

R18

Code No: 153BV

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year I Semester Examinations, March - 2021

SURVEYING AND GEOMATICS

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

1. What are the instruments used in chain surveying? How is a chain survey executed in the field? Explain with neat sketch. [15]
2. The following bearings were observed in running a closed traverse.

Line	F.B	B.B
AB	$71^{\circ} 05'$	$250^{\circ} 20'$
BC	$110^{\circ} 20'$	$292^{\circ} 35'$
CD	$161^{\circ} 35'$	$341^{\circ} 45'$
DE	$220^{\circ} 50'$	$40^{\circ} 05'$
EA	$300^{\circ} 50'$	$121^{\circ} 10'$

Determine the correct magnetic bearings of the lines. [15]

3. Define: (a) Bench mark, (b) Line of collimation, (c) Reduced level, (d) Backsight and (e) Parallax. [15]
4. What is Simpson's rule? Derive an expression for it. [15]
- 5.a) Explain about obstacles in chain surveying.
b) Explain about local attraction, Magnetic declination and Dip. [9+6]
6. What are the various methods of theodolite traversing? [15]
7. What are the common difficulties in setting out simple curves? Describe briefly the method adopted to overcome the difficulties. [15]
8. How do you determine the scale of an aerial photograph? What do you understand by the terms 'datum scale' and 'average scale'? [15]

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