (Eastings 18 to 26 and Northings 17 to 28) printed on page no. 72 and answer the following questions:

1. What is the meaning of the following?

(i) Fire line in the south east

(ii) Causeway in 1820

Ans. (i) Clearing made in the forest to prevent forest fire from spreading.
(ii) Small bridge built over a stream to maintain level of the road.

2. What is the total length in km of the fire line found in the map?

Ans. 2.5 km approximately.

3. What is the total length of the canal in metres?

Ans. 5750 metres approximately.

4. Give the directions of the following:

(i) Sanwara (2025) from Udvariya (2423)

(ii) Tokra (2221) from Burari Khera (2521)

Ans. (i) North west direction

(ii) West direction

5. Is the area developed? Support your answer with four evidences from the map.

Ans. Yes, as indicated by the presence of canal, dam, dispensary, metalled road and Dak Bungalow.

6. Which is the chief mode of transport in the map? Give reasons for your answer.

Ans. Metalled road because it connects villages like Sanwara, Sirsi and Gulabganj, hence likely to be used by large population.

7. What are the modes of irrigation found in the area?

Ans. Dam and reservoir, canal and perennial lined wells.

8. Describe the nature of Sukli Nadi.

Ans. It is a narrow and dry river. It has less sediment. It flows westward and it does not have broken banks.

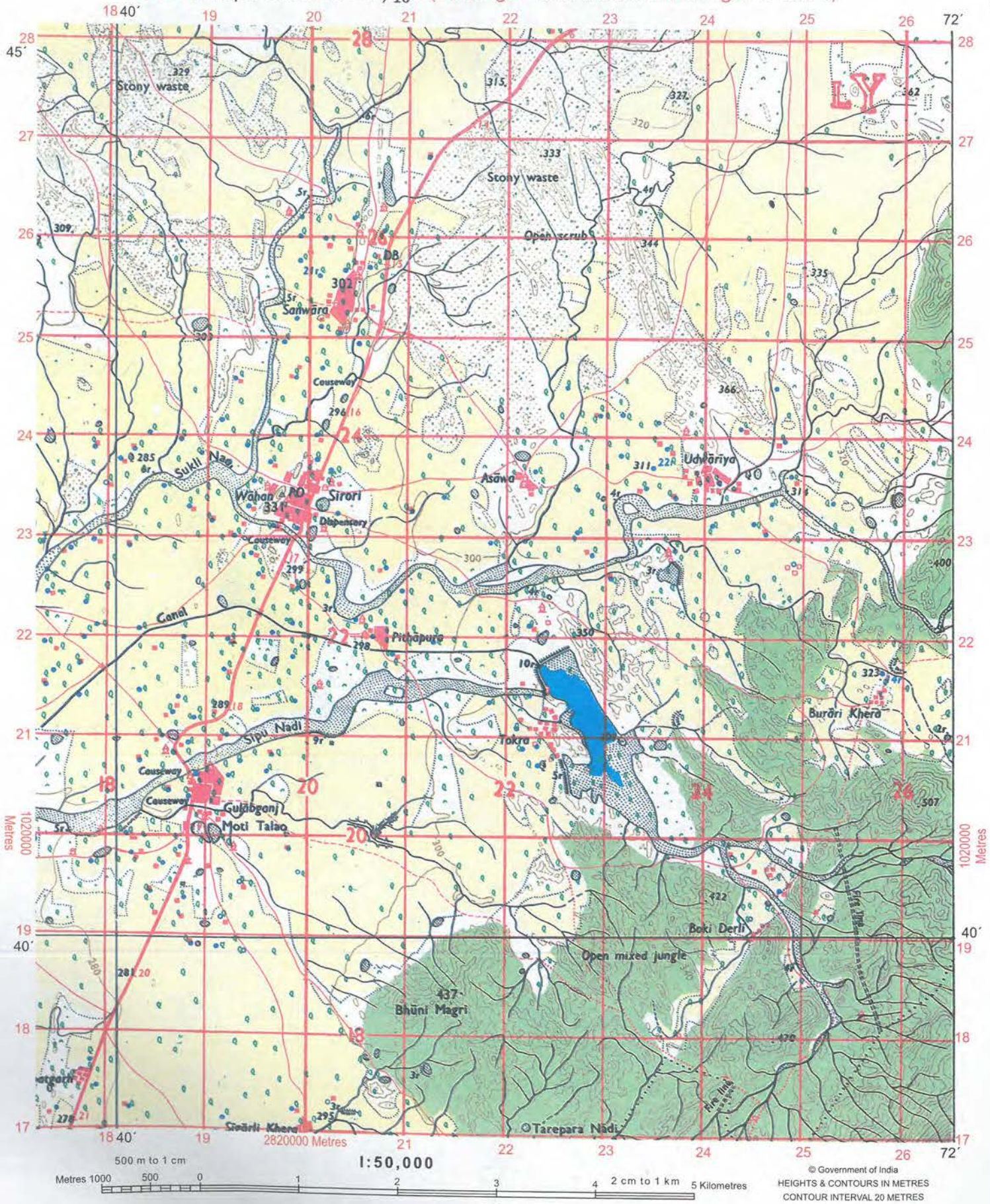
9. Give evidences that the area gets seasonal rainfall.

Ans. Dry rivers, dry tanks and open scrub present in the region indicates seasonal rainfall.

10. What is the difference between the relief in the north and south east of the area?

Ans. Northern part is plain with low relief and scattered hills. Southeastern part has high relief with average height of 400 metres.

Part of Topo Sheet no 45^D/₁₀ : (Eastings: 18 to 26 and Northings: 17 to 28)



© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

11. On which **bank of Sukli Nadi** are the villages Wahan and Sirori (1923) situated? Give evidence.

Ans. Sukli Nadi is flowing from east to west as indicated by spot heights. These villages are on the right bank of Sukli Nadi.

12. Give **four figure grid reference** for the following :

(i) Sanwara settlement west of the main road

(ii) Moti Talao near Gulabganj

Ans. (i) 2025

(ii) 1919/1920

13. Give **six figure grid reference** for the following :

(i) DB near the main road in the north

(ii) **Spot height 437** in the southern part

Ans. (i) 207258

(ii) 214184

14. Give the **direction** of Dispensary (2023) from village Tokra (2221).

Ans. North west direction.

15. Identify the **settlement pattern** in grid square 2221. Give the features of this type of settlement.

Ans. Linear or Ribbed settlement. This generally develops along either sides of roads, railways, rivers or canals, due to communication facilities which help in developing trade.

16. What is the **difference between 4r** in grid square 2323 and **10r** in grid square 2221?

Ans. 4r - Relative height of river bank is 4 metres.
10r - Relative height of dam is 10 metres.

17. What is the **settlement pattern** in the south eastern part of the map? What inference can you draw about the occupation of people living in these settlements?

Ans. Dispersed settlement. Agriculture and lumbering - the main occupations.

18. List five **modes of irrigation** found in the area.

Ans. Reservoir, dam, canal, perennial lined wells and tanks.

19. What is the **direction** of the flow of water in Sipu Nadi? Give reasons in support of your answer.

Ans. Sipu Nadi is flowing from East to West. The spot heights are decreasing towards west.

20. Describe the main **conventional sign** in grid square 2322.

Ans. Dry tank with embankment having depth of 3 metres.

21. What is indicated by **blue colour** shown in the grid square 2220/21?

Ans. It is the reservoir filled with water throughout the year.

22. Give the meaning of the **symbol** shown in grid square 2221.

Ans. It is the Dam (earthen) built across the reservoir (reservoir).
Storage of water allow dams to generate electricity.

23. What is represented by **series of dots** in grid square 2417?

Ans. It represents Tehsil. It forms boundary between two tehsils.

24. State the **distance between** Wahan (1923) and Gulabganj (1920) along the metalled road.

Ans. 3.5 Km approximately.

25. What is the **slope of the area** given in the map extract? Give reasons for your answer.

Ans. Area slopes towards west or southwest, as indicated by the decreasing spot heights towards west.

26. What **kind of vegetation** is found in the grid square 1917?

Ans. Tropical deciduous trees and thorny shrubs.

27. Which **relief feature** do you find in the grid square 2424?

Ans. The relief feature seen in this grid square is saddle. Other features are mountains, hills, dry rivers, v-shaped valleys etc.

28. Give one reason for the **presence of footpath** in grid square 2019.

Ans. Because steep and rugged terrain makes construction of roads difficult.

29. What is indicated by the **meandering river** in grid square 2022?

Ans. It indicates a lower or nil gradient. Such a plain area is best suitable for agriculture.


30. What is indicated by the **presence of canal, dam, tanks and wells** in this map extract?


Ans. This indicates intensive use of land for agriculture.

31. What **occupations** do the people follow in **highland areas** in the south eastern part of the map?

Ans. Forestry, lumbering, and grazing on slopes of hills.

32. What is the **meaning** of the following?

(i)  in the grid square 2023

(ii)  in the grid square 2323

Ans. (i) It indicates Temple

(ii) Meandering river

33. Find out the **actual length** of the **pack-track** from Sanwara (2025) towards the west.

Ans. 3.5 Km approximately.

34. Identify the **drainage pattern** in grid square 2125.

Ans. Dendritic pattern.

35. List **two reasons** why grid square 2221 has been chosen as the location of the dam.

Ans. This area is at the base of the hilly region hence river will have more water. Canal can be easily used for agriculture here.

36. State the **direction** in which the Sipu Nadi originates.

Ans. South east part of the map extract.

37. What is indicated by **red squares** shown in grid square 2422?

Ans. It indicates temporary huts.

38. Describe the **conventional sign** along with 3r in grid square 2322.

Ans. Dry tank with embankment having height (depth) of 3 metres.

39. State the **relief feature** shown in grid square 2123 with brown and black lines. Give evidence.

Ans. V-shaped valley as the stream is originating from hilly area (300 m).

40. Give the meaning of **6r** written in grid square 1823.

Ans. It indicates that the relative height or depth of the river bank is 6 metres.

41. Find out the **straight line distance** between Dispensary (2023) and Baki Derli (2419)

Ans. 6 km approximately.

42. Name the **settlements** through which the metalled road is passing.

Ans. Aulabganj and Wahan settlements.

43. Explain why there are so many **causeways** along the metalled road?

Ans. Due to the presence of seasonal streams and rivers.

44. Name the **geographical feature** represented by the white patches in the middle of Sukli Nadi.

Ans. It represents island, rocks and accumulation of pebbles.

45. Where do you find the **lowest part** of the topo-sheet? Give evidence.

Ans. The south west corner is the lowest part in this region. Two rivers flow towards south west and the spot heights are also decreasing towards south west.

Assignment 13

Study the Topo Sheet No. 45 D/10 (Eastings 02 to 10 and Northings 09 to 19) printed on page no. 77 and answer the following questions:

1. Give a **six figure grid reference** for the peak of Hara Magra hill and also state the grid number in which the hill is located.

Ans. 087160. Hill is located in grid square 0816.

2. Give the **direction** of the following :

(i) Village Marol (0308) from village Nimbora (0610) (ii) Village Mitran (0410) from stony waste (0718)

Ans. (i) South west direction (ii) South west direction

3. Find out the **straight line distance** between Revdar settlement (0313) and Nimbora (0610) settlement.

Ans. 4.5 Km approximately.

4. What **kind of roads** connect Revdar (0313) with Bikanwas (0316)?

Ans. Cart track

5. Calculate the **distance** in kilometres along the metalled road between the causeways in grid square 0512 and 0808.

Ans. 5.75 Km approximately.

6. What is the **general direction of flow** of the **Sipu Nadi**, given in the map extract? Give reason to support your answer.

Ans. North east to south west, because spot heights are decreasing from NE to SW e.g. 262, 254, 242 and so on.

7. What is the **difference in the pattern of drainage** in grid square 0916 and in 0712?

Ans. 0916 - Radial drainage pattern.
0712 - Trellis drainage pattern.

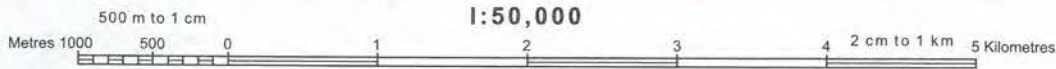
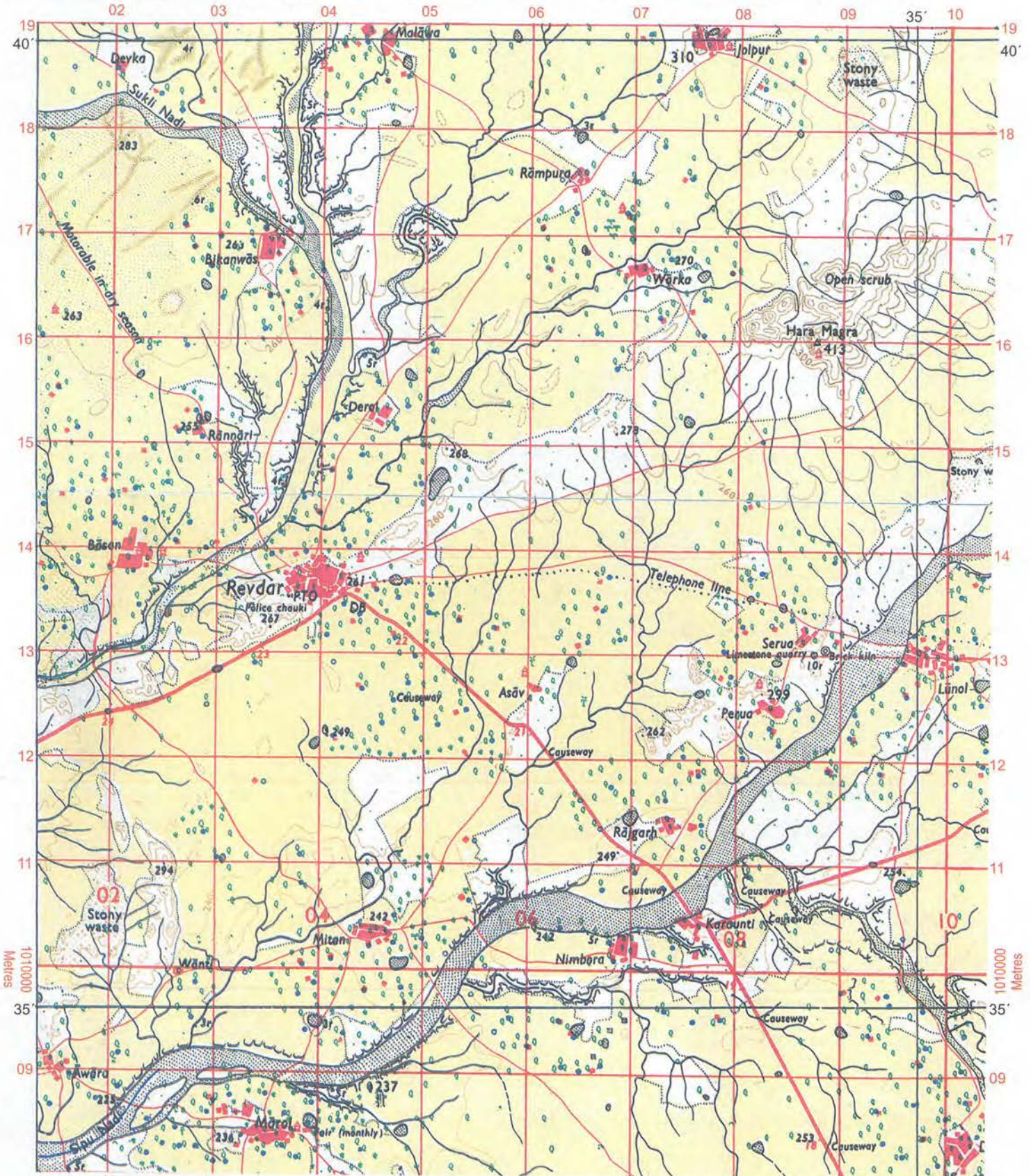
8. What is the **geographical name** that you would give to the general pattern of settlements in the region shown on the map? Give a reason for your answer.

Ans. Nucleated or clustered settlement. Permanent huts are compact or close together.

9. List two **occupations followed by people** in the north east corner of the map. Support your answer with evidence from the map.

Ans. Agriculture as indicated by yellow colour.
Quarrying - presence of limestone quarry and brick kiln.

Part of Topo Sheet no 45^D/₁₀: (Eastings: 02 to 10 and Northings: 09 to 19)



1:50,000

© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

10. Give the **meaning** of the following :

(i) DB in 0413

(ii) Concentric Circles in 0813

Ans. (i) Dak Bungalow

(ii) Brick Kiln

11. Find the **direct distance** in km from temple in Marol (0308) to temple in Asav (0512).

Ans. 5 Km approximately.

12. What is the **length** in metres of the **telephone line** in the map?

Ans. 6500 metres approximately.

13. Give the **compass directions** of the following :

(i) Serua (0813) from Mitran (0410)

(ii) Revdar (0313) from Warka (0716)

Ans. (i) North east direction

(ii) South west direction

14. State the **main means of transport** between Revdar (0313) and Karaunti (0710).

Ans. Metalled road.

15. What is the **meaning of black broken lines** along the river in grid square 0609? Describe how this feature is formed?

Ans. It indicates broken ground. This feature is caused due to gully erosion along river bank. This indicates alternate wet and dry spells.

16. Compare the **relief** of the south east corner of the map with the remaining part of the map.

Ans. South eastern part is a low flat land. North eastern part is the hilly region. Spot heights are decreasing from N. to S.

17. Give the **drainage pattern** of the following grid squares :

(i) 0814

(ii) 0517

Ans. (i) Dendritic pattern

(ii) Trellis pattern

18. What is indicated by **5r** written in grid square 0408?

Ans. It indicates that the relative height of river bank is 5 metres.

19. Name two **natural features** present in the grid square 0410.

Ans. Dry tanks and disappearing streams.

20. Draw suitable **symbols** for the following :

(i) Triangulation station 240

(ii) Limestone Quarry

Ans. (i) Δ 240

(ii) \odot Lime Kiln

21. Give the **four figure grid reference** for the following :

(i) Village Nimborra in the south east

(ii) Stony waste in the north east

Ans. (i) 0610

(ii) 0918

22. What kind of roads connect.

(i) Marol with Mitan

(ii) Revdar with Karaunti

Ans. (i) Cart track

(ii) Metalled road

23. Identify the settlement pattern in grid square 0316.

Ans. Compact settlement in North and scattered settlement in Southern part.

24. Name the largest human settlement in the region. Give reasons for it.

Ans. Revdar is the largest settlement because it has metalled road, Post and Telegraph Office, Dak Bungalow and Police Chauki.

25. What is indicated by the white patch in between Eastings 8 to 10 and Northings 10 to 12?

Ans. It indicates uncultivated barren land.

26. Give two probable reasons, other than dry weather features, to indicate that the region depicted on the map extract receives seasonal rainfall.

Ans. Cart track motorable in dry season and causeways.

27. What is indicated by brown dots in grid square 0217?

Ans. It indicates sandy region having sand dunes.

28. In what compass direction does the village Mitan lie in respect of Nimbora? How many kilometres is Mitan from Nimbora along the road linking these villages?

Ans. Mitan lie in the west. Cart track linking both villages is 2-5 km approx.

29. Give the name of the village where you find Post and Telegraph office and Dak Bungalow in this region of the map extract and draw conventional symbols of the same.

Ans. Revdar village. Conventional signs are:

PTO: Post and Telegraph Office, DB: Dak Bungalow

30. What is the total area (in sq km) between Eastings 04 to 08 and Northings 10 to 14.

Ans. $4 \times 4 = 16$ sq. km

31. Find out the actual length (in km) of the road plide by motor in the dry season.

Ans. 5 km approximately.

32. Name the important means of transportation in this region. Give examples in support of your answer.

Ans. Cart track shown by single red lines,

Metalled road shown by double red lines.

33. Draw the conventional symbols for the following :

(i) Dry tank

(ii) Causeway

Ans. (i) 

(ii) 

34. Give the **six figure grid reference** for the following :

(i) Police chauki south of Revdar settlement

(ii) Brick Kiln near limestone quarry

Ans. (i) 034135

(ii) 088131

35. Identify the **drainage pattern** in the following grid squares :

(i) 0715

(ii) 0916

Ans. (i) Trellis pattern

(ii) Radial pattern

36. Find out the **straight line distance** between $\Delta 413$ (0815) and surveyed tree 249 (0412).

Ans. 1.2 cm = 6 km

37. Why do the region has **open scrub** in the north eastern part of the map?

Ans. Scrub vegetation is found in regions with less than 100 cm of rainfall. North eastern part is a hilly dry region.

