

Code No: RT21353

R13**SET - 1****II B. Tech I Semester Supplementary Examinations, October/November - 2018****SURVEYING**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **THREE** Questions from **Part-B**
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PART -A

1. a) What is meant by Reconnaissance Survey?
- b) Explain the adjustment of "Cross - Hair Ring".
- c) How do you determine the capacity of a reservoir?
- d) In a theodolite traversing, the distances are to be measured to a precision of 1 in 15,000. Determine the accuracy measurements.
- e) What are the advantages of tacheometric surveying over other methods?
- f) What are the different linear methods for setting out simple circular curves?

PART -B

2. a) Explain the procedure of chaining. How will you record the measurements of Chain Survey? Enumerate the points to be kept in view while booking the field notes.
- b) A Survey line BAC crosses a river, A and C being on the near and opposite banks respectively. A perpendicular AD 40m long is set out at A. If the bearings of AD and DC are $38^{\circ} 45'$ and $278^{\circ} 45'$ respectively and the chainage at A is 862m. find the chainage at C.
3. a) Name the temporary and permanent adjustments of a level. State the desired relations.
- b) The following consecutive readings were taken on a continuously sloping ground at a common interval of 20m: .385, 1.030, 1.925, 2.825, 3.730, 4.685, 0.625, 2.005, 3.110, 4.485m. If the R.L of first point was 208.125. Calculate the R.L of the points by the rise and fall method. Also find the gradient of the line joining first and last points.

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4. a) What are the characteristics of contours
b) Write various methods of determining contours and explain with neat sketch.

5. Balance the traverse by transit rule

Line	Length(m)	Latitude	Departure
AB	200	-173.20	+100.00
BC	130	0.00	+130.00
CD	100	+86.60	+50.00
DE	250	+250.00	0.00
EA	320	-154.90	-280.00

Determine the closing error by any one method and adjust the traverse.

6. a) Derive the expressions for the horizontal distance D and the vertical intercept V when the staff is vertical.
b) The following readings were taken with a vernier theodolite on to a vertical staff

Horizontal distance(m)	Stadia readings
46.20	0.780, 1.010, 1.240
61.20	1.860, 2.165, 2.470

Calculate the Tachometric constants.

7. a) What impact did the creation of electronic angle measurement (like in Total Stations) have on surveying procedures?
b) What is the role of Data Base Management in Geographical information System?