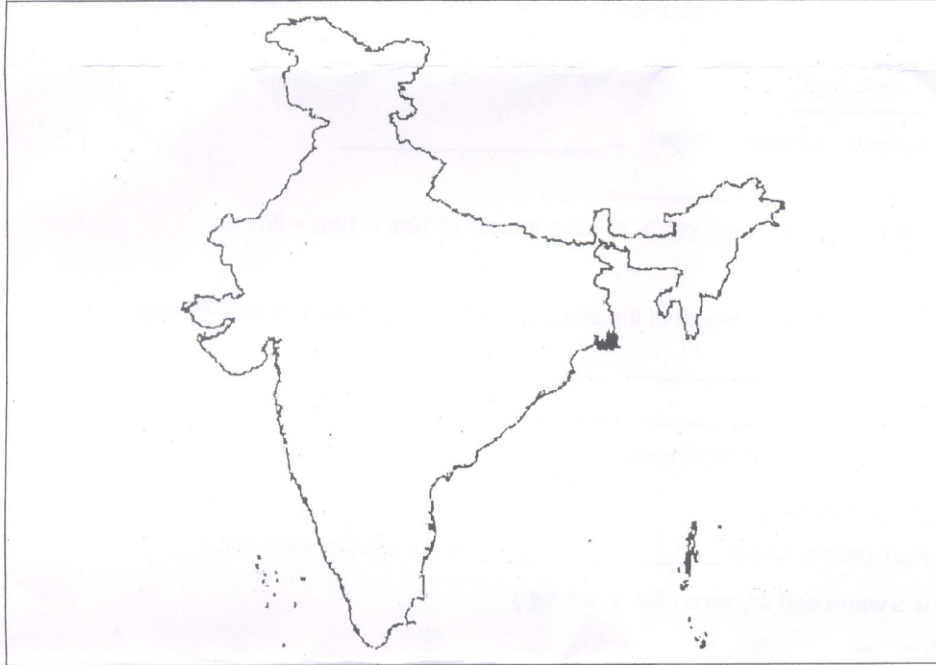


Group A : Compulsory Questions

1. On the given outline map (রেখা মানচিত্রে) of India, mark, shade and name the following (চিহ্নিত করে, শেড দাও এবং নাম লেখ): 5×2=10

- Logtak Lake
- Sabarmati River (নদী)
- A Sugarcane producing region (ইক্ষু উৎপাদক অঞ্চল)
- Telangana Plateau (মালভূমি)
- Two Oil Refineries (তৈল শোধনাগার) - one at Malabar Coast (উপকূল) and one at Coromandal Coast



2. Practical Geography:

a) Draw suitable diagram (উপযুক্ত চিত্র) with the following data and interpret (ব্যাখ্যা কর) 5

Land use	1950-1951	1998-1999
Net sown area (আবাদী জমি)	40%	46%
Fallow land (পতিত জমি)	10%	8%
Cultivable land (কৃষিযোগ্য জমি)	8%	5%
Land not available for cultivation (অ-কৃষি জমি)	17%	14%
Pastures and tree crops (শস্য ও চারণ ক্ষেত্র)	9%	5%
Forests (বনভূমি)	16%	22%

b) In a topographical map (টোপোগ্রাফি মানচিত্রে) the length (দৈর্ঘ্য) of a river is 31.5cm. The actual length of the river is 15.75 km. Calculate the R.F. of the topographical map and draw a linear scale (রৈখিক স্কেল) 5

Group B: Tick the Correct Option (✓) or Fill in the Blanks (Answer any Twenty): 20 ×2= 40

- Normal Lapse Rate of Temperature (স্বাভাবিক তাপহ্রাস হার) in Troposphere is _____
- The colour of Biotite Mica is - White / Black / Brown.
- Relative Humidity (আপেক্ষিক আর্দ্রতা) is expressed (প্রকাশ করা হয়) in Gram / Percentage / Degree.
- Millet – seed sands is a feature (ভূমিরূপ) of glacier / river / wind action.
- The Government Organisation (সরকারী সংস্থা) that provides telecommunication service (টেলিযোগাযোগ ব্যবস্থা) within India is VSNL / TRAI / BSNL.
- The MOHO Discontinuity (বিযুক্তি) lies between _____ and _____.
- Which of the following points (বিন্দু) does not lie on the line $y = 3x+4$?
a. (1, 7) b. (2,10) c. (-1,1) d. (4,12)
- If the direction (দিক) of the Earth's rotation (আবর্তন) on its axis (অক্ষ) becomes east to west, then the Trade wind (আয়ন বা বাণিজ্য বায়ু) in Southern hemisphere (দক্ষিণ গোলার্ধ) will blow from - Southwest / Northeast / Southeast / Northwest direction.
- The direct distance (দূরত্ব) in km between places, 60°N 90°E and 40°S 90°E is 11100 / 11000 / 11200.

