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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

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- 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)

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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)