38. Which is the **chief mode of irrigation** found in the area?

Ans. Perennial lined wells shown by blue dots.

39. Give the **direction** of village Rannari (0215) from village Rampura (0617).

Ans. South west direction.

40. State **two natural** and **two man-made features** in grid square 0812.

Ans. Natural features - Broken ground, seasonal river
Man-made feature - Permanent huts, temple

41. Give the **meaning** of the following :

(i) • in grid square 0214

(ii) 21 in grid square 0512

Ans. (i) Perennial lined well

(ii) Distance stone 21 along metalled road.

42. The telephone line is the communication facility in this area. Write the **names of villages** which are connected by the telephone line.

Ans. Telephone line connects Revdar settlement to Kinal settlement.

43. What may be the **main occupations of the people** living in Serua village? Give evidences.

Ans. Presence of brick kiln indicates making bricks, pottery etc. as the main occupation. Apart from this, people are engaged in quarrying as indicated by the presence of limestone quarry.

44. Name the **geographical feature** represented by white pattern in the middle of the river in grid square 0208.

Ans. It represents island, rock or big stone.

45. State the **type of relief features** shown in grid square 0716.

Ans. Low hills, agricultural land and seasonal streams.

Assignment 14

Study the Topo Sheet No. 45 D/10 (Eastings 10 to 18 and Northings 09 to 19) printed on page no. 82 and answer the following questions:

1. What does the **conventional symbol** at grid reference 147132 mean?

Ans. A temple.

2. What do the following numbers in grid square 1717 and 1718 respectively mean?

(i) 278

(ii) 280

Ans. (i) Spot height 278 metres (ii) Contour 280 m. above mean sea level

3. Name **four facilities** that Anadra settlement has which makes it an important city.

Ans. Anadra settlement has a Post and Telegraph Office, Dak Bunglow, Dispensary and Police Chauki.

4. What is the quickest **means of communication** for the people of Dabani (1313)?

Ans. Telephone line.

5. What do the following mean?

(i) Causeway in 1715

(ii) 6r in 1218

Ans. (i) Causeway is a raised platform across a stream or road.
(ii) Relative height of the bank of river is 6 metres.

6. State **two factors** to show that Sipu river is in its middle course.

Ans. • It has a wider course with tributaries joining it,
• It is meandering at few places.

7. Give **four figure grid reference** for the following.

(i) Mountain Ridge in the south-west

(ii) Dolpura settlement

Ans. (i) 1110

(ii) 1008

8. Give **six figure grid reference** for the following:

(i) Temple near Dak

(ii) Milestone 22

Ans. (i) 147132

(ii) 173155

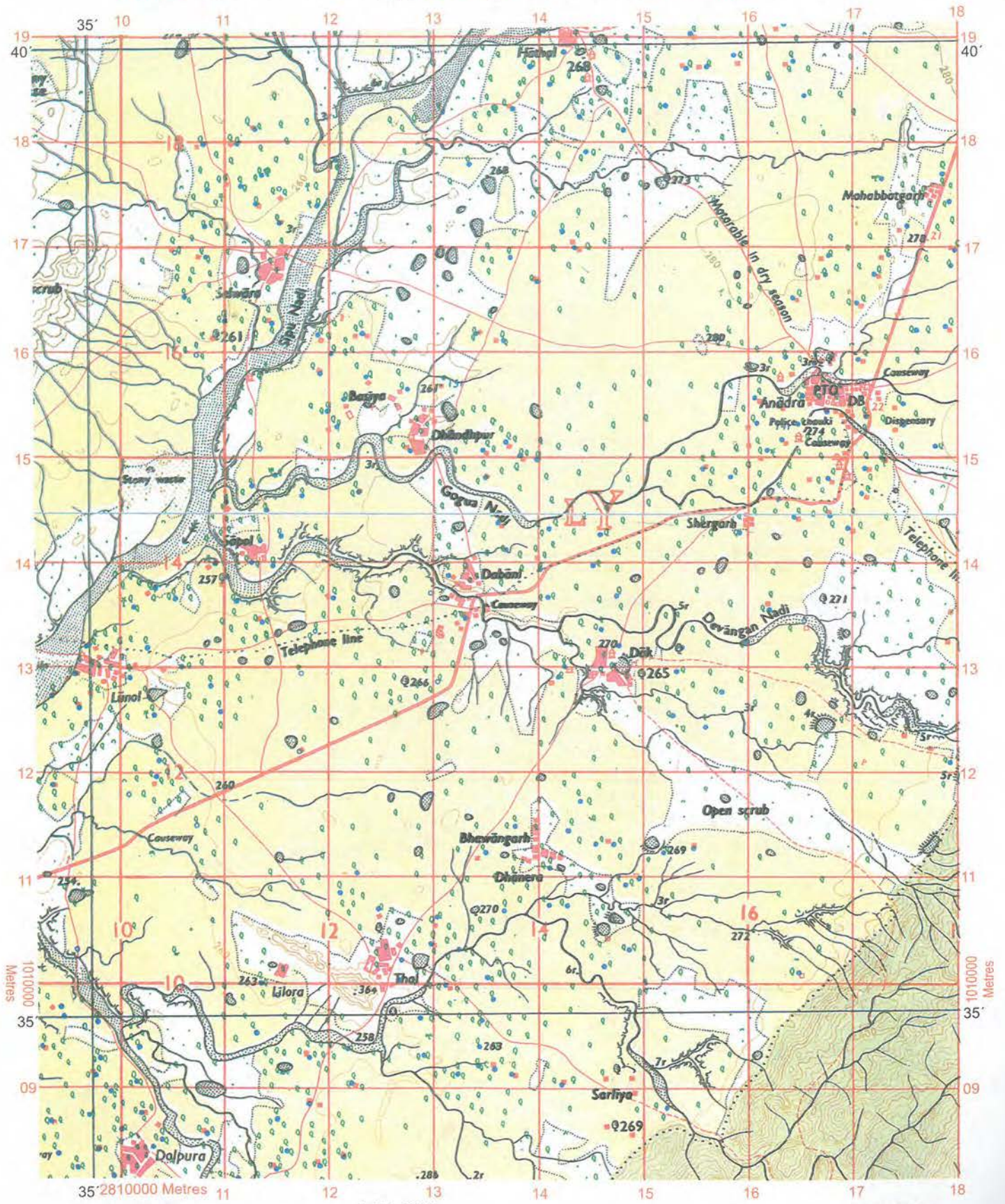
9. Describe the **nature** of Devangan Nadi.

Ans. It is dry and flows through broken ground. It flows towards N.W. direction. Meandering nature indicates it is in the middle course.

10. What does **4r** written in grid square 1612 mean?

Ans. Relative height of embankment of dry tank is 4 metres.

Part of Topo Sheet no 45^D/₁₀ : (Eastings: 10 to 18 and Northings: 09 to 19)



1010000 Metres

35° 2810000 Metres 11 12 13 14 15 16 17 18

500 m to 1 cm

1:50,000

Metres 1000 500 0 1 2 3 4 2 cm to 1 km 5 Kilometres

© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

11. Give the **direction** of the following:

(i) **Temple** (1413) from **temple** (1615)

(ii) **Village** Lunol from **village** Hathal


Ans. (i) South west direction


(ii) South west direction

12. Calculate the **straight line distance** between village Dak and village Thal.

Ans. 3.5 km approximately.

13. What is the **meaning** of the following?

(i)  in the **Sipu Nadi**

(ii)  273 in the grid square 1517

Ans. (i) It shows the direction of the flow of river.

(ii) It shows the surveyed tree. 273.

14. Mention **two natural features** in grid square 1511.

Ans. Open scrub and dry tank.

15. If a man were to walk from Dak (1412/13) to Anadra (1615):

(i) In which **direction** would he be walking

(ii) Which are the two **different kinds of roads** that he would be using.

Ans. (i) North east direction.

(ii) Cart track and metalled road.

16. Mention the names of any **two man-made features** in the grid square 1110.

Ans. Cart track and permanent huts

17. List two **occupations** followed by people in the plains found in the map. Support your answer with evidence from the map.

Ans. Agriculture - yellow colour - Lumbering or forestry - Mountainous region in green in S.E. corner.

18. Compare the **relief** of the south east corner of the map with the remaining part of the map.

Ans. S.E. corner of the map is hilly region with dense forests. Remaining part of the map is a flat plain with low relief.

19. Describe the **climate** of the region in the map with suitable evidences from the map.

Ans. Dry streams and river, broken ground and open scrub indicates tropical monsoon type of climate with seasonal rainfall.

20. Find out **straight line distance** between the following:

(i) **Causeway** (1715) and **Causeway** (1313)

(ii) **Temple** (1615) and **temple** (1418)

Ans. (i) 4.5 km approximately

(ii) 4 km approximately

21. Give the **direction** of village Selwara (1116) from Anadra settlement.

Ans. North west direction.

22. Give six figure grid reference for the following.

(i) Dry tank near Lunol settlement

(ii) Surveyed tree 261 South of Selwara settlement

Ans. (i) 104127

(ii) 109162

23. Give the drainage pattern in grid square 1708. Justify your answer.

Ans. Trellis drainage pattern as the streams are meeting the main river at right angles.

24. Give the direction of the following.

(i) Village Selwara from Anadra settlement

(ii) Village Dolpura from open scrub (1511)

Ans. (i) North west direction

(ii) South west direction

25. Name at least three villages which have temples.

Ans. Dak, Anadra and Hathal villages.

26. Mention two natural features in grid square 1014.

Ans. Stony waste and Sipu Nadi.

27. Give the general direction of Sipu Nadi and write which of its bank receive water of rivers Gogua Nadi and Devangan Nadi.

Ans. Sipu Nadi flows from North east to South west. The left bank receive water of two rivers mentioned here.

28. Name the relief feature shown along with 4r in grid square 1612.

Ans. Dry tank with embankment. The relative height/depth of the tank is 4 metres.

29. Find out the straight line distance between Lilora village (1110) and Sapol village (1114).

Ans. 4 km approximately.

30. Name two tributaries of Sipu Nadi as shown in this map extract.

Ans. Gogua Nadi and Devangan Nadi.

31. Mention two man-made features in grid square 1717.

Ans. Metalled road and permanent huts.

32. State the three types of roads available for transportation in this region.

Ans. Cart tracks, pack tracks and metalled road.

33. Figure 280 is written in brown as well as in black colour in grid square 1516. What does it mean?

Ans. Brown - contour height 280 m. Black - spot height 280 m.

34. How village Hathal (1419) is linked with village Dhandhpur (1215)?

Ans. Through cart track.

35. (i) What is indicated by **black broken lines** shown in grid square 1011?

(ii) What is the **reason** of not making a **causeway** over there?

Ans. (i) It shows indefinite stream

(ii) Because it is not flooded in the rainy season.

36. Give the **drainage pattern** in grid square 1016.

Ans. Dendritic in East and radial in West.

37. Find out the **straight line distance** between surveyed tree 269 (1408) and surveyed tree 273 (1517).

Ans. 9 km approximately (2 cm = 1 km)

38. Give the direction of **PTO** (1615) from dry tank (1210).

Ans. North east direction.

39. Mention **two natural features** in grid square 1711.

Ans. Barren land (white patch) and disappearing stream.

40. Measure the **actual length** (in km) of the metalled road given in this map extract.

Ans. 14 km approximately

41. Give **six figure grid reference** for the following :

(i) Dispensary near Anadra settlement

(ii) Dry tank east of Sarliya village

Ans. (i) 174154

(ii) 162094

42. Mention **two man-made features** in grid square 1409.

Ans. Cart track and permanent hut.

43. Find out the **straight line distance** between Dolpura (1008) and Mohabbatgarh (1717).

Ans. 12 km approximately

44. Mention the grid square where Devangan Nadi meets the Sipu Nadi.

Ans. 1014

45. Dabani (1313) and Anadra (1615) both are situated on the metalled road but there is a lot of difference in facilities. Explain.

Ans. Dabani has the facility of telephone line and metalled road. Anadra has the facility of PTO, Dispensary, Police-Chauki and Dak Bungalow.

Assignment 15

Study the Topo Sheet No. 45 D/10 (Eastings 18 to 26 and Northings 09 to 19) printed on page no. 87 and answer the following questions:

- Give four figure grid reference of the following:
 - St. Mary's High School
 - Nakhi Talao

Ans. (i) 2308 (ii) 2110/2111/2210/2211
- Give six figure grid reference of the following:
 - Sunset Point
 - Highest point in the area

Ans. (i) 21100 (ii) 224120
- What is the purpose of having pipeline in grid square 2209?

Ans. It supplies water to Mt. Abu from Kodra reservoir.
- State the drainage pattern in grid square 2112.

Ans. Dendritic drainage pattern
- List five modes of irrigation found in the area.

Ans. Reservoir, Dam, Pipeline, Perennial lined wells and tanks.
- In which course of river development are the rivers of the area? Give reasons for your answer.

Ans. Upper course as rivers are narrow and flow through hilly region.
- What is the compass direction of Sunset Point from the settlement of Anadro Point (2011)?

Ans. South direction
- What do the following represent:
 - The red square in grid square 2413
 - 6r in grid square 1815

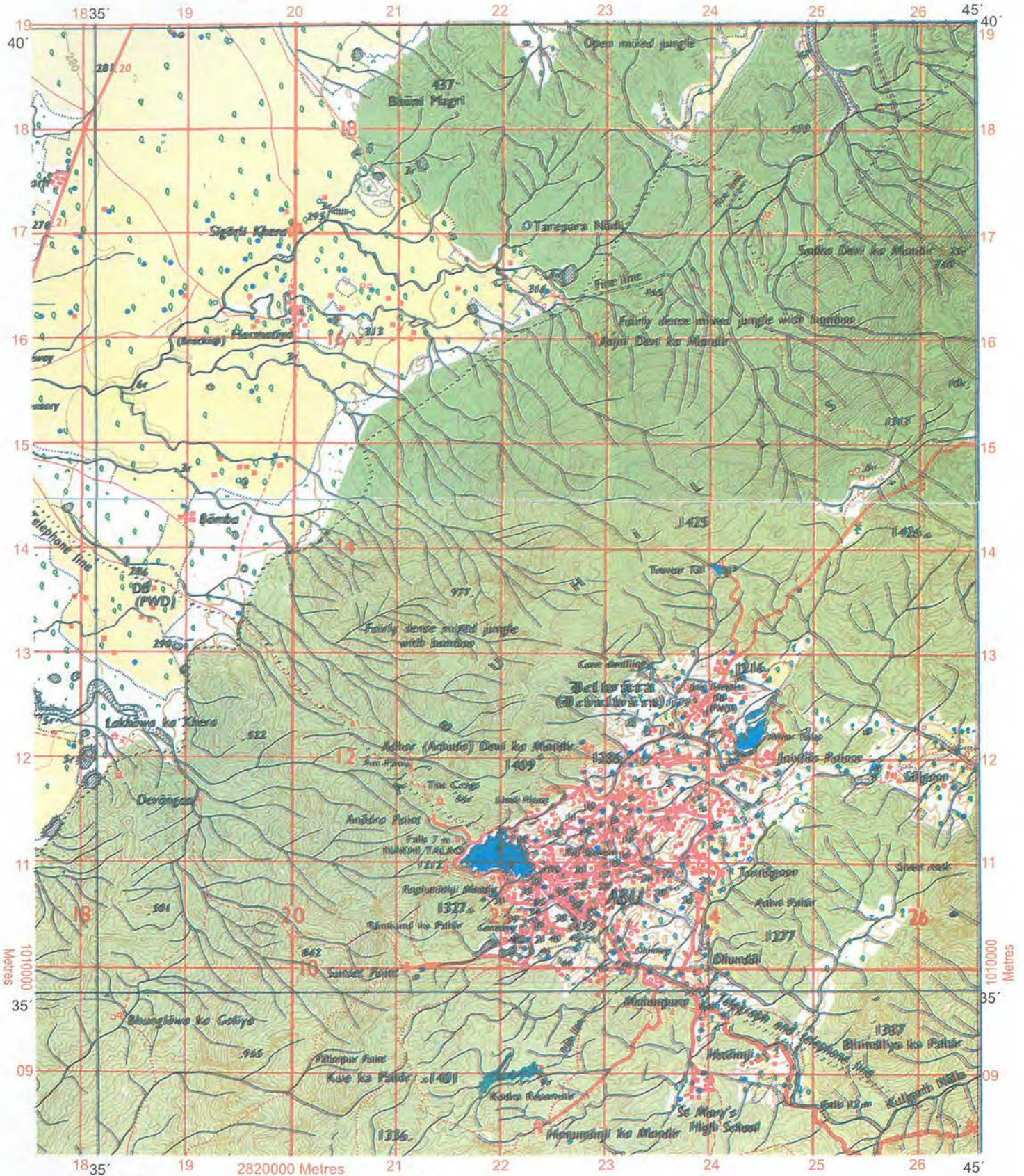
Ans. (i) Temporary hut or settlement (ii) Relative height of stream 6 metres.
- Figure 340 is written in grid square 2318. What does it mean?

Ans. It shows contour 340 metres. Contours are the imaginary lines joining places of equal elevation above mean sea level.
- What is the purpose of having Fire-line in grid square 2417?

Ans. Fire line helps in stopping or preventing the spread of forest fires.
- List two main occupations followed by people in Abu. Support your answer with evidences from the map.

Ans. Tourism - hilly region, Nakhi Talao Falls, Dilwara Temple, Sunset Point etc.
Education - St. Mary's High School, Sophia High School.

Part of Topo Sheet no 45 D/10: (Eastings: 18 to 26 and Northings: 09 to 19)



500 m to 1 cm
 Metres 1000 500 0 1 2 3 4 5 Kilometres
1:50,000
 2 cm to 1 km

© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

12. Describe the **vegetation** of region in the map stating reason for the occurrence of this type of vegetation.

Ans. Tropical Deciduous trees consisting date palms, thorny shrubs, bamboo shrubs etc. due to less rainfall.

13. What would be the **main source of water** for Mt. Abu?

Ans. Nakhi Talao is the main source of water.

14. Give the **meaning** of the following:

(i) **Brackish** in grid square 1915

(ii) **Black dotted line** in grid square 2014

Ans. (i) Water in the well is not fit for drinking purposes.

(ii) Tehsil or Taluka boundary.

15. Mention four **modes of transport** found in the map.

Ans. Metalled road, unmetalled road, cart track, foot path.

16. What can you infer if the **contours** are overlapping each other? Which feature do you find in the map which befits the description stated by you.

Ans. It indicates vertical slope. The feature that befits this is the waterfall in grid square 2508.

17. What is the purpose of **pipeline** in grid square 2209?

Ans. To supply water in the required areas.

18. What is the **difference between the slope** in grid square 2115 and the one in 1811? Give a reason for your answer.

Ans. 2115 - Gentle, concave or dip slope as the contours are far apart and the curves are inside. 1811 - Steep, having escarpments as the contours are close together and curves are outside (convex).

19. Give the **direction** of Bamba (1914) from Athvi Pahar (2410).

Ans. North West direction.

20. Find out the **straight line distance** between Hanumanji ka Mandir and Alwar Talao.

Ans. 4 km approximately.

21. Give the **direction** of the Sunset Point (2009) from Cave Dwellings (2312).

Ans. South West direction.

22. What is the **meaning** of the following:

(i) Δ 1327 in grid square 2110

(ii) $\blacksquare \cdot \cdot \cdot \blacksquare$ in grid square 2409

Ans. (i) Triangulated height is 1327 metres above mean sea level.

(ii) Telegraph and telephone line.

23. Refer to grid square 1813. Mention the **slope of the land** and one man made feature in the area with relevant references.

Ans. Slope of land is towards north west. Man-made feature is Dak Bungalow of Public Works Department (DB, PWD).

24. Give four figure grid reference for the following:

(i) Anjini Devi Ka Mandir

(ii) Trevor Tal

Ans. (i) 2215/2216

(ii) 2413

25. Describe the **settlement pattern** in the grid square 2016.

Ans. Scattered or dispersed settlement.

26. What do **20** and **281** in red and black respectively in grid square 1818 mean?

Ans. Red - distance stone of 20 km, Black - spot height of 281 metres.

27. From where does Abu, north of Mohanpura get its main water supply? Give two reasons for your answer.

Ans. Abu gets its main water supply from Kodra Reservoir through pipeline and water works leading from it to Abu.

28. Where are most of the **permanent huts** located in this region? Give two reasons for your answer.

Ans. In the south eastern part at foothills due to the availability of water, presence of metalled road, PTO, Telephone line, Talao and other facilities.

