

2019

GEOGRAPHY — HONOURS

Paper : CC- 4

(Thematic Mapping and Surveying)

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Use of Scientific calculator is allowed in this paper.

Group - A

Answer *any five* questions (each within 50 words).

1. Convert the following to its scientific notations or to its original numbers : ½×4
 - (a) 204
 - (b) 0.045
 - (c) 0.00002011
 - (d) 2.63×10^4
2. What does log 2 mean? What is the antilog of 3? 1+1
3. Differentiate between qualitative and quantitative data. 2
4. Define strike and dip of a rock bed. 1+1
5. A weather map represents relatively higher pressure over land and relatively lower pressure over sea coupled with precipitation in the North Western part of the Indian sub-continent. Which season does the weather map represent and why? 2
6. What is the utility of a prism in a prismatic compass? What is closing error? 1+1
7. How can the following be represented on a map? ½×4
 - (a) Density of population
 - (b) Number of trains between Howrah to Mumbai and Howrah to Delhi
 - (c) Urban populations for the districts of Karnataka
 - (d) Occupational structures for the districts of West Bengal.

Please Turn Over

Group - B

Answer *any four* questions (each within 150 words).

8. Distinguish between Apparent Dip and True Dip. How is true dip calculated mathematically? 3+2
9. (a) Explain the use of an Abney Level.
 (b) The distance between two points A and B measured along a slope is 250 M. Find the horizontal distance AB when the angle of slope is 5°.
 (c) What is the smallest accurate reading that can be measured in an Abney Level? 2+2+1
10. What are the main types of igneous intrusions? How will you identify them on a geological map? 3+2
11. The following are the bearings of the lines of a Closed Traverse ABCD. Calculate the included angles of the traverse. What is the formula for calculating the sum of included angles in a traverse? 4+1

<u>LINE</u>	<u>FORE BEARING</u>
AB	N 55° 15'E
BC	S 46° 45'E
CD	S 11° 0'W
DA	N 60° 30'W

12. What are the objectives of Land Use and Land Cover map? 5
13. The top of a house (C) has an elevation of 15° from an instrument stationed at A. The distance between A and B (base of the house) is 25M. Find — 3+2
 (a) Height of the house (BC) when instrument height is 1.5 M from A.
 (b) Inclined distance (AC) from Point A.

Group - C

Answer *any two* questions (each within 500 words).

14. What are the different types of maps produced by –
 (a) NATMO
 (b) GSI
 (c) NRSC / Bhuvan?
 Bring out the usefulness and applicability of each type of map. 6+4
15. Discuss the different parts of a Theodolite and its uses in detail. Explain how it can be used to find vertical angles. 6+4
16. What are the features of weather observed during the SW monsoon season in India? How are these elements shown on a weather map? 7+3
17. What is socio-economic map? Describe the principles and objectives of socio-economic map. 3+7