

Code No: R1621356

**R16****SET - 1****II B. Tech I Semester Regular Examinations, October/November - 2017****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 **FOUR** Questions from **Part-B****PART -A**

1. a) Find the Quadrantal bearings of (i)  $192.5^\circ$  (ii)  $217^\circ 36' 52''$  (3 M)
- b) Explain the term "Simple Leveling" (2 M)
- c) Explain the Double Meridian Distance (D.M.D) method for the computation of area of a closed traverse? (3 M)
- d) Distinguish between plane and geodetic surveying? (2 M)
- e) State the Principle of Tachometric surveying? (2 M)
- f) State the causes of errors and corrections in GPS observations? (2 M)

**PART -B**

2. a) Give the broad classification of surveying (7M)
- b) The area of the Plan of an old survey plotted to a scale of 10 metres to 1 cm measures now as 91.5 Sq.cm as found by a Planimeter. The plan is found to have shrunk so that a line originally 10 cm long now measures 9.6 cm only. There was also a note on the plan that the 30 m chain used was 7cm too short. Find the true area of the survey. (7M)
3. a) What are advantages and disadvantages of Rise & Fall method to Height of collimation of Reducing the RL (7M)
- b) State the characteristics of contours? (7M)
4. a) State the Area Calculation by Trapezoidal Rule (7M)
- b) The area on a map with a scale of 1:12000 as measured with a planimeter is 2.54 sq in. What is the area in acres? (7M)
5. a) State the applicability of repetition method and reiteration methods (7M)
- b) A short traverse was made in an underground roadway joining two shafts A and E. All stations are in the same level. Line Azimuth Length (m) AB  $210^\circ$  40 BC  $135^\circ$  135 CD  $240^\circ$  150 DE  $330^\circ$  110 Calculate the length and Azimuth of a proposed new direct roadway AE for haulage and ventilation purposes. (7M)
6. a) Explain the stadia method of tachometric survey (7M)
- b) In tachometric observations, the staff readings are found to be 2.4m, 3.0 m and 3.6m. If the angle of elevation is  $45^\circ$ , the multiplying factor is 100 and the additive constant is 0.3 m then Find out the horizontal distance between the staff and the instrument (7M)

Code No: R1621356

**R16****SET - 1**

7. a) Explain about GPS receivers, GPS observable and Data processing? (7M)
- b) State the different components of EDM instruments? (7M)

[www.FirstRanker.com](http://www.FirstRanker.com)