

No. of Printed Pages : 4

Roll No. .... 170744/120744/030744

**4th Sem. / Civil Engineering**

**Subject : Surveying-II**

Time : 3 Hrs.

M.M. : 100

**SECTION-A**

**Note:** Objectives questions. All questions are compulsory (10x1=10)

**(Course Outcome/CO)**

- Q.1 When contour lines are uniformly spaced it indicates\_\_\_\_\_. (CO-1)
- Q.2 The contour lines cross each other in case of \_\_\_\_\_. (CO-1)
- Q.3 The Axis of Telescope must coincide with the \_\_\_\_\_. (CO-2)
- Q.4 The Transiting is also known as \_\_\_\_\_. (CO-2)
- Q.5 The Component of a line along E-W direction is called\_\_\_\_\_.(CO-2)
- Q.6 The Line of collimation should be perpendicular to \_\_\_\_\_axis. (CO-2)

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Q.7 The usual value of \_\_\_\_\_constant is hundred in tachometry. (CO-3)

Q.8 The Angle between back and forward tangents of a curve is called\_\_\_\_\_. (CO-4)

Q.9 The Curve of varying radius is known as\_\_\_\_\_curve. (CO-4)

Q.10 The Instrument used for enlarging or reducing a given Plan is called\_\_\_\_\_. (CO-5)

**SECTION-B**

**Note:** Very Short answer type questions. Attempt any ten parts 10x2=20

- Q.11 Define Contour and Contour Interval. (CO-1)
- Q.12 Define contour Gradient. (CO-1)
- Q.13 Explain Parallax. (CO-2)
- Q.14 Explain Axis of Telescope. (CO-2)
- Q.15 Define the term Transiting. (CO-2)
- Q.16 Define Consecutive Coordinates. (CO-2)
- Q.17 What is the difference between Theodolite and Tachometer. (CO-3)
- Q.18 Define Degree of curve. (CO-4)
- Q.19 What is long Chord of a curve. (CO-4)

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- Q.20 What is internal angle of a curve? (CO-4)  
 Q.21 What is Summit Curve? (CO-4)  
 Q.22 Define GPS (CO-5)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions. 8x5=40

- Q.23 Explain Graphical method of interpolation of Contours. (CO-1)  
 Q.24 What are the Fundamental lines of Theodolite? (CO-2)  
 Q.25 Write the process of measuring Horizontal angle by ordinary method. (CO-2)  
 Q.26 Describe what is closing error in theodolite surveying? (CO-2)  
 Q.27 Explain the principle of Techometry. (CO-3)  
 Q.28 State the purposes of Transition curve?(CO-4)  
 Q.29 Derive a relation between Degree of curve and Radius of curve. (CO-4)  
 Q.30 Derive an expression for tangent length of a simple circular curve. (CO-4)  
 Q.31 Explain in brief about Total station. (CO-5)  
 Q.32 Write a short note on Pentagraph. (CO-5)

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### SECTION-D

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

- Q.33 Explain the characteristics of contours with diagrams where necessary. (CO-1)  
 Q.34 The Following readings were taken using a tachometer fitted with an analytic lens and having multiplying constant equal to 100 (CO-3)

Instrument Station	Height of instrument	Staff Station	Vertical angle	Hair Readings
A	1.650m	B	5°30'	1.150,1.775,2.465

Calculate the distance AB and R.L of Stattion B When R.L of A is 350.000

- Q.35 Write short notes on the following.  
 (i) Gale's Traversing Table  
 (ii) Planimeter (CO-2,5)  
 Q.36 Explain the following in brief.  
 (a) Instrumental errors in theodolite surveying and their elimination.  
 (b) Types of Vertical Curve. (CO-2,4)

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

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