

**PART- A**

(Compulsory Question 10\*2 = 20 Marks)

- 1 a Define Surveying?
- b Write the purpose of ranging rod?
- c Summarize the factors affecting local attraction?
- d List out the methods of plane table surveying?
- e Write any two applications of contouring?
- f Compare true north and magnetic north?
- g Name the component parts of theodolite?
- h Define line of collimation?
- i Summarize any three methods of calculating areas?
- j What is prismatic formula?

**PART B****(Answer all the Questions Each carry 10 Marks)**

- 2 a Brief the basic measurements in surveying?
- b Differentiate a plan and a map?

OR

- 3 Explain about various instruments used for chain surveying along with its purpose of application?

- 4 a Differentiate prismatic compass and surveyors compass
- b Explain whole circle bearing and Reduced bearing?

OR

- 5 a Explain radiation and intersection method?
- b Write a short note on setting up of a plane table?

- 6 The following consecutive readings were taken with a dumpy level 1.895, 1.500, 1.865, 2.5570, 2.990, 2.020, 2.410, 2.520, 2.960, 3.115. The level was shifted after fourth, sixth and ninth readings, The RL of the first point was 25.50. Rule out a page of answer book as a level book, and fill in the columns. Use HI method and apply usual checks.

OR

- 7 Explain the characteristics of contouring? Define contour interval?

- 8 a Summarize various points to be considered in selection of traverse?
- b Brief the direct method of traversing by transiting?

OR

- 9 a Define the following terms.

Double sighting  
Changing face  
Face left condition  
Centering

- b Explain the method of measuring angles by Reiteration method?
- 10 How would you compute the cross sectional area of a multilevel section by the method of independent coordinates?

OR

- 11 Calculate side widths and cross sectional areas of cut and fill in a side hill section having the following dimensions.  
Central height in cut=1m  
Formation width=22m  
Side slope in cut=1 to 1  
Side slope in fill=2to 1  
Transverse slope=5.5 to 1