29. Name two **types of Jungles** found in this region.

Ans. Open mixed jungle and fairly dense mixed jungle with bamboo.

30. Mention **two occupations** of the people living in the northern part of the region in the map extract. Give reasons to support your answer.

Ans. Agriculture - Presence of yellow wash and perennial lined wells, lumbering or forestry - Presence of green wash or jungle in the north eastern part of the region.

31. What is the purpose of having **DB (PWD)** in grid square 2412?

Ans. It is the rest house for officials working in Public Works Department.

32. Identify **landforms shown by contours** in grid square 2113.

Ans. Contours here indicates steep slopes with escarpments and V-shaped valleys.

33. Give the **direction** of St. Mary's High school (2308) from Jaivilas Palace (2412).

Ans. South west direction.

34. Find out the **straight line distance** between Cave Dwellings (2312) and Singarli Khera (2017).

Ans. 5 km approximately.

35. Find out the **actual distance** between Anadra Point (2111) and St. Mary's High School (2308).

Ans. 5 km approximately.

36. Name **two man made features** in grid square 2208.

Ans. Temple and metalled road.

37. Name **two natural features** in the grid square 1909.

Ans. Watershed and V-shaped valleys.

38. What is indicated by the figure **437** in the grid square 2118?

Ans. It indicates the spot height of 437 i.e. the height of random places between contours. It is shown with a dot.

39. What does the **double line in red colour** in the north west part of the map extract indicate?

Ans. It indicates the metalled road.

40. What is meant by the following:

(i) Falls 12m in grid square 2508

(ii) Δ 1426 in the grid square 2514

Ans. (i) It means a waterfall at the height of 12 metres.

(ii) It shows the triangulated height of 1426 metres.

41. Name the three different **kinds of roads** in grid square 2411 and the one in grid square 2514.

Ans. Metalled road, unmetalled road and peck track in 2411.
Footpath in grid square 2514.

42. Calculate the **distance** in kilometers along the metalled road from distance stone 20 to 21.

Ans. Distance is 1.5 km approximately.

43. Name two **man-made features** shown in grid square 2312.

Ans. Dilwara temple and metalled road.

44. Mention two **natural features** in grid square 2018.

Ans. Dry tank and seasonal streams.

45. Name the **biggest reservoir** mentioned in this map extract. Also give its grid reference.

Ans. Nakhi Talao between eastings 21 to 23 and northings 10 to 12.

Assignment 16

Study the Topo Sheet No. 45 D/10 (Eastings 02 to 10 and Northings 01 to 11) printed on page no. 92 and answer the following questions:

1. Give the **four figure grid reference** for the following :

(i) A big island in Sipu Nadi

(ii) Site of monthly fair near Marol

Ans. (i) 0208

(ii) 0308

2. Find out the **direct distance** in km from temple in Butri (0404) to temple in Karaunti (0710).

Ans. 6.75 km approximately.

3. Give the **compass direction** of Rampura Khera (0707) from Mitau (0410).

Ans. South east direction.

4. State the **drainage pattern** in grid square 0705.

Ans. Radiial drainage pattern.

5. Mention two **modes of transport** used by people in this region.

Ans. Metalled road and cart track.

6. What is the chief **mode of irrigation** found in the area?

Ans. Perennial lined wells.

7. Give **six figure grid reference** for the following :

(i) Temple near Marol village

(ii) Causeway south of Karaunti village

Ans. (i) 038084

(ii) 083098

8. (i) What do the **tiny curved black lines** in grid square 0306 indicate?

(ii) What is the main cause for this feature?

Ans. (i) Broken ground.

(ii) Flooding or hot and dry weather is responsible for it.

9. What kind of road connects Makawal (0604) and Bhatana (0201)?

Ans. Cart track.

10. Calculate the **distance** in kilometres along the metalled road between the causeways in grid square 0809 and 0907.

Ans. 2.75 km approximately.

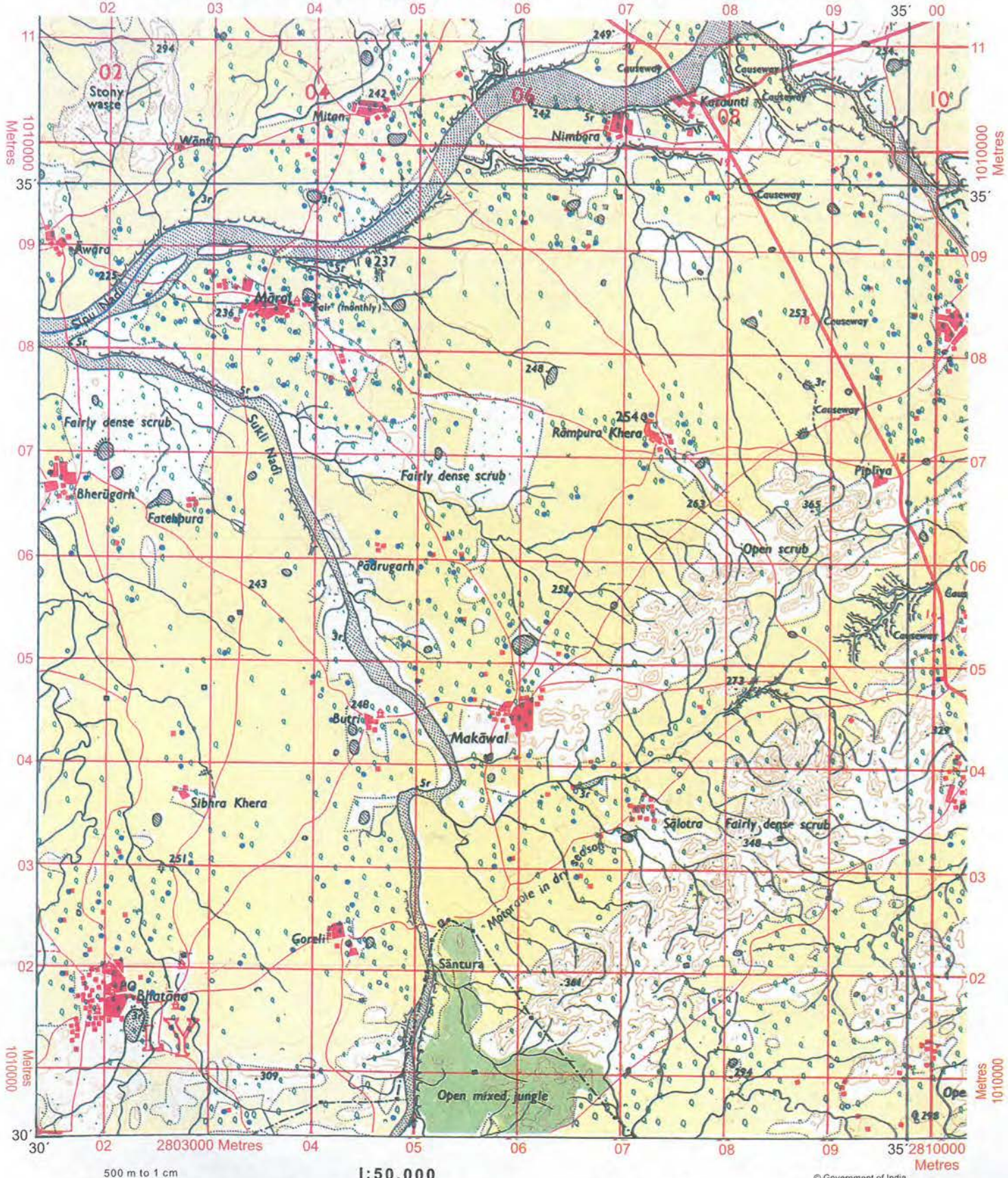
11. Which **type of tanks** are found near village Bherugarh Fatehpura (0206).

Ans. Two dry tanks and one dry tank with embankment.

12. What does figure **243** in grid square 0305 indicate?

Ans. It represents spot height 243 metres above mean sea level.

Part of Topo Sheet no 45^D/₁₀ : (Eastings: 02 to 10 and Northings: 01 to 11)




© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

13. Give the **meaning** of the following :

(i) **PO** in grid square 0201

Ans. (i) Post Office.

(ii)  **248** in grid square 0607

(ii) Dry tank at spot height 248.

14. Give the **direction** of the following.

(i) Mitan (0410) from Rampura Khera (0707)

Ans. (i) North west direction

(ii) Village Nimbora (0610) from Goreli (0402)

(ii) North East direction

15. Name two **man-made features** in grid square 0710.

Ans. Metalled road and temple.

16. Find out the **straight line distance** between Fatehpura (0206) and Pipliya. (0906)

Ans. 6.5 km approximately.

17. Name two **natural features** in the grid square 0703.

Ans. Conical hill and dry tank.

18. Measure the **length of the metalled road** in the region.

Ans. 8.5 km approximately.

19. What is the **difference between** the relief of the south east corner of the map and the remaining part of the map?

Ans. Southeastern part has high relief, whereas, the other part of the map extract has low relief or flat plain area.

20. Give the **settlement pattern** in grid square 0703 with reasons.

Ans. Linear settlement i.e., the settlement is usually stretched out along the road, river etc.

21. Northern part has a gentle southward slope while the southern part has a steeper (concave) slope towards the north west. Give **evidences** (any two).

Ans. In northern part spot heights are decreasing from north to south. Southern part spot heights are increasing from S to N.W.

22. What is the **spot height** of the region north of dry tank in grid square 0910?

Ans. Spot height is 254 metres.

23. Give the **direction** of the following.

(i) Marol settlement (0308) from Makawal (0504)

Ans. (i) North west

(ii) Village Salotra (0703) from Pipliya (0906)

(ii) South west

24. State the **drainage pattern** in grid square 0708.

Ans. Dendritic drainage pattern.

25. Why is there no water in Sipu Nadi and Sukli Nadi?
- Ans. There is no water in the rivers as this area receives seasonal rainfall or very less rainfall.
26. Write the **side of the bank** where Sukli Nadi joins Sipu Nadi.
- Ans. Sipu Nadi is flowing from North East to West direction. Sukli Nadi joins Sipu Nadi on its left side.
27. What is meant by **open scrub** shown in grid square 0806?
- Ans. Scrub or bush is characterised by shrubs. It often includes grasses, herbs etc. Scrubland may either occur naturally or by human activity.
28. Find out the **straight line distance** between Goreli (0402) and Marol (0308).
- Ans. 6 Km approximately (2 cm = 1 km)
29. Measure **actual distance** in km through cart track between Marol (0308) and Makawal (0504/0604).
- Ans. 5 Km approximately.
30. What is indicated by the **red line** in grid square 0608?
- Ans. Cart track.
31. State the **drainage pattern** in grid square 0704.
- Ans. Trellised pattern.
32. State the **pattern of settlement** in Makawal (0504).
- Ans. Compact or clustered settlement.
33. Name two **man-made features** in grid square 0404.
- Ans. Cart track, temple and permanent huts.
34. What is indicated by **red squares** present in grid square 0406?
- Ans. It represents permanent huts.
35. How village Fatehpura **linked** to village Bhutri?
- Ans. Through cart track.
36. Mention eastings and northings of the area where we can see **open mixed jungle** in this region.
- Ans. Eastings 05 to 07 and Northings 00 to 03.
37. What is meant by '**motorable in dry season**' along the cart track?
- Ans. Cart track which is motorable only in dry season. In rainy season it is filled with water or flooded.

38. Describe the **location of forests** in this area.

Ans. Open mixed jungle are in the southern part as shown with green colour. Rest is flat land with fairly dense scrub.

39. Give the **meaning** of the following:

(i) **Causeway** in the grid square 0809

(ii) **Brown dots** in grid square 0704

Ans. (i) A raised road or platform across watered road or minor stream.
(ii) It represents a sandy region.

40. Give the **direction** of village Bhutri (0404) from village Fatehpura (0206).

Ans. Southeast direction.

41. What **type of settlement** is found in grid square 0407?

Ans. Scattered or dispersed settlement.

42. Mention the grid square having **radial drainage pattern**.

Ans. 0803 and 0804.

43. Which **part of the map** do the Sukli Nadi originate from?

Ans. It originates in southern part and flows towards north.

44. Describe the **nature** of Sukli Nadi.

Ans. Sukli Nadi is narrow and dry. It has little sediment in the river bed, it flows from South to North. It is a seasonal river having some water in the rainy season.

45. Give a **reason** why the streams in grid square 0508 do not join the main river.

Ans. These are indefinite streams and they seep into land surface or sand, that is why they do not join the main river.

Assignment 17

Study the Topo Sheet No. 45 D/10 (Eastings 10 to 18 and Northings 01 to 11) printed on page no. 97 and answer the following questions:

1. Give the meaning of the following.

(i) Brackish in 1403

(ii) Dense mixed jungle in 1303

Ans. (i) Water of the well is salty and not fit for drinking purposes.
(ii) Fairy dense mixed jungle shown in green colour indicates dense forest with different types of trees or vegetation.

2. Give the four figure grid reference of the following.

(i) Fairy dense mixed jungle in the south east

(ii) Ridge in the west

Ans. (i) 1702/1704

(ii) 1110

3. Give the six figure grid reference of the following.

(i) Milestone 15

(ii) Temple west of Dhavli

Ans. (i) 107044

(ii) 107076

4. What is the direct distance in km from Lilora (1110) to Kyariya (1206)?

Ans. 4 km approximately

5. What is the distance in km along the metalled road from Vajna (1503) to Was (1004)?

Ans. 6 km approximately

6. What is the difference between $\Delta 480$ in 1304 and $\bullet 312$ in 1306?

Ans. 480 is the triangulated height i.e. height correctly measured.
312 is the spot height i.e. estimated height from the value of contours.

7. State the drainage pattern in grid square 1510.

Ans. Dendritic drainage pattern.

8. What is the settlement pattern in the south eastern part of the map? What inference can you draw about the occupation of people living in these settlements?

Ans. Dispersed or scattered settlement. Main occupation in green colour wash is lumbering, and agriculture in yellow colour wash.

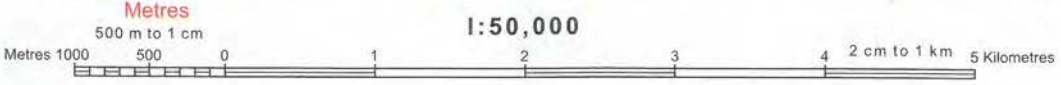
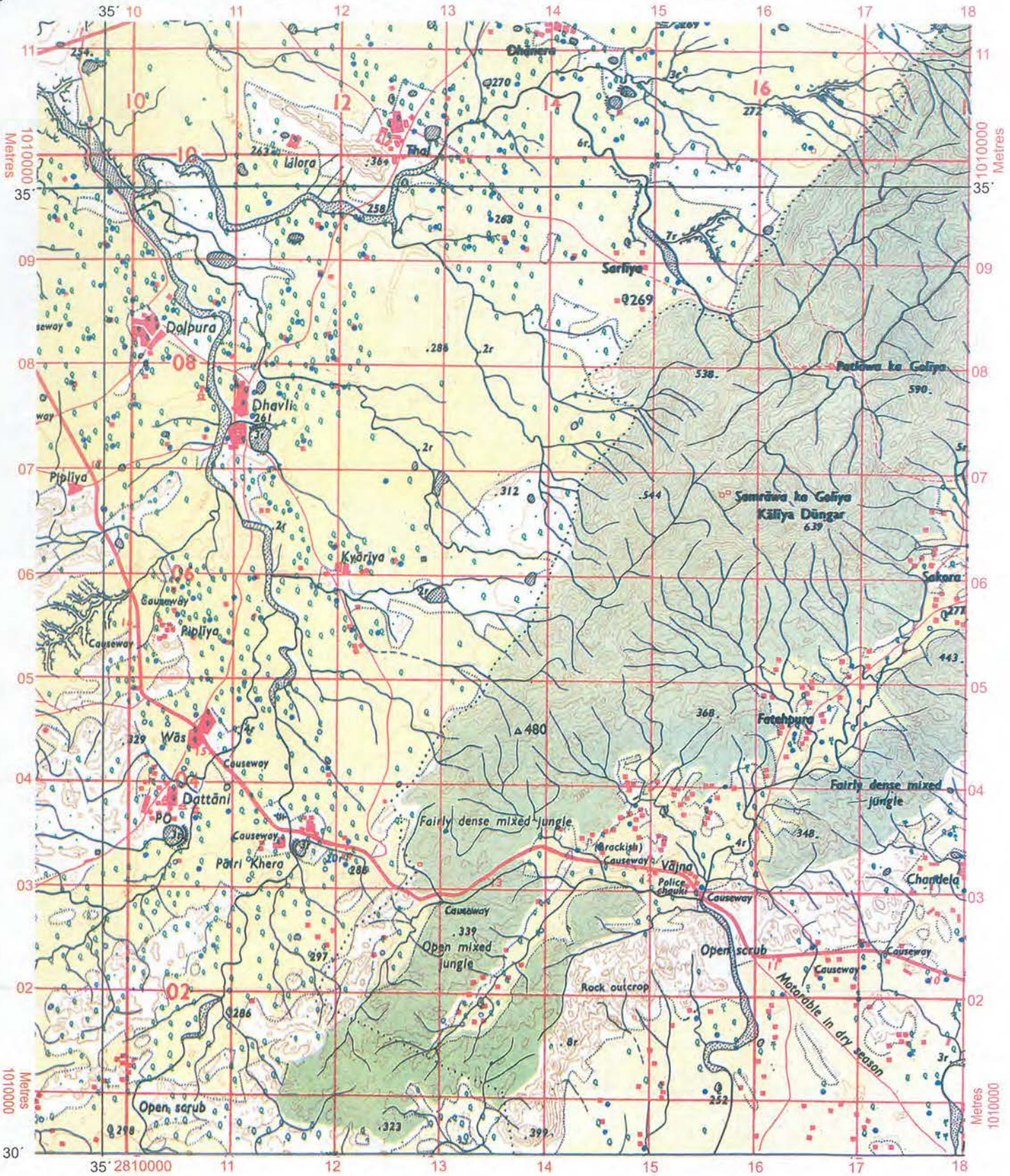
9. Mention two main modes of transport used by the people.

Ans. Metalled road and cart track.

10. Which is the chief mode of irrigation found in the area? Give reasons for the abundance of this mode of irrigation.

Ans. Perennial lined wells due to seasonal rainfall and high water table.

Part of Topo Sheet no 45 D/10: (Eastings: 10 to 18 and Northings: 01 to 11)



© Government of India
 HEIGHTS & CONTOURS IN METRES
 CONTOUR INTERVAL 20 METRES

11. What is the **general slope of the map**? Give **reasons** for your answer.

Ans. Towards north west as rivers are flowing from SE to NW.

12. What is the **direction** of Dattani and Dhavli from Vajan (1503)?

Ans. North west direction

13. Name two **man-made features** in grid square 1601.

Ans. Cart track and permanent huts.

14. Mention two **natural features** in grid square 1001.

Ans. Seasonal streams and dry tanks

15. What is the **difference in the pattern of drainage** in grid square 1606 and in 1007?

Ans. (i) 1606 - Radial Pattern (ii) 1007 - Trellised Pattern

16. State the **length of the given map** in kilometres?

Ans. 10 sq km approximately.

17. What do the following mean?

(i) 3r in 1103

(ii) Open scrub in 1502

Ans. (i) Relative height or depth of dry tank is 3 metres.

(ii) Area receives low rainfall and vegetation is thorny bushes.

18. Name the **settlement** that has a **post office**.

Ans. Dattani settlement

19. Name two **landforms** represented by the **pattern of contours** in grid square 1608.

Ans. Conical hills and saddle.

20. Name two **man-made features** in grid square 1106.

Ans. Permanent huts and cart track.

21. Give **four figure grid reference** for the following:

(i) The **temple** in Dattani village

(ii) Kaliya Dungar

Ans. (i) 1003

(ii) 1606

22. How does the **drainage pattern** in grid square 1207 differ from the drainage pattern in grid square 1708?

Ans. (i) 1207 - Dendritic drainage pattern.

(ii) 1708 - Trellised drainage pattern.

23. State two **reasons** for the **absence of human habitation** in the north-eastern region of the map extract.

Ans. This region is forested, very hilly or rugged with the absence of drinking water facilities and proper roads.

24. What is the **pattern of settlement** in grid square 1501?

Ans. Dispersed or scattered settlement.

25. Explain the meaning of the following:

(i) ● 364 in grid square 1209

(ii) 15 in grid square 1004

Ans. (i) Spot height 364 metres.

(ii) Milestone 15 along the metalled road.

