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Roll No. ....

220733

**3st Year / Civil Engineering**  
**Subject : Surveying-1**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

**Q.1** What is the purpose of a theodolite in surveying?  
(CO2)

- a) To measure distances
- b) To measure angles
- c) To measure elevations
- d) To measure coordinates

**Q.2** Which type of surveying is used to determine the boundaries of a property?  
(CO1)

- a) Topographic surveying
- b) Geodetic surveying
- c) Hydrographic surveying
- d) Cadastral surveying

**Q.3** Which type of surveying is used to determine the shape and size of a land?  
(CO1)

- a) Topographic surveying
- b) Geodetic surveying
- c) Hydrographic surveying
- d) Cadastral surveying

**Q.4** What is the purpose of a benchmark in surveying?  
(CO3)

- a) To serve as a reference point for elevations
- b) To serve as a reference point for angles
- c) To serve as a reference point for distances
- d) To serve as a reference point for coordinates

**Q.5** Which instrument is used to measure the difference in elevation between two points?  
(CO4)

- a) Theodolite
- b) Level
- c) Tape
- d) Compass

**Q.6** 1 Link Furlong is equal to \_\_\_\_\_ Gunter's chain  
(CO2)

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

**SECTION-B**

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

**Q.7** The process of measuring the angle between two lines is called \_\_\_\_\_.  
(CO2)

(1)

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(2)

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- Q.8 The instrument used to measure the distance between two points is called a \_\_\_\_\_. (CO3)
- Q.9 The type of surveying that deals with the measurement of the earth's surface is called \_\_\_\_\_. (CO1)
- Q.10 The term for a line that connects two points of known coordinates is called a \_\_\_\_\_. (CO4)
- Q.11 The process of determining the orientation of a survey line is called \_\_\_\_\_. (CO5)
- Q.12 The type of surveying that deals with the measurement of the shape and size of a parcel of land is called \_\_\_\_\_. (CO1)

### SECTION-C

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

- Q.13 What is purpose of a leveling rod in surveying? (CO2)
- Q.14 Explain the process of measuring an angle using a theodolite. (CO3)
- Q.15 What is the difference between open traverse and a closed traverse? (CO4)
- Q.16 What is the purpose of a benchmark in surveying? (CO3)
- Q.17 What is the difference between a topographic survey and a hydrographic survey? (CO1)

Q.18 Explain the principle of radiation in plane table surveying. (CO5)

Q.19 A surveyor measures the following WCBs: (CO2)

- i) WCB =  $77^{\circ} 45'$
- ii) WCB =  $130^{\circ} 30'$
- iii) WCB =  $250^{\circ} 15'$
- iv) WCB =  $340^{\circ} 30'$

Calculate the RB for each and the included angle. (CO2)

Q.20 What are the advantages of using contour lines in mapping? (CO5)

Q.21 Explain the Reciprocal leveling. (CO4)

Q.22 Write the advantages of Plain table. (CO5)

### SECTION-D

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

Q.23 Explain any eight characteristics of contour (CO4)

Q.24 Explain various method of leveling. (CO4)

Q.25 Write the instrument which are used in plane table and Explain the procedure for setting of plane table. (CO5)