

II B.Tech I Semester Supplementary Examinations, November 2005
SURVEYING-I
(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Write the classification of surveys in a detailed manner.
 (b) What is reciprocal ranging? Explain with a neat sketch. [8+8]
2. Draw a neat sketch and explain the page of a field book. Show how the field measurements are entered in it. [16]
3. (a) Explain
 - i. Time bearing
 - ii. Magnetic bearing
 - iii. Arbitrary bearing
 (b) The following are the bearing of the lines of a closed traverse ABCDA:

Line	AB	BC	CD	DA
Forebearing:	<i>N46°10'E</i>	<i>S60°40'E</i>	<i>S9°50'W</i>	<i>N80°40'w</i>

Calculate the interior angles of the traverse. [8+8]

4. (a) What are the isogonic charts? [4]
 (b) What is the dip of a magnetic needle? How is it compensated in a prismatic compass? [6]
 (c) What are the precautions to be taken while conducting a compass survey. [6]
5. (a) Explain the operations
 - i. centering and
 - ii. orientation in a plane table survey
 (b) Write the advantages and disadvantages of plane table survey. [8+8]
6. (a) What is Simsons's Rule in the computation of areas of figures.
 (b) The following offsets were taken from a chain line to a hedge: [8+8]

Distance(m)	0	8	16	24	32	48	64	88	112
Offset (m)	8.76	4.32	5.44	4.88	3.84	3.36	3.00	2.52	1.84

7. (a) Write in brief about the prismoidal formula for volume.

- (b) A railway embarkment is 8m wide with side slopes of 1.5 to 1. The ground is level transversely. The centre heights at 30m intervals are 0.66, 1.20, 1.35, 1.80, 1.70, 1.25 and 0.15m. Compute the volume contained in this reach by the prismoidal formula.

[8+8]

8. Describe the construction and working of a pantagraph and planimeter . [8+8]

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