26. Give the direction of Dolpura (1008) from Dattani (1003).

Ans. It is in the north direction.

27. What is the height of the conical hill in grid square 1306?

Ans. Height of conical hill is 312 metres above mean sea level.

28. Mention the difference in height between the highest spot height in the map extract and the contour height in grid square 1006.

Ans. Highest spot height = 639

Contour height = 260

Difference in height = 379 metres (639 - 260)

29. What is the settlement pattern in village Vajna (1503)?

Ans. Linear settlement i.e. settlement along road or streams.

30. Name two man-made features found in grid square 1106.

Ans. Permanent bridge and cart track.

31. What do the words 'motorable in dry season' in grid square 1601 and 1602 indicate about the rainfall received by the region shown in the map extract?

Ans. It means that the track is motorable only during dry season i.e. no rainfall. This indicates that rainfall is seasonal here.

32. Measure the straight line distance between dry tank with embankment in 1511 and dry tank with embankment in 1107.

Ans. 5.5 km approximately.

33. Name two features which make Dattani (1003) a more important settlement than the other settlements in the map extract.

Ans. Presence of Post Office, temple and Mosque. Besides this, it is well connected with other towns by metalled road.

34. What is the value of the contour line in grid square 1403? What is the contour interval in the map?

Ans. Value of the contour is 280 metres. The contour interval in the map is 20 metres.

35. Name two relief features that can be seen in the grid square 1401.

Ans. (i) Conical hills

(ii) V-shaped valleys


36. What is indicated by white colour in grid square 1306?


Ans. Area is barren land unsuitable for cultivation of crops.

37. What are the brown broken lines drawn in grid square 1208?

Ans. Formlines which show only approximate heights above mean sea level.

38. Explain the meaning of the following :

(i)  in the north west corner

(ii)  in the grid square 1103

Ans. (i) Dry tank having water in the rainy season.

(ii) Causeway along the metalled road.

39. What is the direction of Bhawangarh (1311) from Pipliya (1005)?

Ans. North East direction.

40. (i) Which part of the map is more developed in agricultural occupation?

(ii) Give a reason for your answer

Ans. (i) Western part is more developed in agricultural occupation.

(ii) Presence of perennial lined wells and plain area (Yellow colour).

41. Name the settlement that has Police Chowki. Give the grid square.

Ans. Vajna Settlement (1503).

42. How is the cart track in grid square 1209 able to cross Nadi or Nala flowing in the region?

Ans. Through the causeway on the stream.

43. Describe the drainage pattern in grid square 1304. With which water source would you link this pattern?

Ans. Radial pattern. Streams are emerging in all directions from the triangulated height 480 metres.

44. State the difference between 280 written in grid square 1403 and 1208.

Ans. 1403 - It represents the contour height 280 metres -

1208 - It represents the spot height 280 metres.

45. Give the direction of Vajna (1503) from Dolpura (1008).

Ans. South east direction.

Assignment 18

Study the Topo Sheet No. 45 D/10 (Eastings 18 to 26 and Northings 01 to 11) printed on page no. 102 and answer the following questions:

1. Give four figure grid reference for the following:

(i) Ghorawala Magra in SE

(ii) Bageri village

Ans. (i) 2503

(ii) 2002

2. Find out the direction of Jhamar (2401) from Nakhi Talao.

Ans. South East direction.

3. Identify the correct six figure grid reference for the following:

(i) $\Delta 1352$ in the east (235075, 242074, 246073)

(ii) Shri Vashisht Ashram (224078, 233079, 213858)

Ans. (i) 246073

(ii) 224078

4. What is the meaning of the following?

(i) 22r in grid square 2304

(ii) Sheet rock in grid square 2611

Ans. (i) Relative height or depth of unlined well is 22 metres.

(ii) Rock where overlying soil layers have been eroded due to mechanical weathering.

5. Measure the straight line distance in km between Gautam Maharishi Mandir and Kodra Reservoir.

Ans. 2.5 km approximately.

6. What is the general slope of the land in the north-west corner of the map extract?

Ans. South east to north west.

7. Identify two man-made features in grid square 1903.

Ans. Permanent huts and embankment along dry tank.

8. What is the drainage pattern in grid square 2405?

Ans. Radial drainage pattern.

9. Give the general direction of Gomti Nadi.

Ans. North east to south west direction.

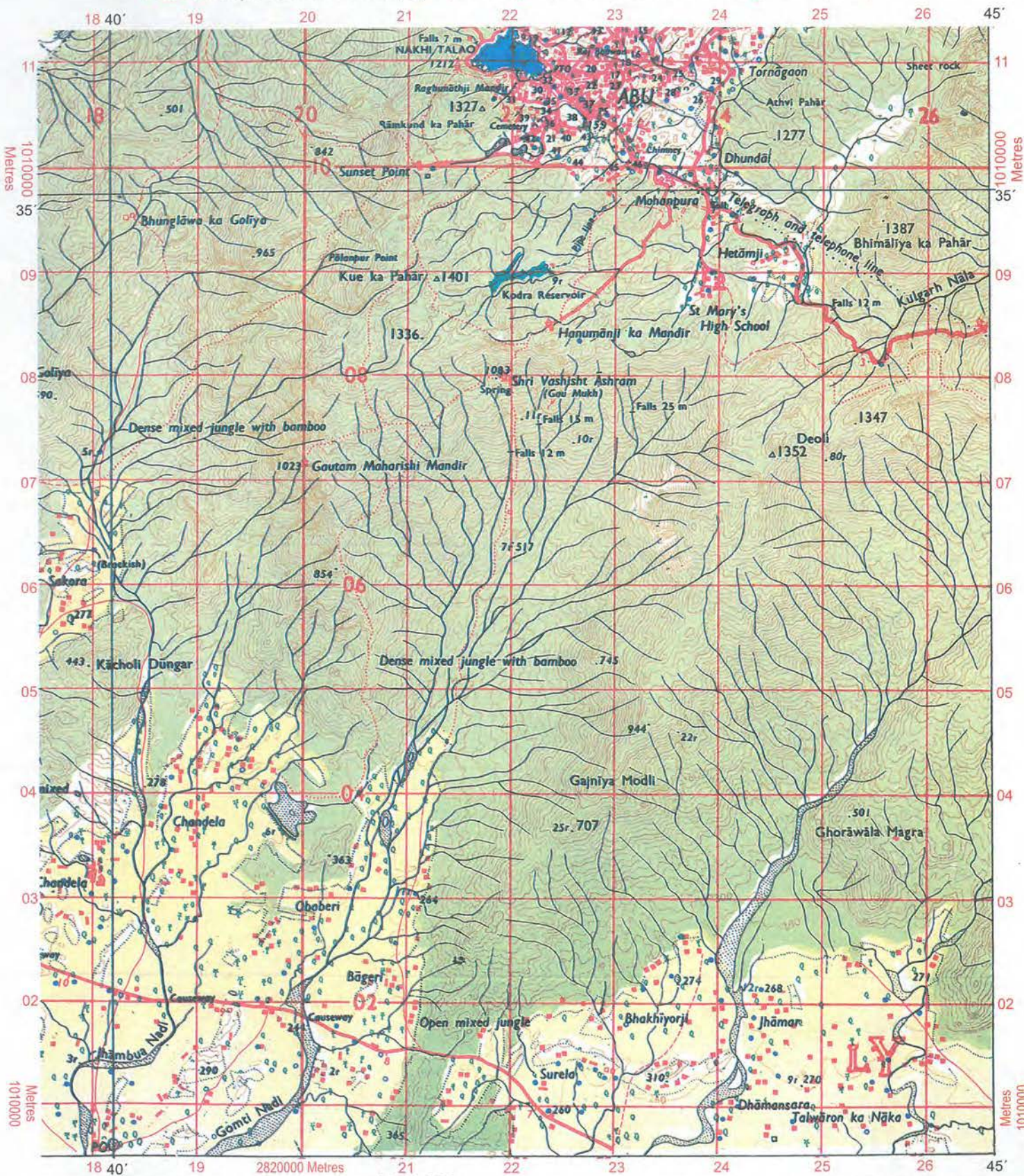
10. Are the Reservoirs shown in this map extract perennial? Give one evidence.

Ans. Yes, both are perennial. They are coloured blue.

11. State the settlement pattern in grid square 2401.

Ans. Scattered or dispersed settlement.

Part of Topo Sheet no 45 D/10 : (Eastings: 18 to 26 and Northings: 01 to 11)



500 m to 1 cm
Metres 1000 500 0 1 2 3 4 5 Kilometres
1:50,000

© Government of India
HEIGHTS & CONTOURS IN METRES
CONTOUR INTERVAL 20 METRES

12. Which part of the map extract has **cultivable land**? Give evidence.

Ans. Southern part of map extract has cultivable land. Yellow colour indicates cultivable land.

13. What does **red broken line** in grid square 2301 show?

Ans. A pack track or footpath.

14. Identify **landforms** in the grid square 2003. Give evidence.

Ans. Conical hill (363) and V-shaped valley (stream originating through hill).

15. What is meant by **falls 25m** in grid square 2307?

Ans. It indicates waterfall from the height of 25 metres.

16. What is the **drainage pattern** in grid square 2307?

Ans. Dendritic drainage pattern.

17. Give the **meaning** of the following:

(i) ■ - - ■ in grid square 2409

(ii) Falls 15m in the grid square 2207

Ans. (i) Telegraph and telephone line.

(ii) Waterfall at the height of 15 metres.

18. Name any two **man-made features** in grid square 1803.

Ans. Cart track and permanent huts.

19. Measure the **straight line distance** in km between Raj Bhawan in the Abu City and village Chandela (1903).

Ans. 8-25 km approximately.

20. Find out the **direction** of Deoli from Bhakhiyar (2301).

Ans. North East direction.

21. Describe the **vegetation of the region** in the map stating reason for the occurrence of dense mixed jungle with bamboo.

Ans. It has tropical deciduous forests consisting date palms, berries and thorny shrubs. Due to waterlogging at foothills, bamboo shrubs are also found.

22. Describe the **general relief of the area**.

Ans. Most part of the region is hilly having steep slopes, mountains, ridges, saddle, valleys etc. Southern part is plain region. The highest point in this region is 1426 metres above sea level.

23. Find out the **area in square kilometers** enclosed by Eastings 21 to 26 and Northings 02 to 08.

Ans. $5 \times 6 = 30$ sq. Km.

24. What factors support the **development of tourism** in this region?

Ans. Raghunathji Mandir, Nakhi Talao, Sunset Point, Palampur Point, Kodra Reservoir, waterfalls, temples etc. supports tourism here.

25. Is the water of **perennial well** (2401) suitable for drinking purposes? Give reasons.

Ans. Water of perennial lined well (2401) is suitable for drinking as it is not brackish.

26. The north west corner of the map extract shows a **dry tank with embankment** (1903). What does it mean?

Ans. Embankments are raised rock or soil filled constructions made near tanks to prevent flooding in the rainy season.

27. What is the purpose of having **Pipeline** in grid square 2209?

Ans. It supplies water to Abu settlement from Kodra Reservoir.

28. Give the **four figure grid reference** of:

(i) Bhunglawa ka Goliya

(ii) Palampur Point

Ans. (i) 1809

(ii) 2009

29. Find out the **direction** of Tornagaon (2410) from Nakhi Talao in the north.

Ans. It is in the East direction.

30. Measure the **straight line distance** in km from the Raghunathji Mandir in the Abu city to Ghorawala Magra (2503).

Ans. Approximately 8 km.

31. What is the **settlement pattern** in grid square (1904)?

Ans. Scattered or dispersed settlement.

32. What is the **difference** between $\Delta 1352$ and $\bullet 1387$ in 2509?

Ans. 1352 is correctly measured triangulated height.
 1387 is spot height estimated from the value of adjacent contours.

33. What are the **main mode of irrigation** found in the area?

Ans. Reservoirs and perennial lined wells.

34. Mention any two **modes of transport** used by people here.

Ans. Metalled road and cart track.

35. Give six figure grid reference for the following:

(i) Falls 12m near Kulgarh Nala

(ii) 274 in southeast

Ans. (i) 251086

(ii) 236023

36. What do you find at the grid location 199023? How is this feature different from the one found in grid location 208015?

Ans. 199023 - Perennial lined well having protective wall around it.
208015 - Perennial unlined well, no protective wall around it.

37. In grid square 1909, several contours merge at one point. What does this represent?

Ans. It indicates a cliff or vertical steep slope. Peak of the hill is 965 m.

38. Why there is no water in the rivers flowing in the southern part of map extract?

Ans. River bed has sediments because the area receives seasonal rainfall.

39. What is indicated by figure 8 written along the metalled road in grid square 2001?

Ans. It indicates distance stone 8 km.

40. What difference do you notice in the slope of hills in grid squares 2104 and 2204? Give evidence.

Ans. 2104 - Gradual slope as contours are at a distance to each other.
2204 - Steep slope as contours are close to each other.

41. Name two man-made features in grid square 2208.

Ans. Hanumanjika Mandir and metalled road.

42. State two natural features in grid square 2207.

Ans. Waterfalls and V-shaped valleys.

43. What is the settlement pattern in the south western part of the map? State the occupations of the people living in this area.

Ans. Dispersed settlement. People follow agriculture and lumbering.

44. What is indicated by figure 501 in grid square 1810.

Ans. Figure 501 in grid square 1810 indicates spot height 501 above mean sea level.

45. Which is the most densely populated region of the map extract? Name the city along with the grid reference.

Ans. Area close to Abu settlement (2310) in the northern part of map.

SECTION B : MAP OF INDIA

Map Pointing Skills–GUIDELINES

(Please note that the labelling should be done in CAPITAL letters preferably using the Arrow.)

1. Mountains and Plateaus :

- To be marked in Brown colour with a single line.
- Direction of the mountain should be kept in mind.
- No mountains to be marked intersecting a river, e.g., Eastern Ghats should not be marked between rivers Krishna and Godavari.
- Western Ghats must not touch the coastline; the same applies to the Eastern Ghats.

2. Plains :

- To be marked in yellow colour.
- The extent of the plains should not exceed the 'limit'.
- The coastal plains should not be marked inside the Coast but bracketed and labeled within the limits.

3. Rivers :

To be marked in Blue colour labelled 'on' the Curve of the river and not 'under'.

4. Water bodies :

To be coloured within the 'limit' and the arrow should be marked accordingly.

5. Passes :

To be marked using the symbol] [in red colour.

6. Latitudes and Longitudes :

- To be marked in broken lines using red colour.
- Should be labeled in degrees ($^{\circ}$), $23\frac{1}{2}^{\circ}$ N for Latitude (Tropic of Cancer) and $82\frac{1}{2}^{\circ}$ E for Longitude (Standard Meridian).

7. Direction of Monsoon Winds :

- To be marked in blue colour arrows.
- South West Monsoon from South West to North East (June – September)
- Retreating Monsoon from North East to South West (October – November)
- North East Monsoon from North East to South West (December – February)

8. Distribution of Minerals :

- Only 3 minerals have to be marked for Board exams, i.e. iron ore, coal and oil field.

- Mumbai High (Offshore oilfield in Arabian sea should not touch the coast). Digboi is onshore oil field.
- Iron ore in Singhbhum and Coal in Jharia.

9. Soil Distribution :

- Soils should be marked in a small area as per following colours–
 - Alluvial Soil : Brown
 - Laterite Soil : Reddish brown
 - Black Soil : Black
 - Red Soil : Red
- They should be shaded only in a small area, as per the question asked.
- One must learn one area above the Tropic of Cancer (North) and one area South of the Tropic of Cancer, for all the soils.

10. Towns :

- Only 10 towns to be marked, as given in the syllabus.
- They must be marked with a red dot on the Coast and not in the Ocean (for ports).

11. Population :

The distribution of population as per density to be marked as one point in North India and one point in South India.

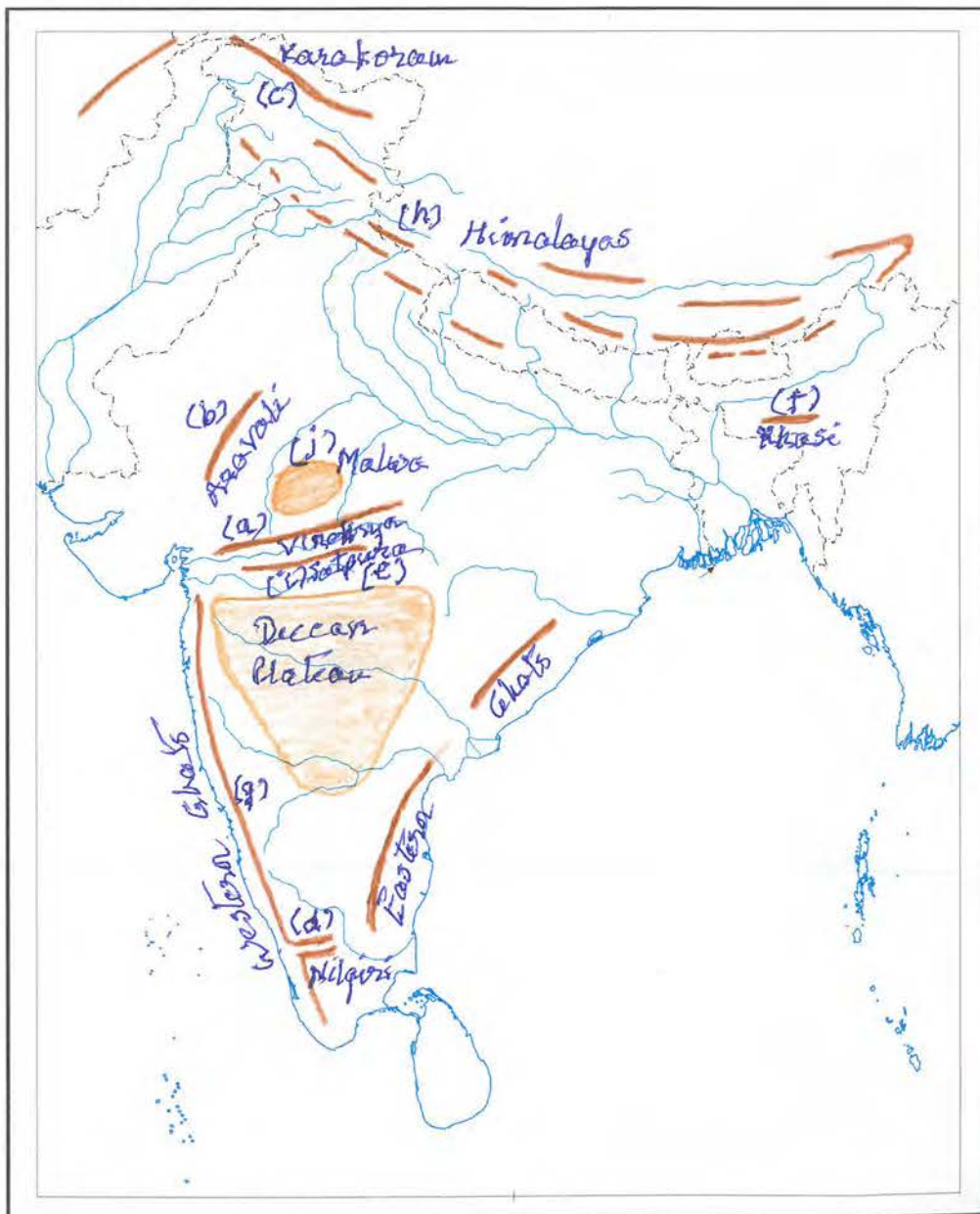
Please Note :

- The map pointing should be strictly as per the question asked in the Board exam. No additional information needs to be done for map pointing.
- Appropriate pencil colours must be used. No Crayon or Sketch Pens should be used.
- Use of Arrows give most specific and exact location in map pointing. Arrow head to be pointed towards the feature.
- While labeling and marking, one must keep in mind, whether the 'Area' or the 'State' is asked in the question.
- If only marking is done and not labelled, no marks are given.
- All marking in the map should be done with reference to the Rivers.

