



**WEST BENGAL STATE UNIVERSITY**  
B.A./B.Sc. Honours 2nd Semester Examination, 2021



**GEOACOR04T-GEOGRAPHY (CC4)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

**GROUP-A**

Answer any *one* question from the following

10×1 = 10

1. What is the magnetic bearing of a line? Describe the Whole Circle System and Quadrant System of bearing with suitable diagrams. 3+7 = 10
2. How do you determine the horizontal distance between two points by Theodolite? From the given Prismatic compass survey data (Table 1) calculate included angles and area of the traverse: 5+5

Table-1

Line	Length (m)	Corrected Bearing		Remarks
		FB	BB	
AB	8.96	181°15'	1°15'	Survey was done anti-clockwise
BC	6.45	109°15'	289°15'	
CD	9.75	20°45'	200°45'	
DA	9.51	282°30'	102°30'	

**GROUP-B**

Answer any *four* questions from the following

5×4 = 20

3. Find out scientific notation for 10.4700000000, and anti-log value of -2.94628 (with the help of five-figure log/anti-log table).
4. What is triangulation? Explain how triangulation is applied in the field.
5. Simplify:  $\log_{10} (250 \times 150) / 375$ .
6. A Theodolite survey was conducted and the following observations are recorded (Table 2). With the given data determine the height of the object from its base, B (accessible).

Table-2				
Station of observation	Object	Face	Vertical circle reading	Remark
A	P	Left	17°20'	<ul style="list-style-type: none"> <li>• AB = 18 m on a more or less level surface</li> <li>• Instrument height at A = 1.6 m</li> </ul>
		Right	17°30'	

7. What is the purpose of using Bowditch's Method in Prismatic Compass Survey? What are the other errors occurring in this type of survey?
8. State the various types of time series data represented by Lines Graphs. Why some data are can only be represented by Line and not Bar graphs?
9. Why logarithmic scale is used for representing geographical data? Explain with example(s).

### GROUP-C

Answer any *five* questions from the following

2×5 = 10

10. Differentiate between Proportional Circles and Pie Diagrams.
11. Convert Whole Circle Bearing (WCB) of Line AB = 195° into Reduced Bearing (RB), and RB of Line CD = N 35°W into WCB.
12. Round off 10.2637 of the nearest tenths, hundredths and thousands.
13. Do you think slope and gradient are the same? Justify your answer.
14. Find out the included angle between the Lines AB and BC when it's Forward Bearing of AB is 77°30' and Backward Bearing of BC is 176°00'.
15. Differentiate between Geographical north and Magnetic north line.
16. How is the line of collimation obtained in a Dumpy Level Survey?
17. Why sphere is used to represent the urban population? Determine the radius of a sphere for an urban population of 705128.
18. Convert 76°30'40" into radian value.

**N.B. :** Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.

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