

Seat No. **OCT-NOV 2025 WINTER EXAMINATION****1154 B.Tech. CBCS****Sub. Name: Surveying-I****Sub. Code: 63339/73198/77770****Day and Date: Thursday ,18-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM**

**Instructions:** 1. Assume suitable data wherever necessary and mention it boldly  
 2. Figures to the right indicate full marks  
 3. Use of Scientific calculator is allowed

**Special Inst.:** Attempt any Three questions from question number 1 to question number 4  
 Attempt any Three questions from question number 5 to question number 8

- Q1)** a) Explain curvature correction and refraction correction with neat sketch (06) [12]  
 b) The following observations were made during the testing of a dumpy level. (06)

Instrument at	Staff reading at	
	A	B
A	1.725	2.245
B	2.145	3.045

Distance between A and B =200m , RL of A =450.000M

1. Is the instrument in adjustment?  
 2. What should be the staff reading on A during the second set up of the instrument for the line of collimation to be exactly horizontal?  
 3. What should be the RL of B?
- Q2)** a) Explain Trapezoidal rule for volume calculation with neat sketch (05) [11]  
 b) Explain zero circle of the planimeter with neat sketch (06)
- Q3)** a) Explain Intersection Method of plane table survey with neat sketch (05) [11]  
 b) Explain Traversing Method of plane table survey with neat sketch (06)
- Q4)** Attempt any three questions from the following , [12]  
 a) Define level surface and levelline (04)  
 b) What are the uses of Plane Table Survey (04)  
 c) Explain characteristics of contour (04)  
 d) Explain Mid ordinate rule for area calculation (04)  
 e) Explain errors in plane table survey (04)
- Q5)** a) Describe temporary adjustments of theodolite in detail (06) [12]  
 b) Describe sources of errors in theodolite (06)
- Q6)** a) Describe case in trigonometrical levelling when the base of the object is [11]  
 accessible(03)

<b>b)</b>	LINE	LENGTH	BEARING
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AB	100	?
BC	80.5	140°30′
CD	60	220°30′
DA	?	310°15′

b) An incomplete traverse table is obtained as above. Calculate the length of DA and bearing of AB (08)

**Q7)** a) Draw neat sketch of ghat tracer (05) [11]  
b) what are the various usage of box sextant (06)

**Q8)** Attempt any **three** questions from the following , [12]  
a) Describe uses of Theodolite (04)  
b) Define face left and face right (04)  
c) Explain direct method of measuring horizontal angle with theodolite (04)  
d) Explain tunnel surveying (04)  
e) Explain usage of hand level (04)

## End Of Question Paper

**Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -**

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (77770) Surveying-I Part 2 SEM 3
- 2] (1154) B.Tech. CBCS (73198) Surveying-I Part 2 SEM 3
- 3] (101) Bachelor of Engineering (63339) Surveying-I Part 2 SEM 3