Map Practice

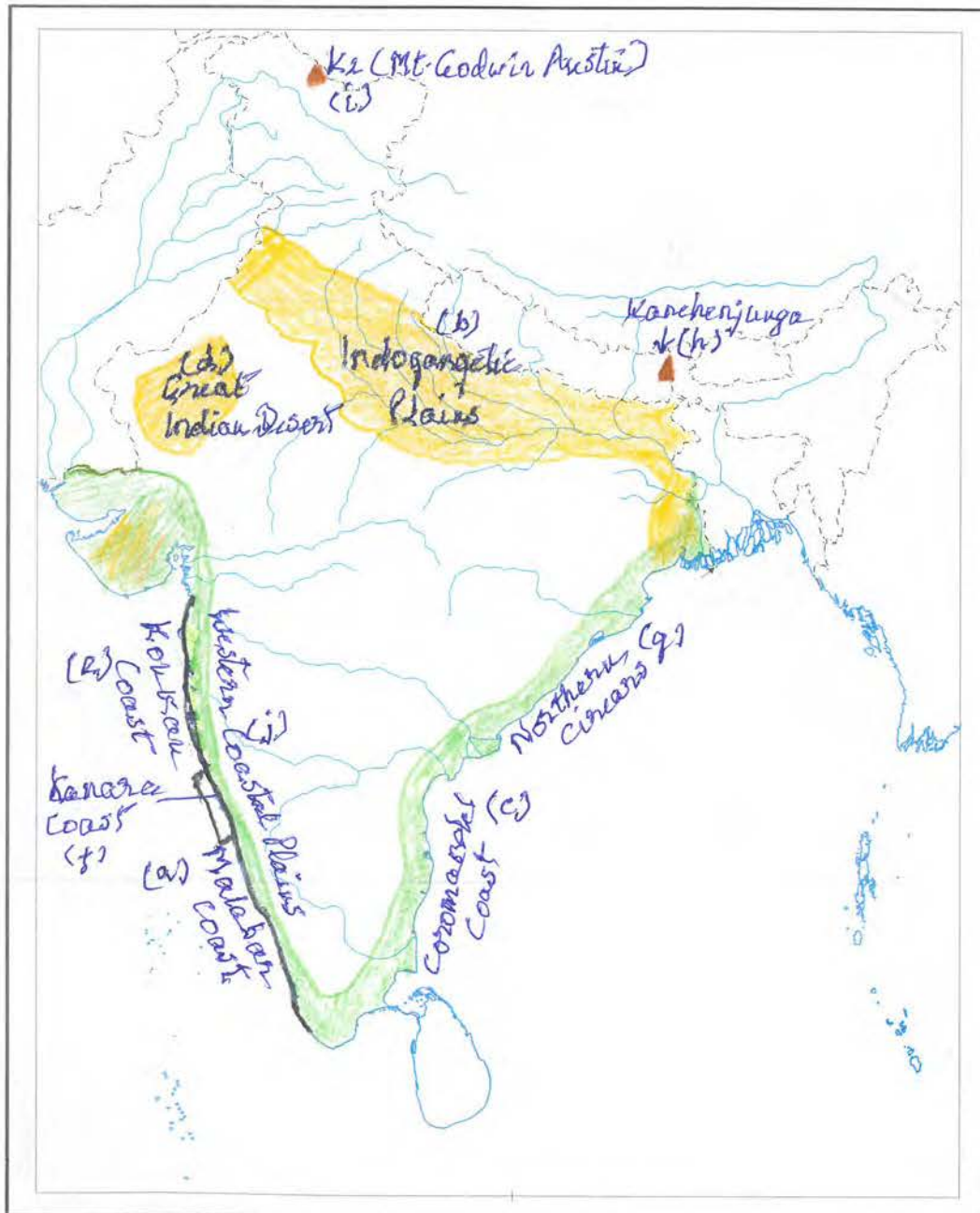
Assignment 1 (Based on Mountains and Plateaus) : On the outline map of India provided :

- Mark and name Vindhya Mountains
- Shade and label Aravali Hills
- Mark and name Karakoram Range
- Shade and label Nilgiri Hills.
- Shade and label the Deccan Plateau
- Mark Khasi Hills
- Mark and label Western and Eastern Ghats
- Shade and label Himalayas Mountains
- Mark and label Satpura Range
- Mark and label Malwa Plateau



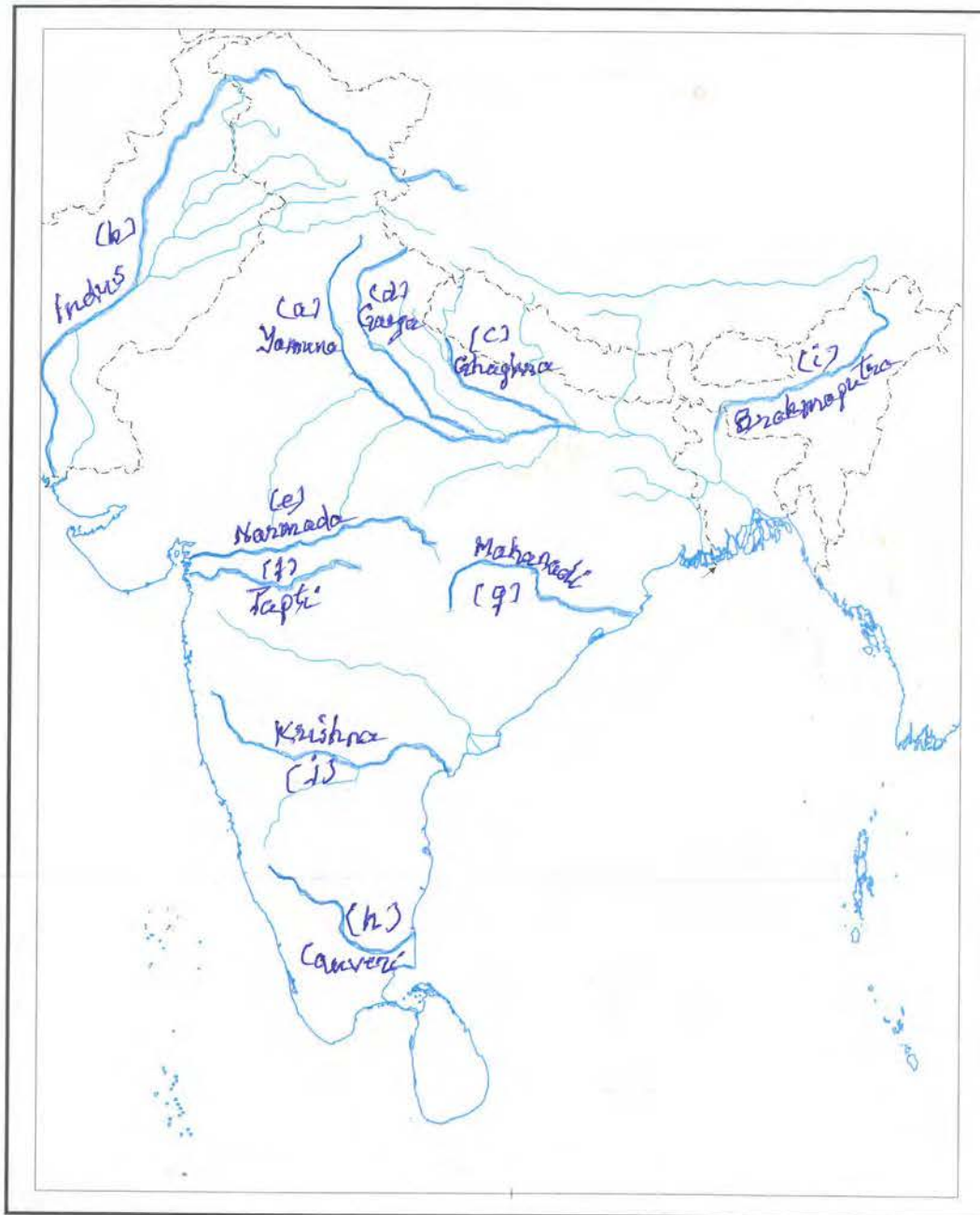
Assignment 2 (Based on Plains, Deserts and Mt. Peaks) : On the outline map of India provided :

- (a) Shade and label Malabar Coastal Plains
- (b) Shade and label Gangetic Plains
- (c) Mark and label Coromandel Coast
- (d) Shade and label the Great Indian Desert
- (e) Mark and label Konkan Coast
- (f) Mark and label Kanara Coast
- (g) Mark and label Northern Circars
- (h) Mark and label Mount Kanchenjunga
- (i) Mark and label Mount Godwin Austin (K_2)
- (j) Shade and label Western Coastal Plains



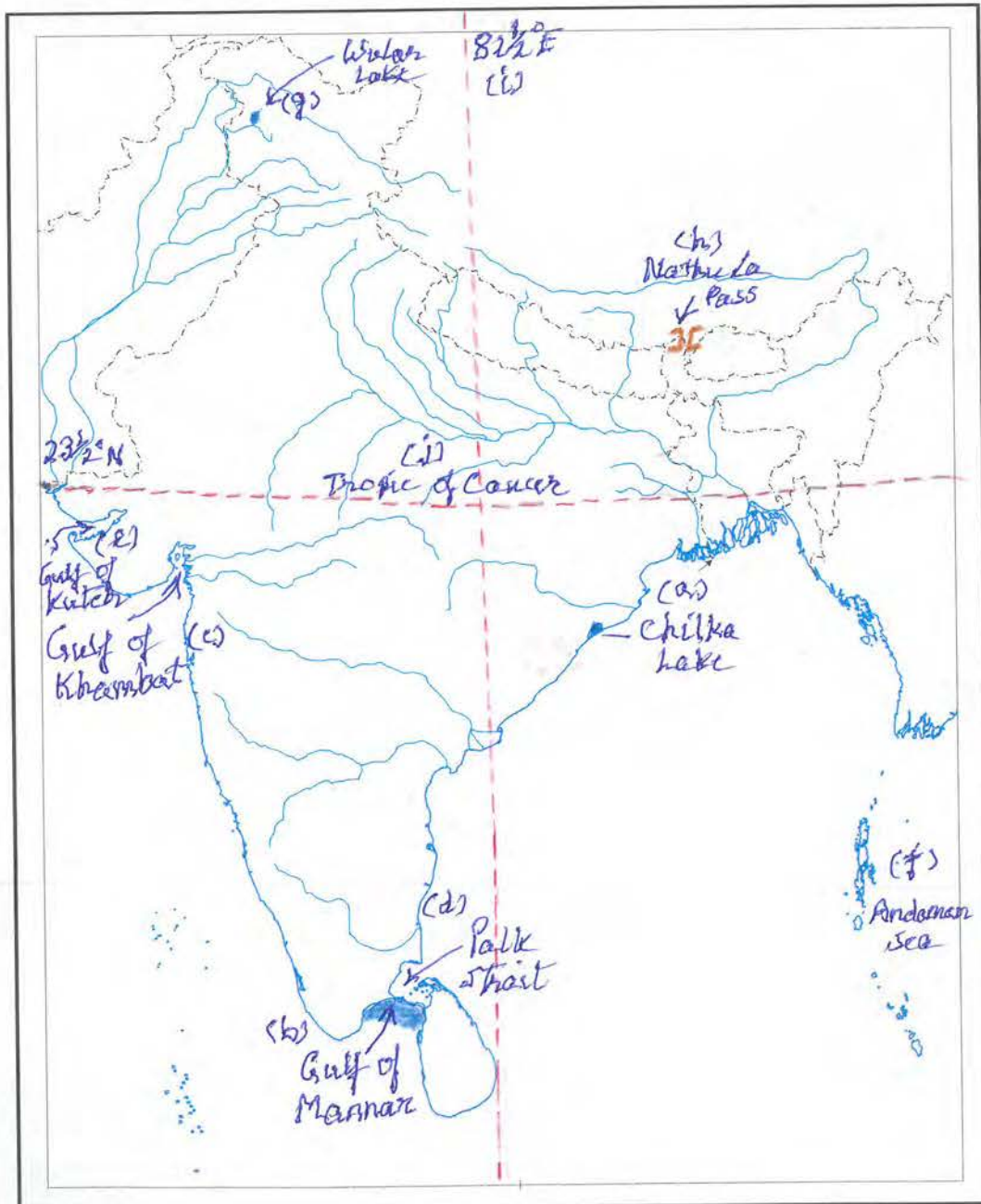
Assignment 3 (Based on Rives) : On the outline map of India provided :

- (a) Label the river Yamuna
- (b) Label the river Indus
- (c) Label the river Ghaghra
- (d) Label the river Ganga
- (e) Label the river Narmada
- (f) Label the river Tapti
- (g) Label the river Mahanadi
- (h) Label the river Cauveri
- (i) Label the river Brahmaputra
- (j) Label the river Krishna



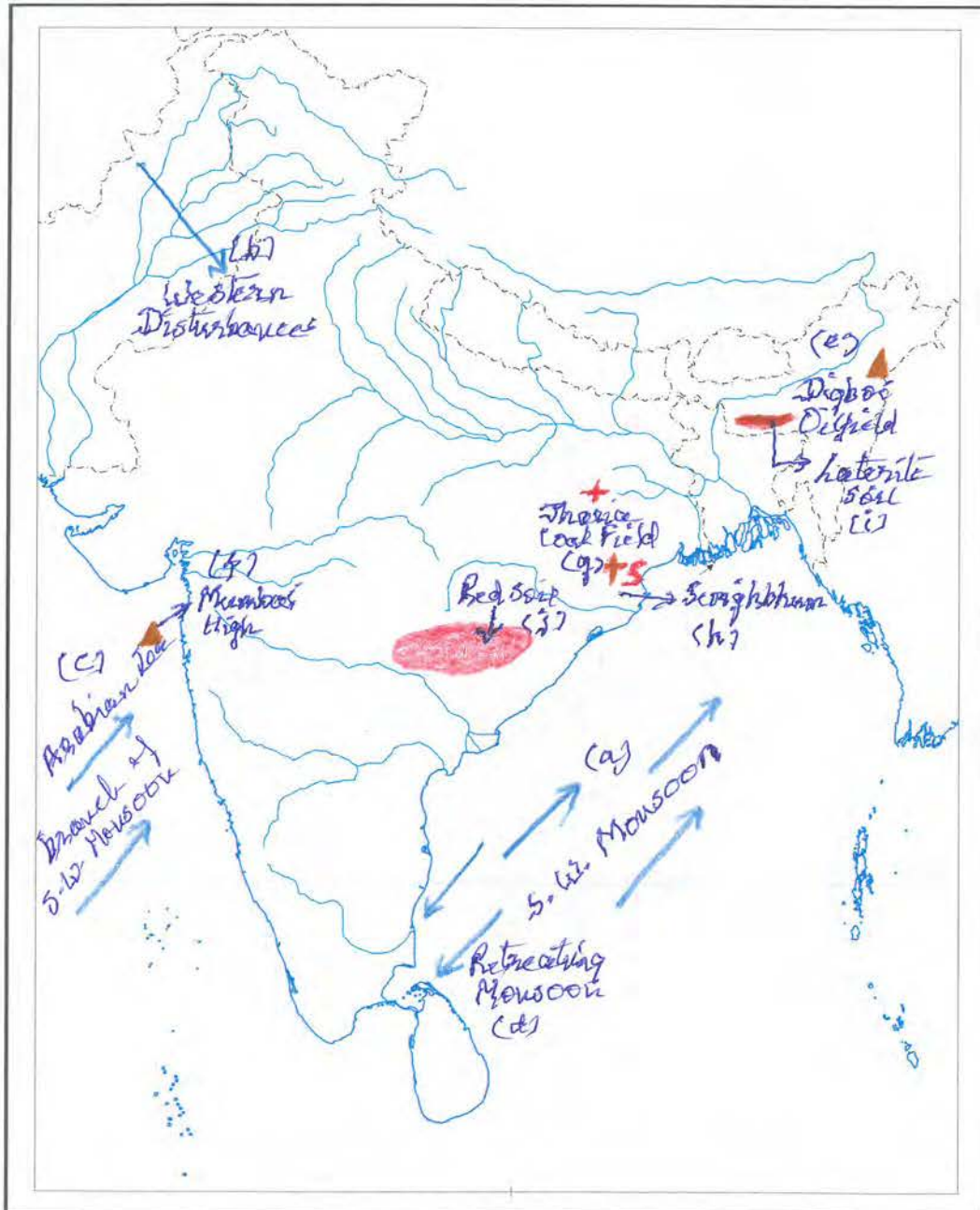
Assignment 4 (Based on Water Bodies, Latitude and Longitude) : On the outline map of India provided :

- (a) Mark and name Lake Chilka
- (b) Shade and name the Gulf of Mannar
- (c) Shade and name the Gulf of Khambhat
- (d) Mark and label Palk Strait
- (e) Shade and name the Gulf of Kutch
- (f) Shade and label Andaman Sea
- (g) Mark and name Wular Lake
- (h) Mark and label Nathu-La Pass
- (i) Draw the Longitude $82\frac{1}{2}^{\circ}$ E.
- (j) Draw and label the Tropic of Cancer



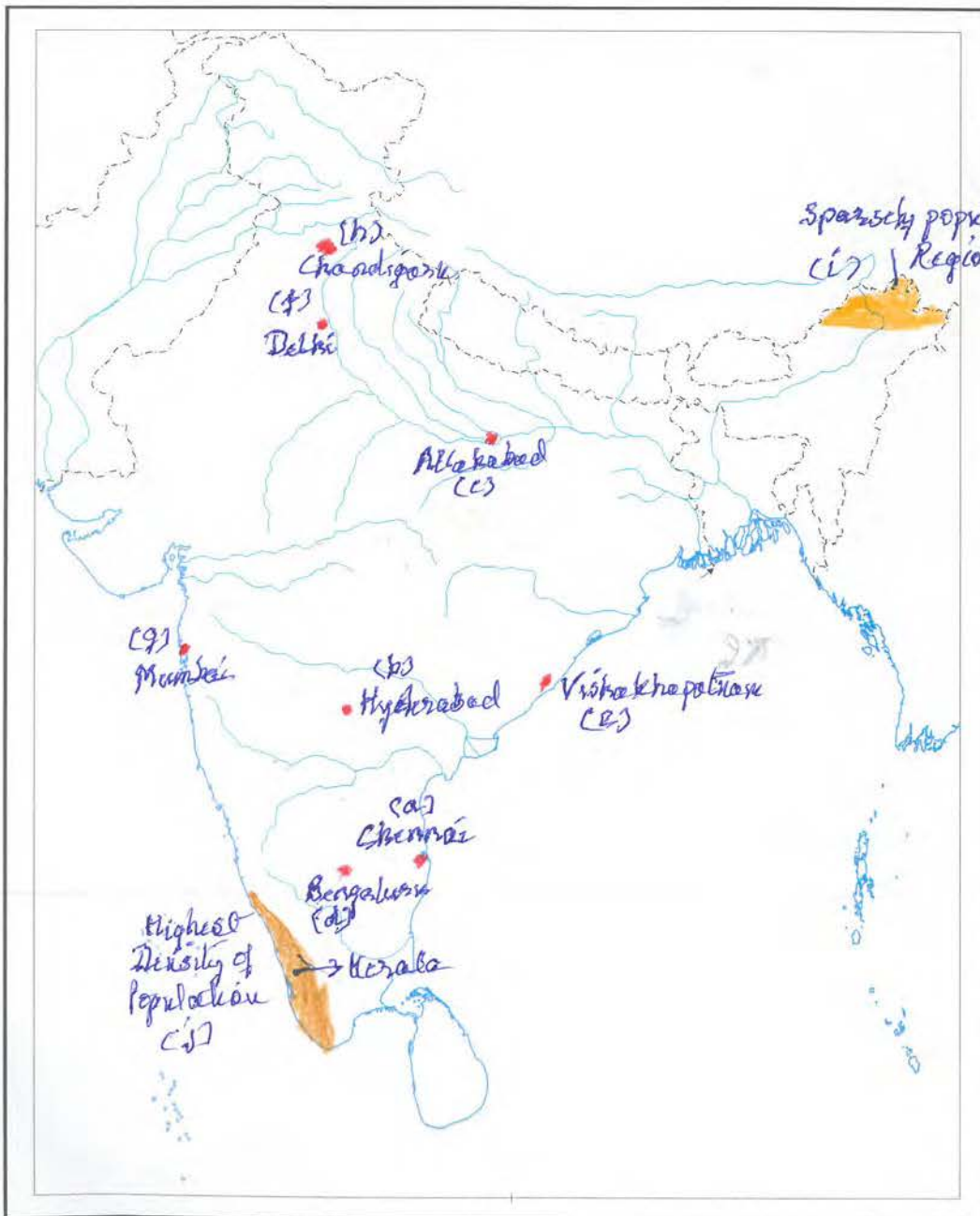
Assignment 5 (Based on Direction of Winds, Distribution of Minerals & Soils) : On the outline map of India provided :

