

B. Sc. GEOGRAPHY 1st YEAR 2nd SEMESTER EXAMINATION-2023**Subject: Surveying and Mapping****Paper: SC/GEOG/UG/CORE/TH/04****Time: 1 hour 30 minutes****Full Marks: 30****GROUP-A***Answer any one question*

10 x 1 = 10

1. Explain the coding system in an open series topographical map published by Survey of India with sketches. Mention the range(s) of latitudinal and longitudinal difference and R.F. of the following old series topographical maps. 4+6
 - (i) 76F
 - (ii) 63J/10
 - (iii) 73D/5/SW
2. Classify bearings and mention their advantages. Calculate the included angles and determine the ground area of the traverse from the given data of prismatic compass survey. 4+4+2

Line	Length (m)	Corrected Bearing		Remarks
		FB	BB	
AB	6.20	128°15'	308°15'	The survey was done clockwise
BC	9.50	211°45'	31°45'	
CD	7.40	314°30'	134°30'	
DA	8.10	43°45'	223°45'	

GROUP-B*Answer any two questions*

5 x 2 = 10

3. Distinguish between polar co-ordinate and rectangular co-ordinate systems. Determine the Cartesian co-ordinate of Point A, while its polar co-ordinates are 30 m, 31°15'.
4. Write the different sources of error produced during the Transit Theodolite survey.
5. State various types of traverse with suitable diagrams. Convert the following whole circle bearing into reduced bearing: (i) WCB of MN=125°55', (ii) WCB of PQ= 328°15'
6. Write the marginal information available on toposheets with 1:50000 scale. Distinguish between benchmark and spot height on a topographical map.

GROUP-C*Answer any two questions*

2 x 2 = 4

7. The magnetic bearing of line XY is 75°45'. Find out the true bearing if the magnetic declination is 6°15'E.
8. What is a datum surface?
9. Write the importance of upper stadia and lower stadia in the Dumpy Level survey.
10. Differentiate a large scale map from a small scale map.