

**(DCE 213)**

**B. Tech. DEGREE EXAMINATION, MAY - 2015**

**(Examination at the end of Second Year)**

**CIVIL ENGINEERING**

**Paper - III : Surveying - I**

**Time : 3 Hours**

**Maximum Marks : 75**

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*Answer question No. 1 compulsory*

*(15 x 1 = 15)*

*Answer ONE question from each unit*

*(4 x 15 = 60)*

- 1) a) Write about principles of surveying.
- b) Define scale.
- c) Explain about sources of Errors.
- d) What is meant by Degree of accuracy?
- e) Define Tape correction.
- f) What is compass?
- g) Write the errors in theodolite.
- h) Define offset.
- i) What is Local attraction?
- j) Write about prismatic compass.
- k) What are the methods of plane table surveying?
- l) Define curvature.
- m) What is profile levelling?

- n) Define contour.
- o) What is the location of a contour gradient?

**Unit – I**

- 2) a) Describe the different methods of setting out a right angle at a point on a chain line using a chain/tape only. (8)
- b) Discuss the advantages and disadvantages of plane table surveying over other method of surveying. (7)

OR

- 3) Write in detail about types of errors and their sources. (15)

**Unit – II**

- 4) a) Write about the reiteration methods of measuring horizontal angle with theodolite. (8)
- b) Write about the chain and tape corrections. (7)

OR

- 5) a) With a sketch explain the working principle of line Ranger. (7)
- b) Can you use a theodolite as a leveling instruments? If so how? (8)

**Unit – III**

- 6) a) Write in detail about various methods of plane tabling. (8)
- b) State and Explain the principles of chain surveying. (7)

OR

- 7) a) Explain : (8)
  - i) Well conditioned triangle.
  - ii) Tie line
  - iii) Check line with neat sketch.
- b) Describe the Intersection method of surveying of plane Tabling? (7)

**Unit – IV**

- 8) a) Explain the block counter method of contour surveying. (8)
- b) Explain the sources of error in levelling. (7)

OR

- 9) The following readings were observed consecutively on a ground the instrument being shifted after 3<sup>rd</sup>, 6<sup>th</sup> and 8<sup>th</sup> readings. Find the RLS of all the staff stations if the B.M. of the first point is 100.000 m. (15)

0.055, 0.350, 0.455, 0.905, 1.545, 1.995, 2.505,

2.905, 0.675, 0.995, 1.655, 1.905, 2.005, 2.500