- Mark with arrows and name South West Monsoon winds over the Bay of Bengal.
- Mark with a single arrow and name the winds that bring winter rain in northeast India. *west*
- Mark and name the winds which bring rain to Mumbai in July and August.
- Mark with arrows the wind that brings rainfall to Tamil Nadu coast in December.
- Mark and label Digboi oilfields
- Mark and name Mumbai High
- Mark and name Jharia coalfield
- Print S on the iron mines in Singhbhum
- Shade a region with Laterite Soil in Eastern India
- Shade and label an area with Red Soil



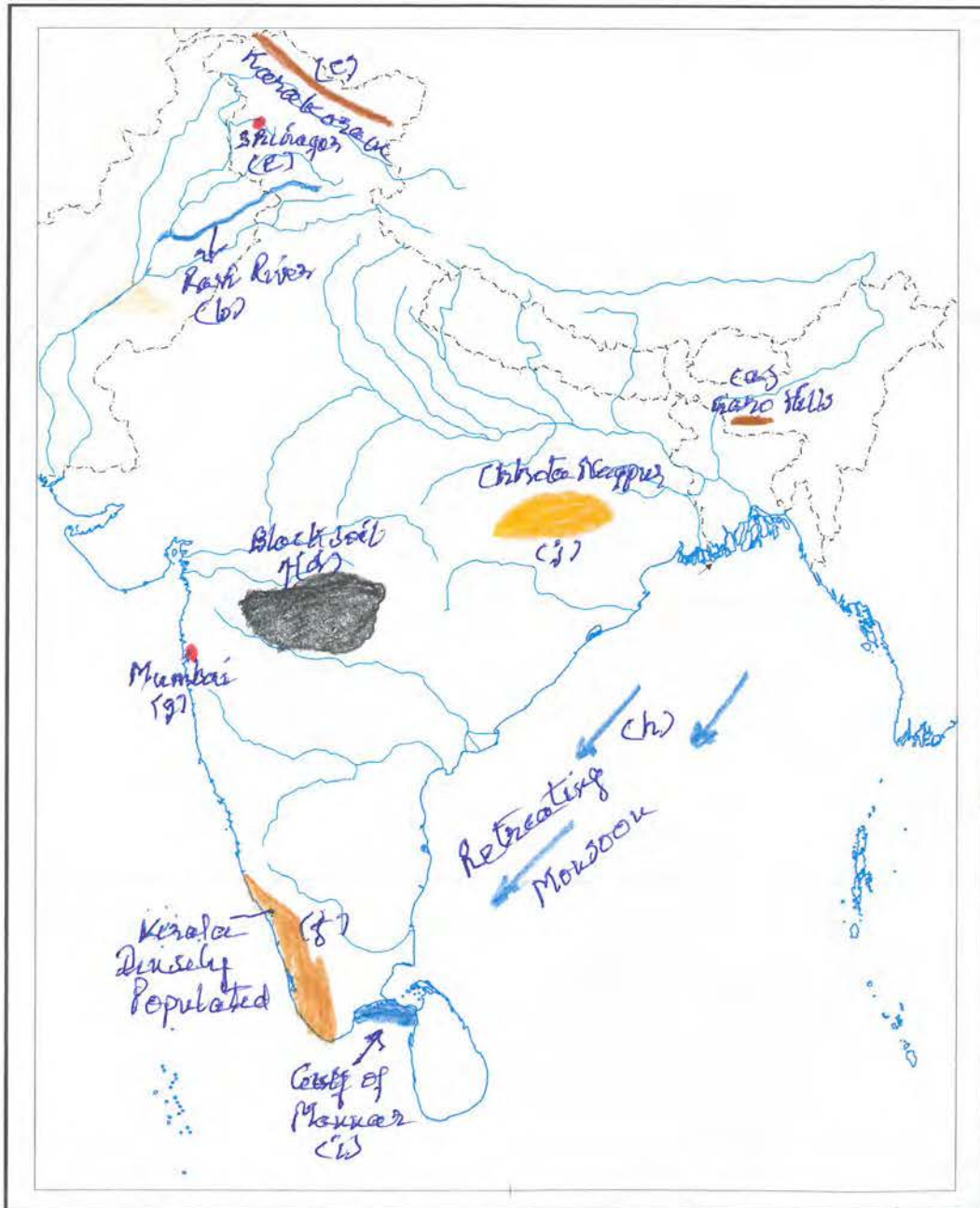
Assignment 6 (Based on Cities and Population) : On the outline map of India provided :

- (a) Mark and name Chennai
- (b) Mark and name Hyderabad
- (c) Mark with the red dot and name Allahabad
- (d) Mark a city which is known as the 'Electronics capital of India'.
- (e) Mark and name the port city of Andhra Pradesh
- (f) Mark and label the capital of India
- (g) Mark and label Mumbai
- (h) Mark and label Chandigarh
- (i) Shade and name a sparsely populated region in the northeast of India
- (j) Shade and name the state with highest density of population.



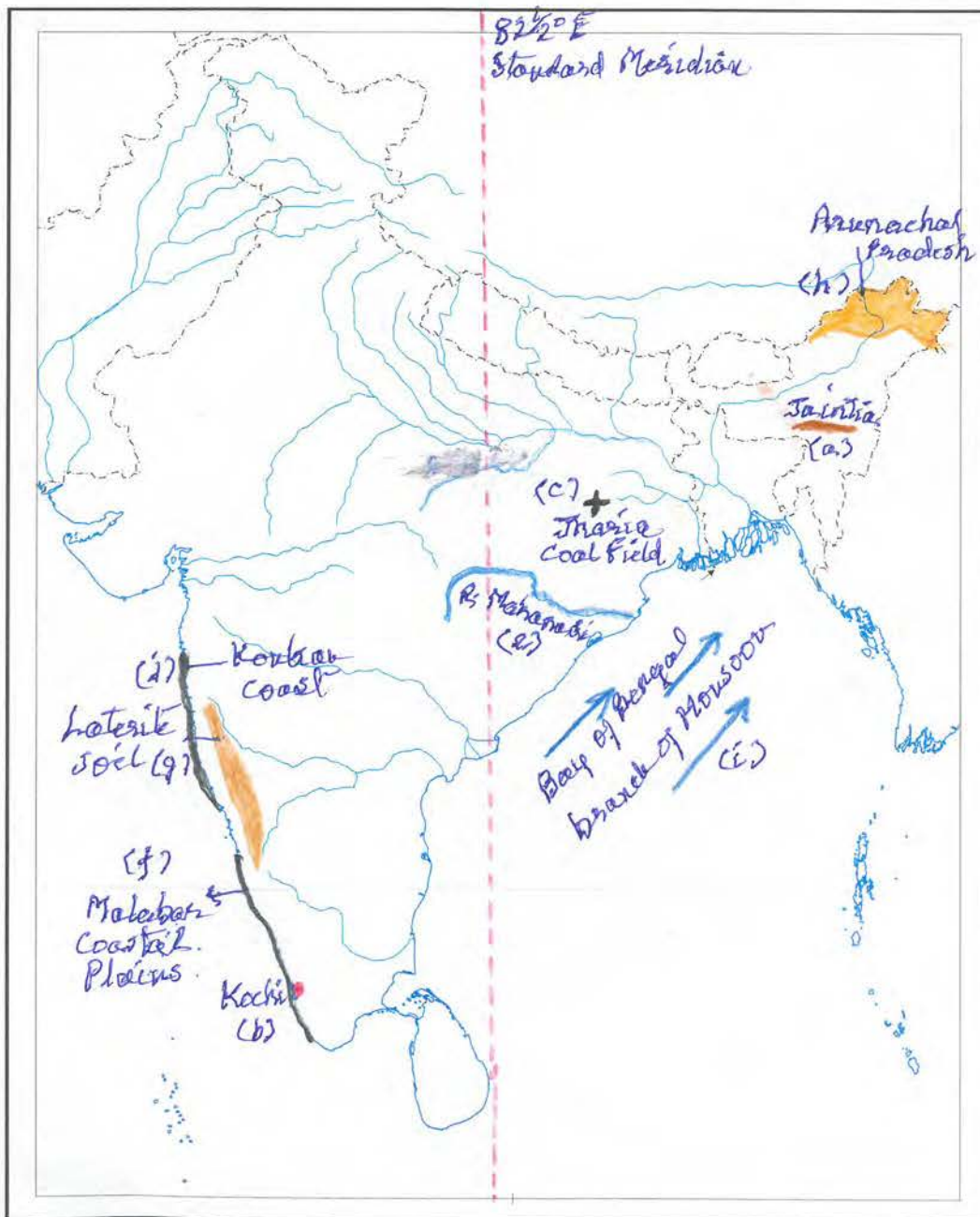
Assignment 7 : On the outline map of India provided :

- (a) Shade and label Garo Hills
- (b) Label the river Ravi
- (c) Mark and name Karakoram Pass
- (d) Shade and label an area with black soil
- (e) Mark and name Srinagar
- (f) Shade and label a very densely populated state located in South India
- (g) Mark and name the biggest port city on the West Coast
- (h) Mark with the help of arrows the direction of monsoon winds in Jan.-Feb.
- (i) Mark and label Gulf of Mannar
- (j) Shade and label Chhota Nagpur Plateau



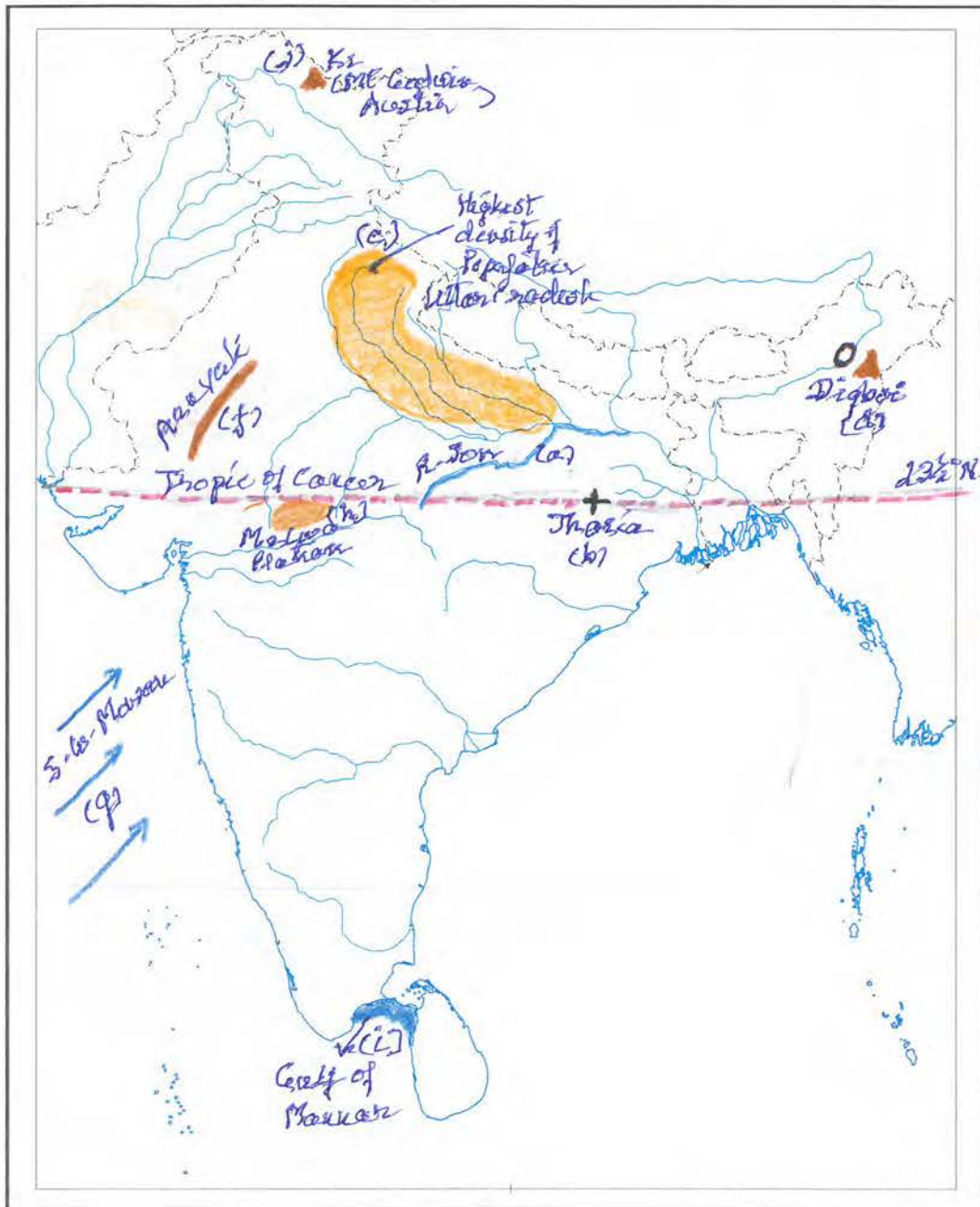
Assignment 8 : On the outline map of India provided :

- (a) Mark and name Jaintia Hills
- (b) Mark and name Kochi
- (c) Mark the Jharia coalfields
- (d) Draw and number the Standard Meridian of India
- (e) Label the river Mahanadi
- (f) Shade and label Malabar Coastal Plains
- (g) Mark an area with laterite soil below the Tropic of Cancer.
- (h) Shade and name a state which has low population density
- (i) Mark with the help of arrows the branch of monsoon that brings rain to the north-eastern states
- (j) Mark and label Konkan Coast



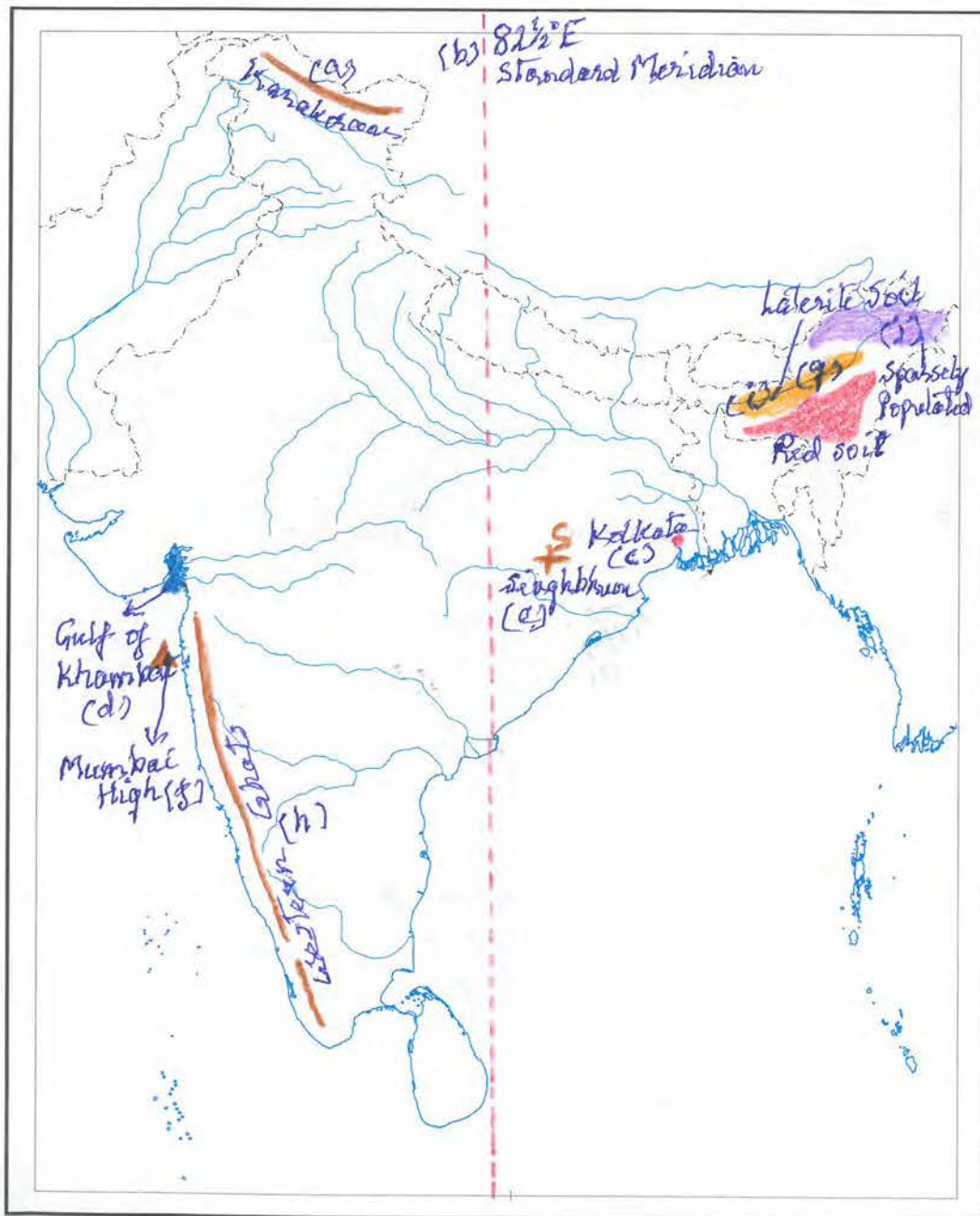
Assignment 9 : On the outline map of India provided :

- Label a tributary of Ganga
- Mark a place where coal is found in Jharkhand
- Shade and label a state with highest density of population
- Name and print O on an oilfield in North-East India
- Draw, name and number the Tropic of Cancer
- Mark and name the Aravali Mountains
- Mark with arrows the direction of the Arabian Sea branch of SW monsoon winds
- Shade and label the Malwa Plateau
- Shade and label the Gulf of Mannar
- Mark and label Mount Godwin Austin



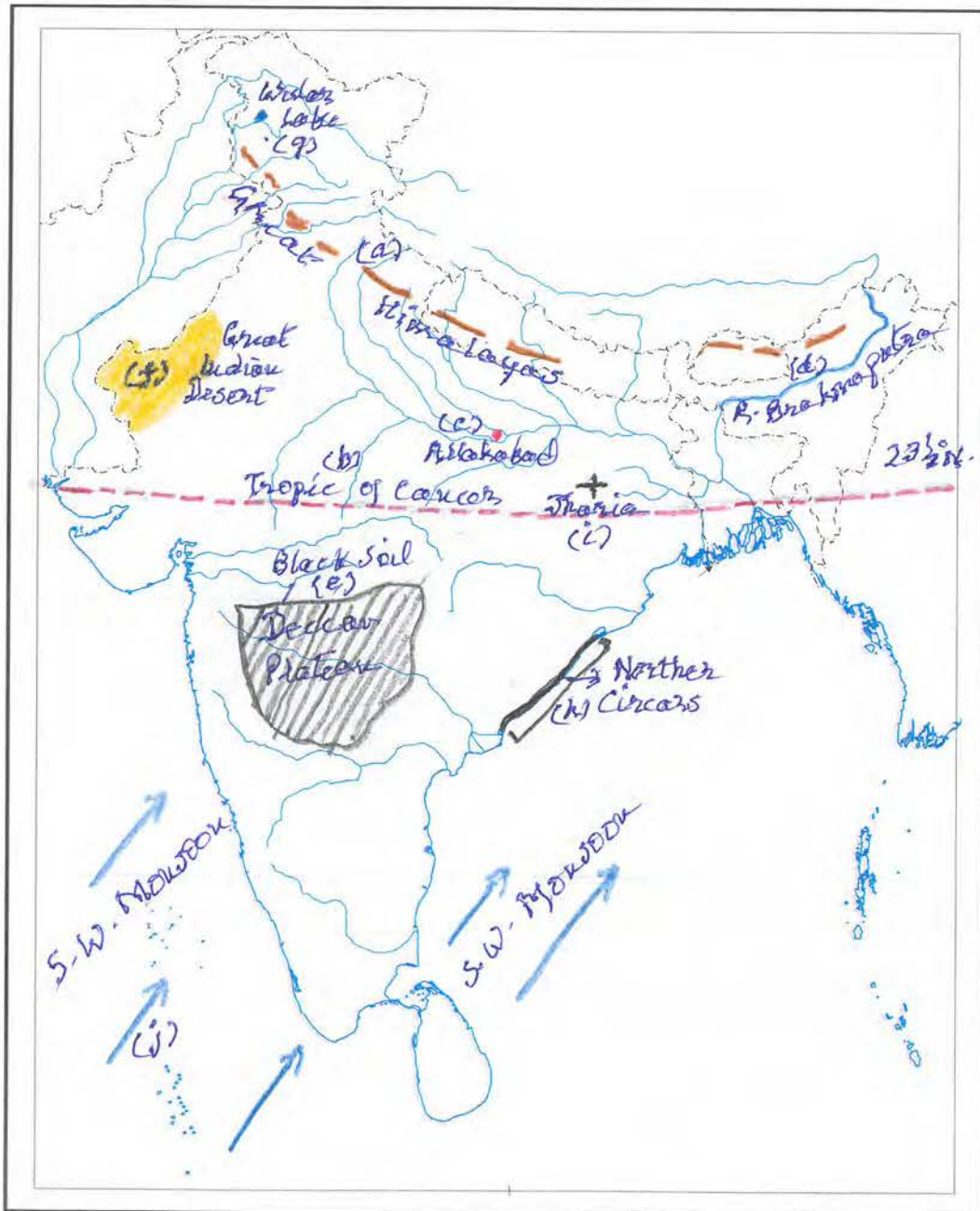
Assignment 10 : On the outline map of India provided :

