

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]

May-25-0312

CE-303 (Engineering Surveying-I)

B.Tech. 3rd (CBCS)

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all, selecting one question each from section A, B, C and D. Section E is compulsory.

SECTION - A

1. Explicate definition of surveying, types of surveying, objectives of surveying, and principles of surveying. (10)
2. Elucidate the various obstacles in chaining. Explain the precautions against error and mistakes. (10)

SECTION - B

3. Define plane tabling. How many plane table survey techniques are there? What kind of compass is used for plane table surveying? (10)
4. (a) Define reciprocal levelling in detail. (5)
(b) Explain the direct methods of locating contours. (5)

SECTION - C

5. What is transit theodolite and what are the temporary adjustments in theodolite? (10)
6. Explain the repetition method to measure the horizontal angles with the help of theodolite. (10)

SECTION - D

7. Discuss the procedure to determine the area of an irregular figure by trapezoidal rule. (10)
8. Elaborate different types of curves. Discuss the characteristics and components with the help of neat sketch. (10)

**SECTION - E
(Compulsory Question)**

9.
 - (a) Explain principle of chain surveying.
 - (b) Define bearing.
 - (c) What are the characteristics of vertical curve?
 - (d) Explain the gales's traverse table.
 - (e) Explain principle of theodolite traversing.
 - (f) Explain elements of a curve.
 - (g) What are the errors and mistakes in chaining?
 - (h) Define trigonometric levelling.
 - (i) Enlist the methods of setting out super elevation.
 - (j) Can contours cut each other at any point? Write your answer with reasons. (10×2=20)