



**WEST BENGAL STATE UNIVERSITY**  
B.A./B.Sc. Honours 2nd Semester Examination, 2023

**GEOACOR04T-GEOGRAPHY (CC4)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**CATEGORY-A**

Answer any *one* question from the following within 600 words 10×1 = 10

1. Write down the utilities of Transit Theodolite. Briefly discuss the suitability of bar graphs and pie graphs on the basis of types of data used. 2+4+4
2. Based on the following field book calculate the Reduced Level of Station B, C, D, E, F, G, H. Define choropleth. 8+2

Station	Distance in mt.	Staff Reading (mt.)			Collimation Level (mt.)	Reduced Level (mt.)	Remarks
		BS	IS	FS			
A	0	1.395				6.410	The benchmark of Station A is given. Heights were taken by Dumpy Level which was shifted at Station D.
B	2		1.400				
C	4		1.305				
D	6	1.280		1.260			
E	8		1.270				
F	10		1.320				
G	12		1.310				
H	14			1.355			

**CATEGORY-B**

Answer any *four* questions from the following within 150 words each 5×4 = 20

3. Define logarithm scale and discuss its basic characteristics. 2+3
4. What is closing error in a Prismatic Compass Survey? State the principle of Bowditch's Method with suitable diagram. 2+3
5. Calculate the Whole Circle and Reduced Bearing from the given table:

Sl. No.	Whole Circle Bearing	Reduced Bearing
	217°30'	?
	?	S 89° E
	172°	?
	?	N 42°30' W
	105°30'	?

6. If  $\log x = -2.0258$ , find  $x$ .
7. Distinguish between Land use and Land cover map.
8. What do you understand by scientific notation? If the approximate distance between the Earth and Sun during Perihelion and Aphelion is 149000000 km and 152000000 km, express the distance using scientific notation.
9. What is characteristic and mantissa? Explain with examples how to determine characteristic and mantissa. 1+4

### CATEGORY-C

Answer any *five* questions from the following within 50 words each

2×5 = 10

10. Round the 1878 into nearest thousand and round the 6247 into nearest ten.
11. Why sphere is used to represent urban population?
12. Distinguish between closed traverse and open traverse survey.
13. What is magnetic declination?
14. Back bearing of a line AB is  $308^{\circ}15'$  (in a clockwise circuit). The value of the angle ABC is  $96^{\circ}30'$ . Find the forward bearing of BC.
15. What is a Cadastral Map?
16. What are the secondary sources from which socio-economic maps may be prepared?
17. Write down two demerits of Theodolite Survey.
18. Write major difference between slope and gradient.

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