11. Removal of the foothills forests (পাদদেশীয় বনভূমি ছেদন) - decreases / increases sheet flow (সিট্ প্রবাহ) , erosion (ক্ষয়সাধন), and sediment inputs (অবক্ষেপণ) into the streams.
12. Two Nitrogen Fixing (সংযোজক) Bacteria are _____ and _____.
13. _____ + green = yellow + _____ = white -violet = _____ + blue = _____.
14. Reversal of 'Terrestrial Magnetic Polarity' can be explained by _____ rule of Electromagnetism.
15. A boy walking at a speed (গতিবেগ) of 10km / hr, reaches his school 15 minutes late. Next time he increases his speed (গতিবেগ বাড়ায়) by 2 km / hr ; but still he is late by 5 minutes. The distance (দূরত্ব) of his school from the house is _____.
16. $2 + \sqrt{2} + 1/2\sqrt{2} + 1/\sqrt{2} - 2 =$ _____.
17. The equation (সমীকরণ) of the solar constant (সৌরধ্রুবক) is _____.
18. If $(x-a)$ is a factor of $x^3 - ax + x + 2$, then $a =$ _____.
19. If density(ঘনত্ব) of air is 1.26 kg / m^3 , the mass (ভর) of air in a room of $10\text{m} \times 12\text{m} \times 6\text{m}$ is _____.
20. With sun at 45° above the horizon(দিগন্ত) , length of the shadow (ছায়ার বিস্তার) cast by a 30 m long vertical pillar (উল্লম্ব স্তম্ভ) will be _____.
21. If the $7 \sin^2 \theta + 3 \cos^2 \theta = 4$, then $\theta =$ _____.
22. Dawn , 6.00 am, (প্রত্যুষকাল) at Kolkata ($88^\circ 30'E$) corresponds to the Twilight, 6.00 pm (গোধূলি) at _____ longitude.
23. The velocity of diurnal motion (আহ্নিক গতি) is _____ on the equator (নিরক্ষরেখা)
24. Foehn / Mistral /Chinook is a warm and dry wind (উষ্ণ ও শুষ্ক বায়ু)
25. ICRISAT is situated (অবস্থিত) at _____.
26. Abhujmaria tribe (উপজাতি) resides (বাস করে) at _____, while Onge tribe at _____.
27. In northern hemisphere highest percentage of population (সর্বাধিক জনসংখ্যা) live within latitude 0° to 20° / 20° to 40° / 40° to 60° / 60° to 80° .
28. Square/Circular/L-shaped village form (আকৃতি) can not be regarded as nucleated (গোষ্ঠীবদ্ধ)
29. Boleadoras is a type (প্রকার) of rope / crop / dress.
30. Block Spade (ব্লকস্পেড) is associated with - physical weathering / chemical weathering / glacier.

Group - C: Short answer type question

10x4 = 40

1. Compulsory Question (To be answered in English only)

10

"Field studies constitute an important part of Geography" ——— Explain.

2. Answer any 3 (three) questions from the following

3x10 = 30

- A. What do you mean by the 'Holistic Concept' (সামগ্রিক ধারণা) of Human Resource (মানব সম্পদ) ?
- B. What should be the appropriate strategies (যথাপযুক্ত ব্যবস্থা) for forest conservation (সংরক্ষণ) in India?
- C. How the theory of Plate tectonics (পাতাসংস্থান তত্ত্ব) explain the origin of fold mountain system(ভঙ্গিল পর্বতমালার উৎপত্তি) of the world?
- D. The moon describes a circular orbit of radius $3.8 \times 10^5 \text{ km}$ about the earth in 27 days and the earth describes a circular orbit of radius $1.5 \times 10^8 \text{ km}$ round the sun in 365 days. Find the ratio (অনুপাত) of the mass (ভর) of the sun to that of the earth.
- E. The focal length of the objective of an astronomical telescope is 100 cm and its diameter is 5 cm. If the focal length of the eye piece is 20 cm, find
 - i) Magnifying power in normal adjustment
 - ii) The separation of two lenses
 - iii) The diameter of the eye piece
- F. Discuss the changes in composition (গঠনগত পরিবর্তন) of foreign trade (বৈদেশিক বাণিজ্য) in India in recent years.