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Roll No. ....

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**3rd Sem / Branch : Civil**  
**Sub.: Surveying - I**

Time : 3Hrs.

M.M. : 60

**SECTION-A**

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

- Q.1 Principle of surveying is (CO1)
- a) Work from part to whole
  - b) Work from whole to part
  - c) To locate a point with reference to two known points
  - d) Both A & C
- Q.2 Gunter chain consist of \_\_\_\_\_ Links. (CO1)
- a) 500
  - b) 50
  - c) 1000
  - d) 100
- Q.3 Chain surveying uses the principle of (CO1)
- a) Traversing
  - b) Chaining
  - c) Ranging
  - d) Triangulation
- Q.4 Determining points of strategic importance are called (CO1)
- a) Topographic Surveying
  - b) City Surveying
  - c) Military Surveying
  - d) Traverse Surveying

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- Q.5 What is the sum of interior angle of a pentagon? (CO2)

- a) 260°
- b) 360°
- c) 440°
- d) 540°

- Q.6 \_\_\_\_\_ is a line lying in a level surface. (CO3)

- a) Level Line
- b) Horizontal Line
- c) Datum Line
- d) Plumb Line

**SECTION-B**

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

- Q.7 Contour line do not \_\_\_\_\_ in the middle of map. (CO5)
- Q.8 Define Contour Map. (CO5)
- Q.9 1 Hectare is equal to \_\_\_\_\_ m<sup>2</sup>. (CO1)
- Q.10 A 30 m chain has \_\_\_\_\_ links. (CO1)
- Q.11 Length of Engineer's chain is \_\_\_\_\_. (CO1)
- Q.12 Correction due to slope is always \_\_\_\_\_. (CO1)

**SECTION-C**

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

- Q.13 Explain the classification of error in chain surveying. (CO1)

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- Q.14 Explain plane surveying and geodetic surveying. (CO1)
- Q.15 During a construction work, R.L. \_\_\_\_\_ of floor is taken as 98.100m and reading on Staff over floor is 1.86m and inverted staff placed at bottom of roof showing, reading as 0.54m. Find the R.L. of bottom of roof. (CO3)
- Q.16 What is magnetic declination? Explain various variation in Declination. (CO2)
- Q.17 Explain the following with diagram:- (CO1)
- a) Survey station      b) Base line  
b) Check line      d) Tie line
- Q.18 True Bearing and Magnetic Bearing of a line is  $247^\circ$  and  $249^\circ$ . Find the declination with diagram. (CO2)
- Q.19 Explain Whole Circle Bearing and Quadrantal Bearing System with diagram. (CO2)
- Q.20 Convert the following Reduced Bearing in whole circle bearing:- (CO2)
- a)  $N40^\circ30'E$       b)  $S15^\circ45'E$   
c)  $S57^\circ15'W$       d)  $N39^\circ30'W$
- Q.21 Enlist various survey based on the instrument used. Explain any one. (CO1)
- Q.22 Define traverse. Explain open and closed traverse with diagram. (CO2)

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## SECTION-D

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

- Q.23 Enlist the various instruments used in plane table surveying and explain any three with diagram.(CO1)
- Q.24 Differentiate between Prismatic Compass and Surveyor Compass. (CO2)
- Q.25 Calculate the interior angle of close traverse with following bearings:- (CO2)

Line	Fore Bearing	Back Bearing
AB	$N50^\circ 45'E$	$S50^\circ 45'W$
BC	$S65^\circ 15'E$	$N65^\circ 15'W$
CD	$S15^\circ 45'W$	$N15^\circ 45'E$
DA	$N81^\circ 00'W$	$S81^\circ 00'E$

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