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Reg. No. : .....

Name : .....

Fourth Semester B.Tech. Degree Examination, June 2019

(2013 Scheme)

13.405 SURVEYING II (C)

Time : 3 Hours Max. Marks : 100

Answer **all** questions from Part A and **One full question from each Module** in Part B :

PART – A

1. (a) Define Signals and towers.
   (b) What are types of curves? Name the elements of simple curves.
   (c) What are different sources of errors?
   (d) What is the principle of Total station?
   (e) Differentiate Terrestrial photogrammetry and Aerial photogrammetry.

(5 × 4 = 20 Marks)

PART – B

Module – I

2. (a) Explain the various types of Triangulation figures with their advantages and disadvantages. **8**

   (b) The elevation of two triangulation stations A and B, 150 km apart, are 250 m and 150 m above MSL. The elevation of two peaks C and D on the profit between the satellite stations are 300 m and 550 m respectively. The distance AC = 60 km and AD = 85 km. Design a suitable signal required at B, so that it is visible from the ground station. **12**

OR

3. (a) How the errors are classified? What are the precautions and corrections? **8**

(b) The angles of the triangle ABC were recorded as A = 77° 14' 20" weight 4; B = 49° 40' 35" weight 3: C = 53° 04' 52" weight 4; Give the corrected values of the angles. **12**

Module – II

4. (a) Describe Fast needle method of Theodolite traversing. **8**

(b) Explain the various methods of balancing the traverse. **12**

OR

5. (a) Derive the elements of a simple curve. **8**

(b) Explain field procedure of Rankines method of setting out simple curves. **12**

Module – III

6. (a) What is meant by Total Station survey? Explain Errors in Total Station Survey. **8**

(b) List the components of Total Station? Describe them briefly and also tell about its care and maintenances. **12**

OR

7. (a) What is the Principle of Electromagnetic Distance Measurements? List the different types of EDM. **8**

(b) Explain the components of GPS and their functions. **12**

Module – IV

8. (a) Derive the formula to determine the focal length of camera lens. **8**

(b) Discuss on the various types of remote sensing systems and its application. **12**

OR

9. (a) Explain the principles and branches of terrestrial photogrammetry. **8**

(b) Explain the uses of GIS and remote sensing in the field of civil engineering. **12**