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Roll No. ....

220733

**3rd Sem. / Civil**

**Subject : Surveying-I**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 All points on contour line have \_\_\_\_\_ elevation. (CO5)

- a) Different                      b) Equal
- c) Increasing                  d) Decreasing

Q.2 1 Links Furlong is equal to \_\_\_\_\_ Gunter's chain. (CO1)

- a) 5                                  b) 50
- c) 15                                d) 10

Q.3 Levelling deals with measurements in (CO3)

- a) Horizontal Plane      b) Inclined Plane
- c) Vertical Plane         d) None of these

Q.4 The type of survey in which field work and office work is done simultaneously. (CO1)

- a) Plane Table Surveying
- b) Compass Surveying
- c) Theodolite Surveying
- d) Aerial Surveying

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Q.5 Contour line cross ridge line at \_\_\_\_\_ (CO5)

- a) 90°                              b) 180°
- c) 45°                              d) 60°

Q.6 \_\_\_\_\_ Instrument is used to sight an object. (CO1)

- a) Compass                      b) U-Fork
- c) Plumbing Fork              d) Alidade

**SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Invar tape is made up of \_\_\_\_\_ (CO1)

Q.8 Error due to sag is always. \_\_\_\_\_ (CO1)

Q.9 For Bearing and Back Bearing should differ by \_\_\_\_\_ (CO2)

Q.10 The line joining through points at which the magnetic declination is equal at a given time is \_\_\_\_\_ (CO2)

Q.11 The sum of interior angles of a closed traverse is \_\_\_\_\_ (CO2)

Q.12 The B.M. established by Survey department of India is known as \_\_\_\_\_ (CO3)

**SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 What are the various methods of plane table surveying? Explain any one with diagram. (CO1)

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Q.14 Explain the following with diagram:- (CO5)

- a) Contour Interval
- b) Horizontal Equivalent
- c) Back Sight
- d) For Sight

Q.15 Explain the concept of correction due to curvature and refraction. (CO3)

Q.16 What is bearing? Explain Fore bearing and Back bearing. (CO2)

Q.17 A 20m chain found to be 10cm long after chaining a distance of 520m. Find the true distance. (CO1)

Q.18 Differentiate between Height of Collimation method and Rise & Fall method. (CO3)

Q.19 Explain Reciprocal Levelling. (CO3)

Q.20 Explain the temporary adjustment of dumpy level. (CO4)

Q.21 Explain the error in compass surveying. (CO2)

Q.22 Find out the back bearing of the following- (CO2)

Sr. No.	Line	Fore Bearing
1	AB	216°
2	BC	179°
3	CD	71°
4	DE	18°

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the characteristics of contour along with diagram. (CO5)

Q.24 Enlist the name of various instruments used in chain surveying and explain various types of chain. (CO1)

Q.25 The following consecutive reading were taken with a level. The level was Shifted after 4th, 7th and 10th readings. The first reading was taken on a BM of RL 150.000m. Draw out a page of level book, enter the readings and calculate the RL of all the points by Height of Instrument Method. The readings are as:-  
1.520, 0.965, 1.475, 1.545, 0.435, 2.545, 1.715, 1.630, 1.915, 0.560, 1.790, 1.365, 1.135. (CO3)

(**Note:** Course outcome/CO is for office use only)