- (a) Shade and label Karakoram Ranges
- (b) Draw the meridian according to which IST is measured
- (c) Mark the city leading in jute textiles
- (d) Mark and label Gulf of Khambat
- (e) Mark ore deposits of Singbhum
- (f) Mark and name an offshore oilfield
- (g) Shade an area of Red Soil in Eastern India
- (h) Shade and label Western Ghats
- (i) Shade and label an area of laterite soil in the north east
- (j) Shade a sparsely populated region in the north east of India



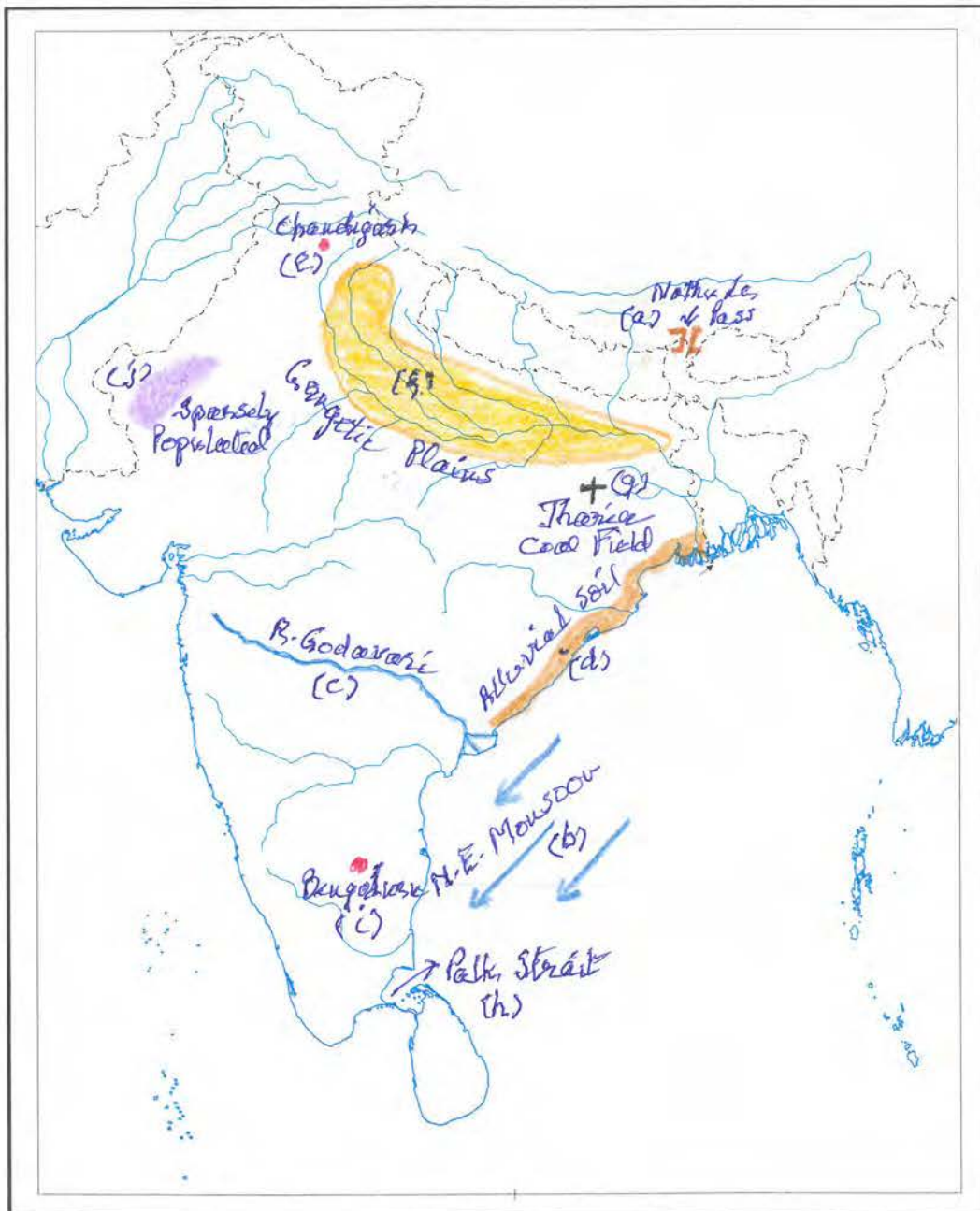
Assignment 11 : On the outline map of India provided :

- (a) Shade and label Great Himalayas
- (b) Draw, name and mention the degree of the latitude that divides India into two equal halves.
- (c) Mark with a dot, the town located at confluence of Ganga and Yamuna
- (d) Label the river Brahmaputra
- (e) Shade and label a region which has soil ideal for cotton cultivation
- (f) Shade and label the Great Indian Desert
- (g) Mark and label Wular Lake
- (h) Shade and label Northern Circars
- (i) Mark and label Jharia coalfield
- (j) Mark with arrows the direction of South West Monsoons.



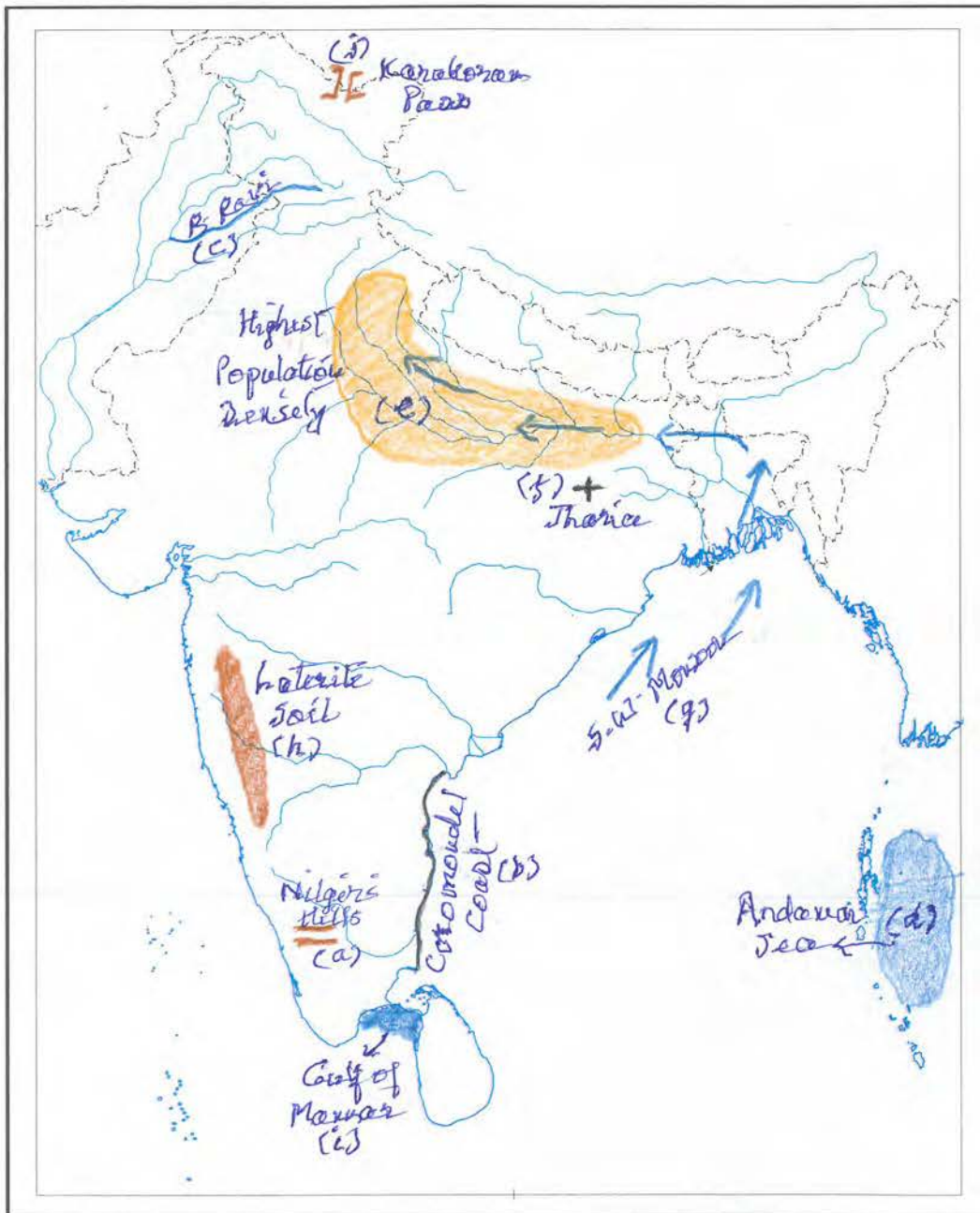
Assignment 12 : On the outline map of India provided :

- (a) Mark and label Nathu-La Pass
- (b) Mark and name the winds which bring rain in winter on the eastern coast
- (c) Label the river Godavari
- (d) Shade and label an area of alluvial soil on the Eastern Coast
- (e) Mark and label Chandigarh
- (f) Shade and label Gangetic Plains
- (g) Mark an area having largest reserves of coal in India
- (h) Shade and label the strait between India and Sri Lanka
- (i) Mark and label Bengaluru
- (j) Shade and label a sparsely populated region in Western India.



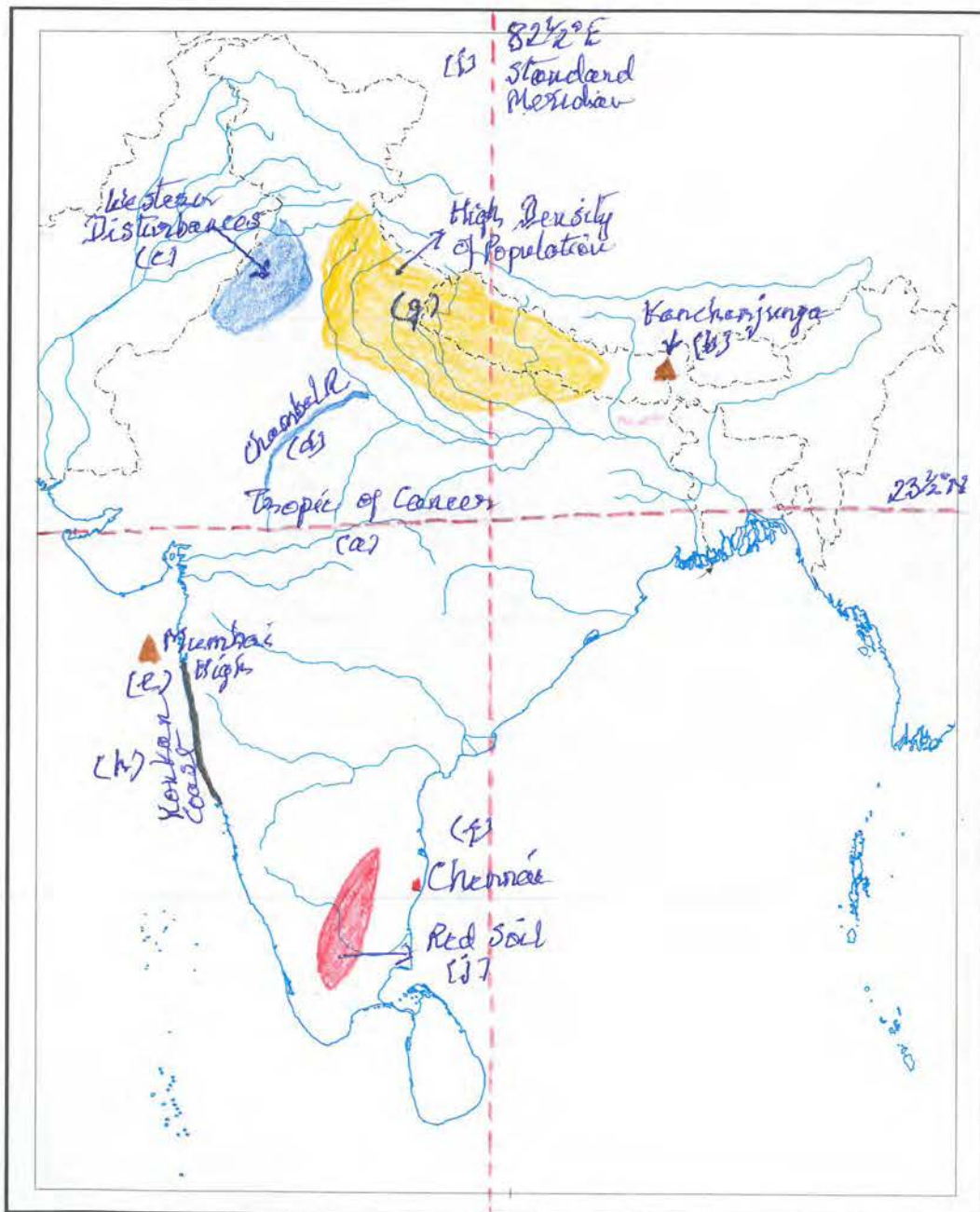
Assignment 13 : On the outline map of India provided :

- (a) Shade and label the Nilgiris
- (b) Mark and label Coromandel Coast
- (c) Label the river Ravi
- (d) Shade and label Andaman Sea
- (e) Shade the state with highest population density
- (f) Mark Jharia coalfields
- (g) Mark with the help of arrows the direction of Bay of Bengal branch of monsoons over Ganga Plains
- (h) Shade an area of laterite soil
- (i) Mark and label Gulf of Mannar
- (j) Mark Karakoram Pass

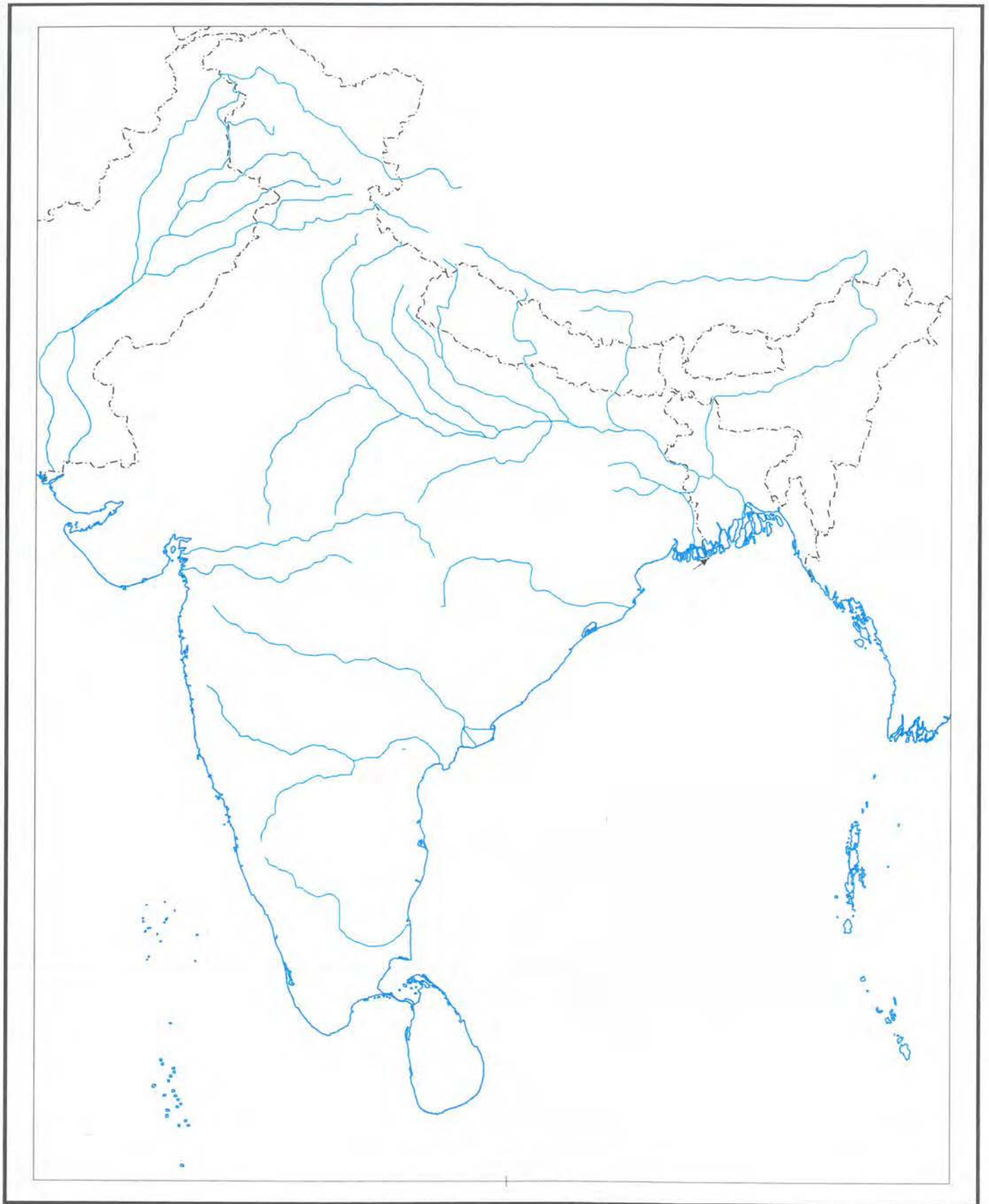


Assignment 14 : On the outline map of India provided :

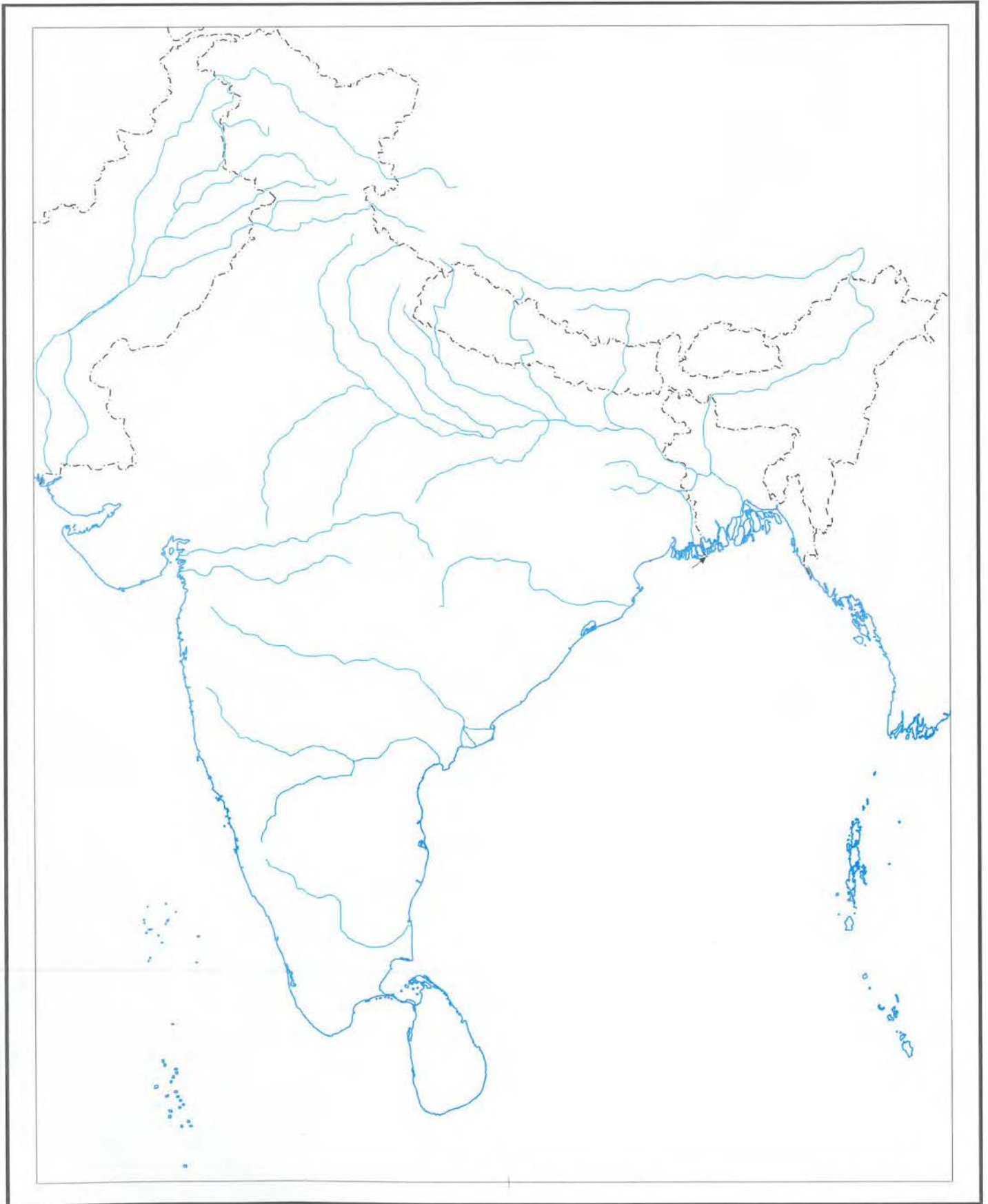
- (a) Draw and label Tropic of Cancer
- (b) Mark and label Mount Kanchenjunga
- (c) Shade and mark the area getting rainfall by Western Disturbances
- (d) Label the river Chambal
- (e) Mark and label Mumbai High
- (f) Mark with dot and label Chennai
- (g) Shade and label a state having high density of population
- (h) Mark and label Konkan Coast
- (i) Draw the Standard Meridian of India
- (j) Shade an area having red soil



