Code No: RT21353   **R13**   SET - 1

II B. Tech I Semester Supplementary Examinations, May/June - 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 **THREE** Questions from **Part-B**

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PART –A

1. a) Define True meridian and Magnetic meridian.   (4M)
    b) Define contour and contour interval   (4M)
    c) Derive by the trapezoidal formula the volume of the Prismoid.   (4M)
    d) Explain briefly the temporary adjustments of theodolite.   (4M)
    e) Write about Subtense method.   (3M)
    f) Write about G.P.S   (3M)

PART -B

2. a) Distinguish between cumulative errors and compensating errors.   (8M)
    b) Write about Azimuthal bearing system and Quadrantal bearing system.
                                                                           (8M)

3. a) What are the various methods of contouring? Discuss the merits and demerits of each   (8M)
    b) A railway embankment is (10M) wide with slopes 1 ½ to 1.Assuming the ground to be in level in a direction transverse to the centre line ,calculate the volume contained in a length of 120 m, the centre heights at 20m intervals being in metres 2.2,3.7,3.8,4.0,3.8,2.8 and 2.5.   (8M)

4. a) Discuss various methods of theodolite traversing   (8M)
    b) What are the different errors in theodolite work? How are they eliminated? (8M)

5. a) Derive the expression for distance and elevation formulae for staff normal (8M)
    b) Write the steps involved in setting a compound curve   (8M)

6. a) What are the different types of EDM instruments. Write in detail about Tellurometer   (10M)
    b) Distinguish between Theodolite and Total Station   (6M)

7. The following staff readings were taken with a level which was shifted after 3RD,6th and 10th readings:1.235,210.5,1.855,0.86,0.38 , 1. 64, 2. 44, 1. 75, 1. 82, 2. 15, 2. 37 and 1.56.Assuming the R.L of starting point as 100.00m, enter the readings in the form of a level book page and check by height of instrument method. (16M)