Code No: R21015 **R10** SET - 1

II B. Tech I Semester Supplementary Examinations, Oct/Nov - 2017
SURVEYING
(Civil Engineering)

Time: 3 hours Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. Explain the principles of surveying? With a simple sketch state the construction and use of a cross staff

2. The following angles were observed in clockwise direction in an open traverse angle ABC = 124°15', angle BCD = 156°30,' angle CDE = 102°0', angle DEF = 95°15', angle EFG = 215°30' magnetic bearing of line AB was 241°30'.what would be the bearing of line FG = ?.

3. a) Explain the methods of locating contours
   b) Explain the following with the help of neat sketches:
   (a) Vertical line
   (b) Datum

4. A railway embankment is 10m wide with side slopes 2:1. Assuming the ground to be level in a direction traverse to the centerline, calculate the volume contained in a length of 150m, the central heights at 30m intervals beings 2.5,3.00,4.00,3.75, and 2.75 respectively.

5. Calculate the horizontal and vertical distances using Tangential tacheometry when both the observed angles are angle of elevation and angle of depression

6. Two observations were taken upon a vertical staff by means of a theodolite, the reduced level of its trunnion axis being 160.95. In the case of the first, the angle of elevation was 4°36' and the staff reading 0.75. In the case of second observation, the staff reading was 3.45 and the angle of elevation 5°48'. Calculate the reduced level of the staff station and its distance from the instrument.

7. Explain the design steps of compound curve with an example and draw the sketch

8. Describe in detail the steps required for the initial set up of a Total station during the field work?
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