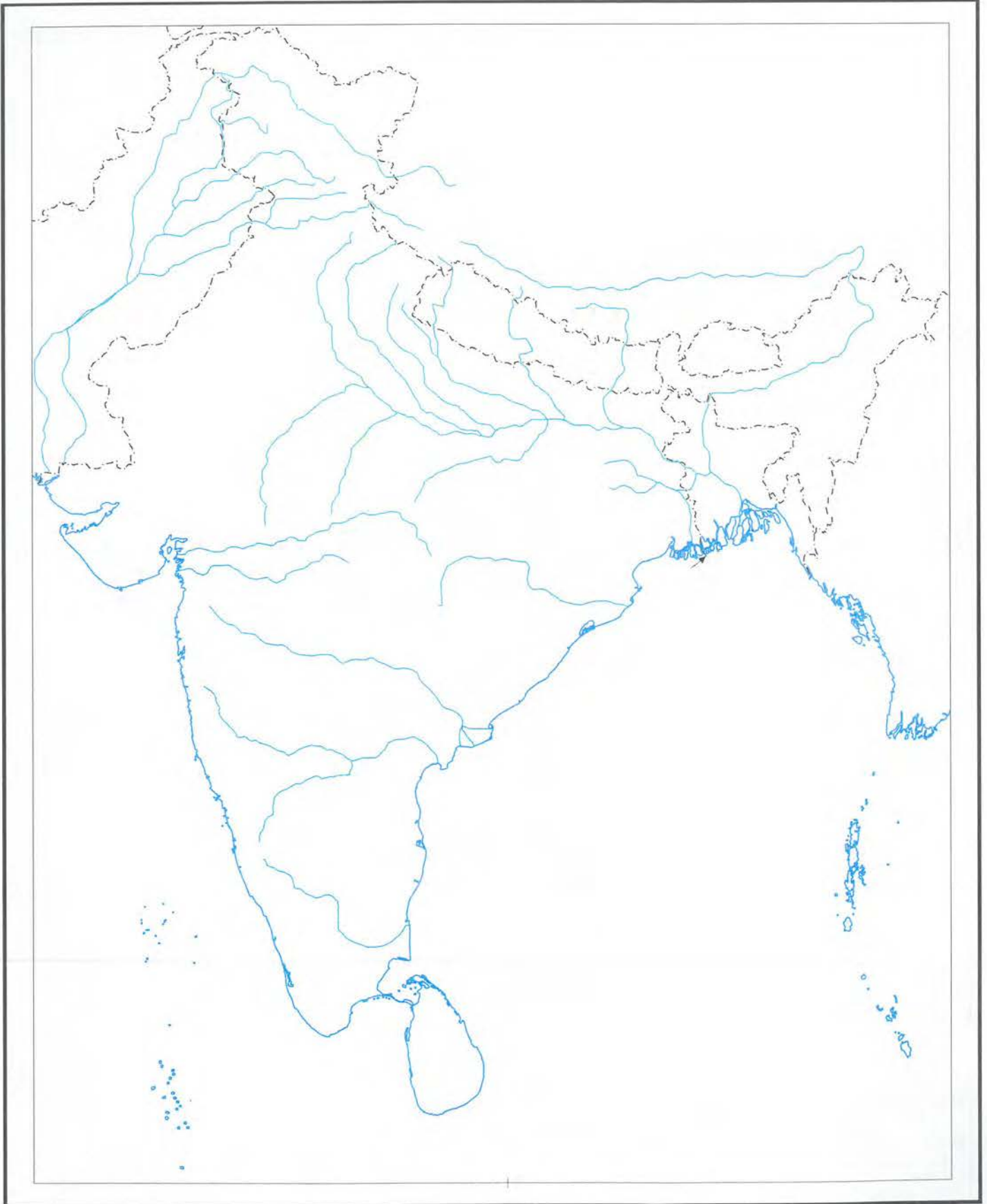
Map of India for Practice



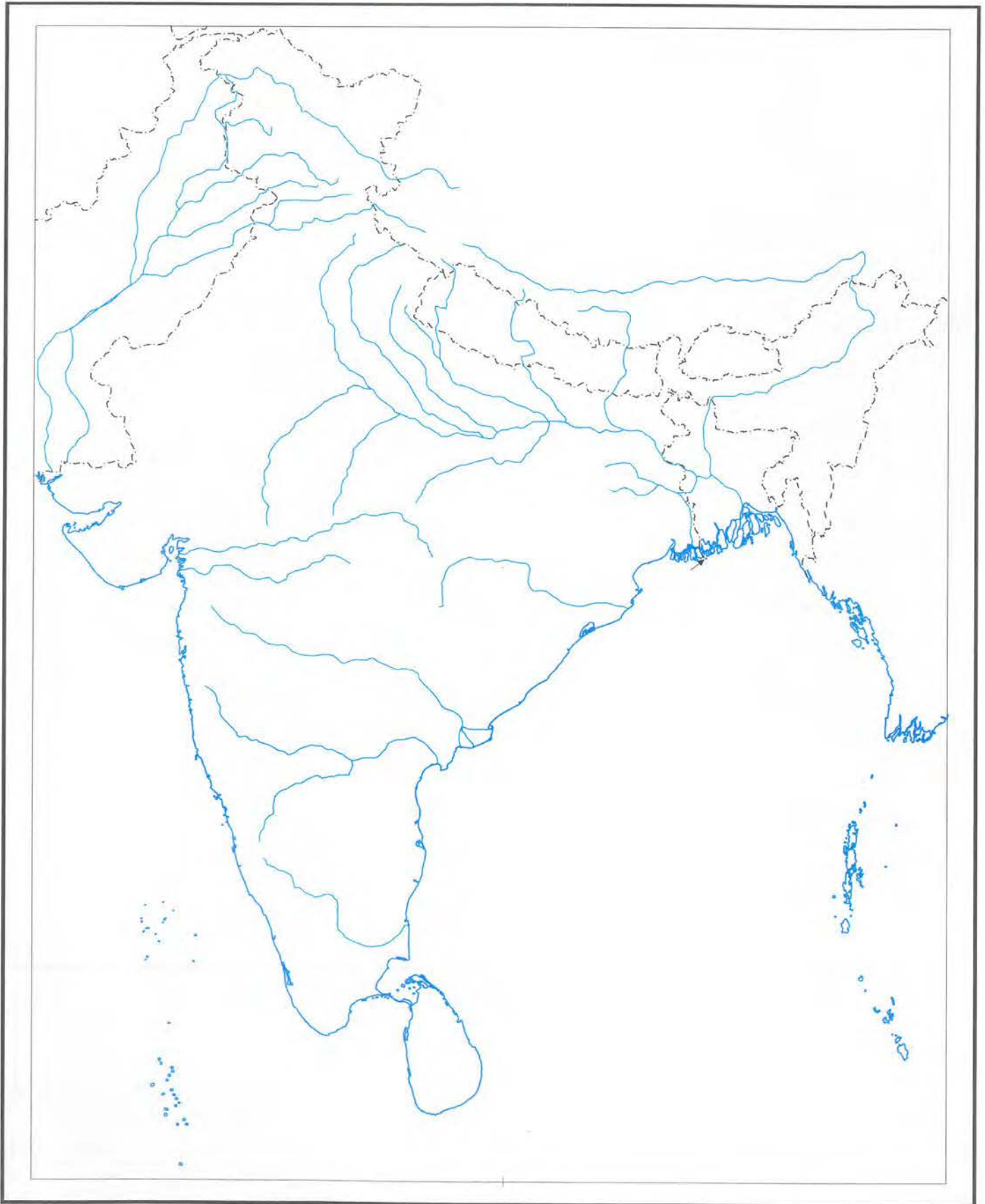
Map of India for Practice



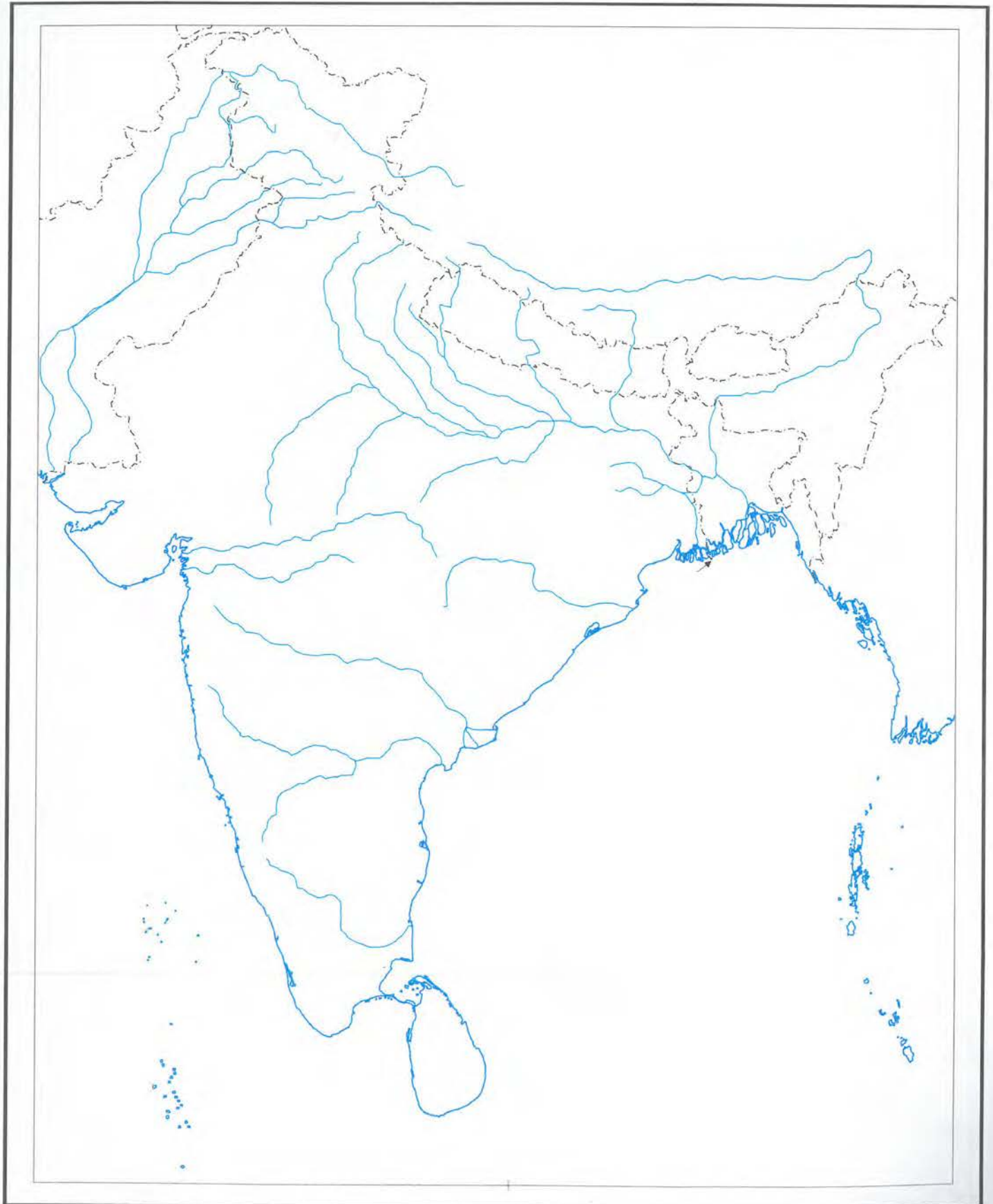
Map of India for Practice



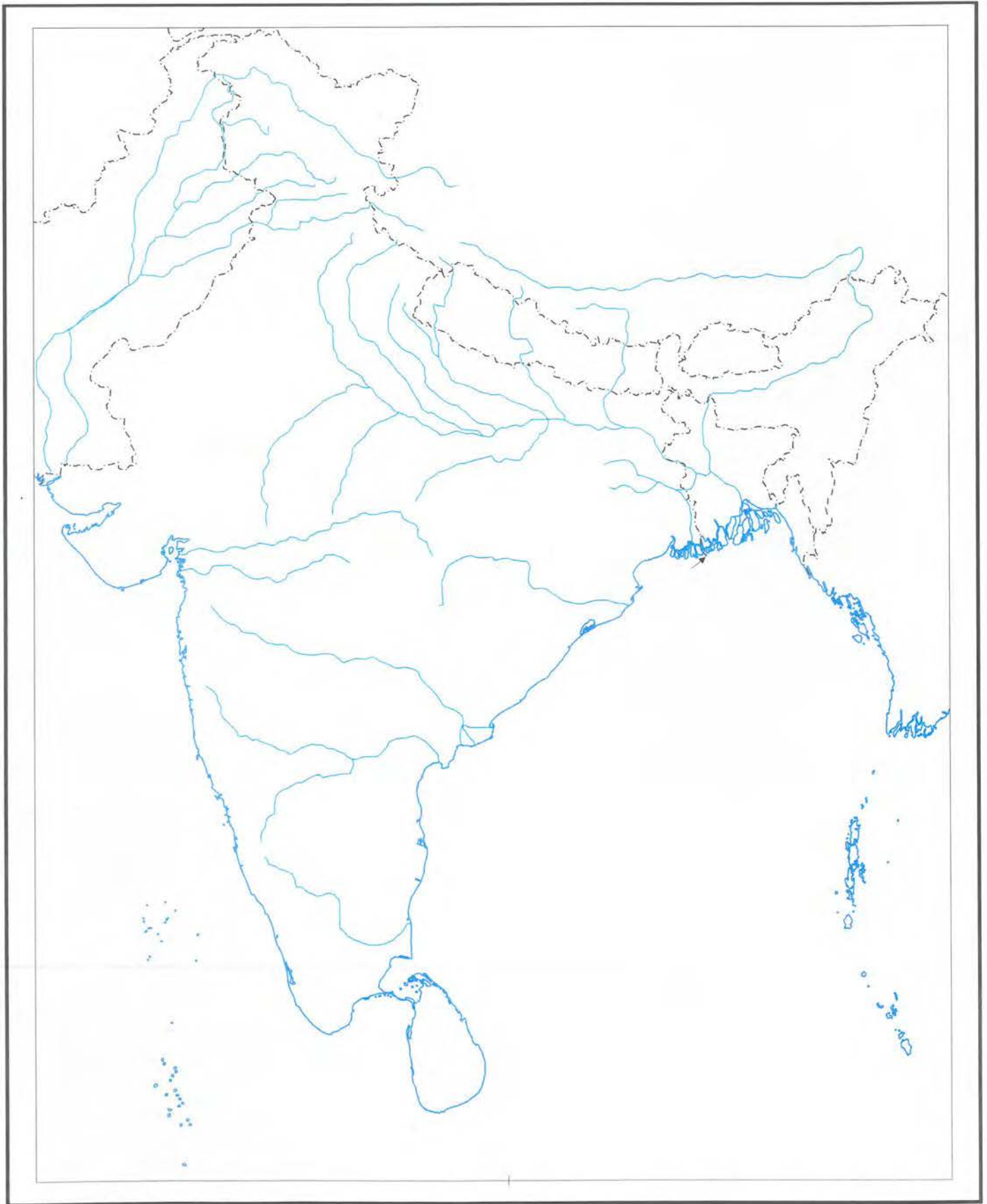
Map of India for Practice



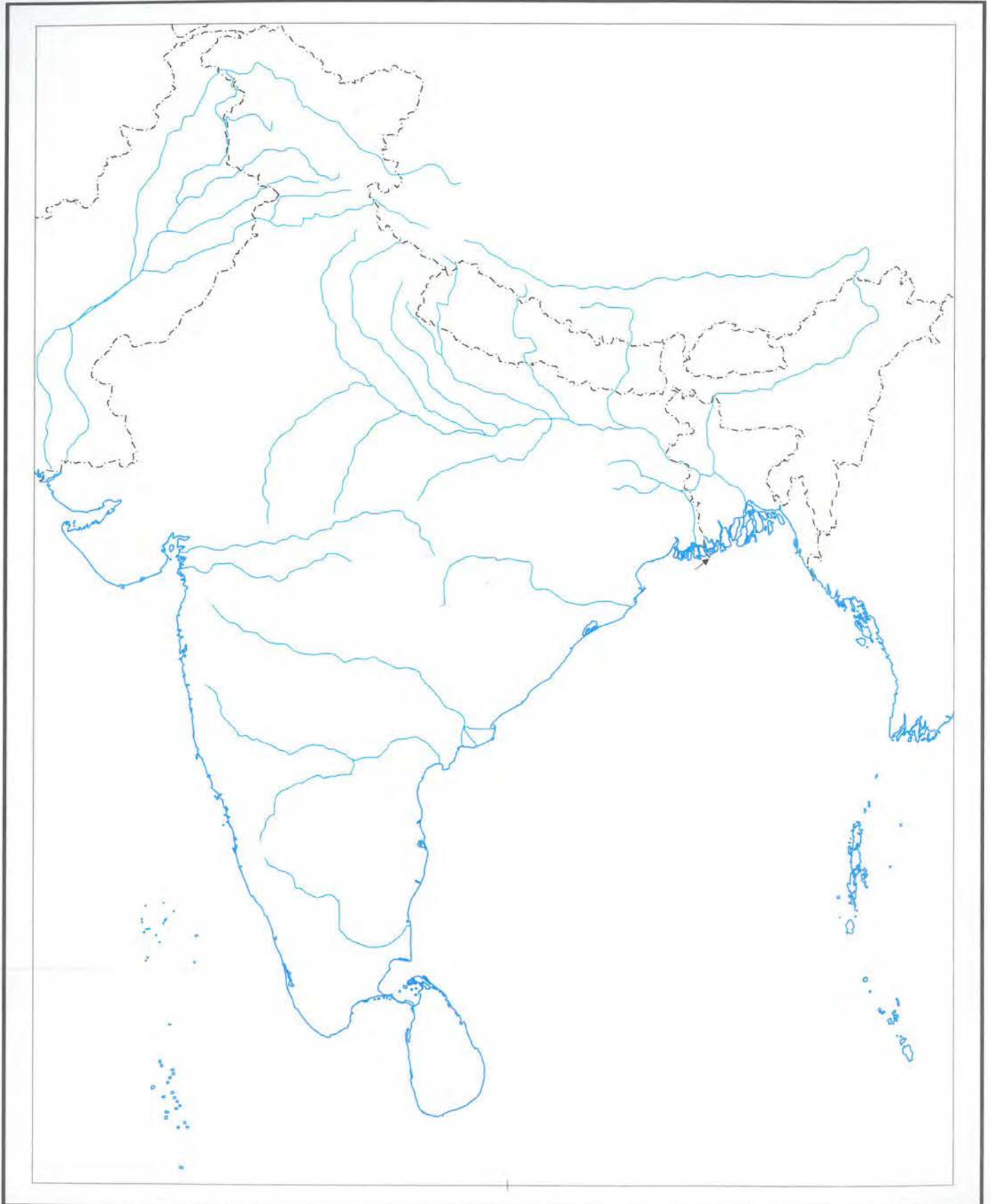
Map of India for Practice



Map of India for Practice



Map of India for Practice



Map of India for Practice

