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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)
- Contour Interval
  - Horizontal Equivalent
  - Back Sight
  - 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:-  
 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)