

Roll No. ....

Total Pages : 02

**BT-3/D-19**  
**SURVEYING-I**  
**CE-207N**

**33100**

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. Assume any missing data. All questions carry equal marks.

**Unit I**

1. Differentiate between whole circle bearing and quadrantal bearing system, convert the following whole circle bearing into quadrantal bearing and quadrantal bearing into whole circle bearing. **15**  
(2)  $20^\circ$  (2)  $150^\circ$  (2)  $210^\circ$  (2)  $N25^\circ30'W$  (2)  $N30^\circ30'W$
2. Write the type of correction in chain or tape. **15**

**Unit II**

3. (a) Write the classification of direct levelling. **7**  
(b) The following reading were taken on a continuous sloping ground with 4 meter staff 0.780, 1.535, 1.955, 2.985, 3.480, 1.155, 2.365, 3.640, 0.935,

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1,850

1.630, 2.545 the R.L of first A was 100 determine R.L of all the other points by both the method and also draw the profile diagram. **8**

4. What do you understand by contour and also write down the characteristics of contours. **15**

**Unit III**

5. Write down all the method used for the measurement of angles in theodolite traverse. **15**
6. Stadia reading were taken with a theodolite on a vertical staff with the telescope inclined at an depression of  $3^\circ30'$ . The staff reading were 2.990 and 1.120. The R.L. of the staff is 100 m and H.I is 1.40 m. What is the R.L. of the ground at the instrument ? Take the constant 100 and 0. **15**

**Unit IV**

7. Explain the various methods of setting out the simple curves with neat diagram. **15**
8. (a) Discuss the transition curves and what are the requirements of transition curves. **7**  
(b) Calculate the ordinates at 10 m intervals for a circular curve. The long chord is 60 m and the radius is 150 m. **8**