Seat No.

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MAR_APR 2026 SUMMER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Surveying-I

Sub. Code: 63339/73198/77770

Day and Date: Friday ,15-05-2026 **Total Marks: 70**

Time: 10:30 AM To 01:00 PM

Instructions:
1. **Assume suitable data wherever necessary and mention it boldly**
2. **Draw neat labelled diagrams wherever necessary**
3. **Figures to the right indicate full marks**
4. **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) Define line of collimation ,axis of the telescope and reduced level. [06] **[12]**
b) Explain curvature correction and refraction correction with neat sketch. [06]

Q2) a) Explain Trapezoidal rule with neat sketch for area calculation. [05] **[11]**
b) Explain zero circle of the planimeter with neat sketch [06]

Q3) a) Explain principle of plane table and accessories in plane table survey [06] **[11]**
b) Explain intersection method of plane table survey with neat sketch [05]

Q4) Write short note on any **three** questions from the following **[12]**
a) Temporary adjustments in plane table survey [04]
b) Temporary adjustments of level [04]
c) Radiation method in plane table survey [04]
d) Mid ordinate rule for area calculation [04]
e) Reciprocal levelling [04]

Q5) a) Describe sources of error in theodolite [06] **[12]**
b) Explain with neat sketch, procedure of measuring vertical angle with theodolite [06]

Q6) a) The following records are obtained in a traverse survey where the length and bearing of the last line were not recorded **[11]**

LINE	LENGTH IN [M]	BEARING
AB	75.50	30°24′
BC	180.50	110°36′
CD	60.25	210°30′
DA	?	?

Compute the length and bearing of line DA. [08]
b) Explain Bowditch rule [03]

Q7) a) What are various usage of Ghat Tracer [05] **[11]**

b) Explain with neat sketch hand level and abney level [06]

Q8) Write short note on any **three** from the following **[12]**

a) Tunnel survey [04]

b) Define telescope normal and telescope inverted [04]

c) Latitude and departure [04]

d) Repetition method of measuring horizontal angle with theodolite [04]

e) Usage of box sextant [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

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