

**Total No. of Pages : 02**

**B.Tech. (CE) (Sem.-3rd)**

**Subject Code : CE-201**

Paper ID : [A0601]

**Max. Marks : 60**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

1. Answer briefly :

- Why is it important to 'work from the whole to part and never from part to whole' in surveying?
- What is meant by 'representative fraction'?
- Give the conventional signs used to represent the following surface features on a survey map (i) Compound wall (ii) Katcha Building
- Examine whether the triangle having sides 60 m, 40 m and 30 m is well conditioned or not.
- Differentiate between open and closed traverse.
- What is dip? How does it affect bearing measurement?
- List any two advantages of plain tabling.
- What is meant by reduced level?
- Differentiate between line of sight and line of collimation.
- What do you understand by 'temporary adjustments' of level?

2. Explain 'Chaining by steps' in moving.
3. In 1880 the bearing of a line was measured as  $109^\circ$  and its magnetic declination was measured to be  $14^\circ 40'$  west. What would be the bearing of the line in 1980?
4. What is meant by closing error in a traverse? Explain the method of adjustment of closing error.
5. An excavation is to be made for a reservoir. The bottom is 3 m deep. The sides of the excavation are 1 vertical. Assuming surface of ground to be horizontal, find the volume of excavation.
6. The following readings are successive readings on a level during leveling work :  
0.224, 0.354, 0.565, 1.765, 1.890, 2.145  
The position of the instrument was changed after every two readings. Draw out the level field book. The RL of the first point was 100.00, calculate the RL of the last point by the method. Apply the check.

7. Explain the terms with reference to contouring:
  - a) contour interval
  - b) contour interval
  - c) interpolation of contour
  - d) contour interval
8. a) State the advantages and disadvantages of plane table surveying.  
b) Explain the two point problem and its solution.
9. Explain with sketches the use of:
  - a) Abney level
  - b) Box sextant
  - c) Clinometer
  - d) Dumpy level