SP-18

Total No. of Pages : 2

Seat No.	

S.Y.B.Tech. (Civil Engineering) (Semester - III)
(CBCS) Examination, January - 2024
PCC-CV302 : SUERVEYING - I
Sub. Code: 73198

Day and Date : Thursday, 04- 01 - 2024 **Total Marks : 70**

Time : 10.30 a.m. to 1.00 p.m.

Instructions :
1) **Attempt Any Three questions from Each Section.**
2) **Figures to the right indicate full marks.**
3) **Assume suitable data if necessary and state them clearly.**
4) **Use of non-programmable calculator is allowed.**

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SECTION-I

Q1) Attempt all questions.

a) Define contour line, contour interval and horizontal equivalent. **[6]**

b) In an operation involving Reciprocal Levelling two points A and B are taken on opposite banks of river. When the level was set up near A, the staff readings on A and B were 2.245 and 3.375 respectively. When the level was set up near B, the respective staff readings were 1.955 and 3.055. Find the true difference of level between A and B. What is the RL of B, if that of A is 125.550. **[6]**

Q2) Attempt any Two.

a) What are uses of contour map. **[5]**

b) Describe trapezoidal rule for volume calculation. **[5]**

c) Describe area of zero circle with neat sketch. **[6]**

Q3) Attempt any Two.

a) Explain radiation method in plane table survey. **[5]**

b) Describe orientation by back sighting. **[5]**

c) What are the uses of Plane Table Survey? **[6]**

Q4) Write short notes on Any Three: **[3×4=12]**

a) Describe Sensitivity of bubble tube.

b) Explain two peg method.

c) Explain Prismoidal formula for volume calculation.

d) Explain mid ordinate rule with neat sketch.

P.T.O.

SECTION-II

Q5) Attempt all questions:

a) Define the terms Centring, Transiting, Face left relation to Theodolite. **[6]**

b) Explain repitation method to measure horizontal angle with Theodolite. **[6]**

Q6) Attempt all questions:

a) The following records are obtained in a traverse survey, where the length and bearing of the last line were not recorded. **[8]**

Line	Length in [M]	Bearing
AB	75.50	30º24’
BC	180.50	110º30’
CD	60.25	210º30’
DA	?	?

Compute the length and bearing of line DA.

b) Explain the case of trignometrical levelling when the base of the object is accessible. **[3]**

Q7) Attempt any Two:

a) What are uses of abney level and ghat tracer. **[5]**

b) Draw neat sketch of box sextant. **[5]**

c) Explain the method of transferring center line alignment inside a tunnel by a neat sketch. **[6]**

Q8) Write short notes on any three: **[3×4=12]**

a) Explain various sources of errors in Theodolite.

b) What are various usage of Box sextant.

c) What are usage of vernier Theodolite.

d) Define Line of collimation, define axis of the telescope.

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