

No. of Printed Pages : 4  
Roll No. ....

220742

**4th Sem / Civil**  
**Subject : Surveying -II**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

- Q.1 The face left position is also called  
a) Telescope normal    b) Telescope reversed  
c) Telescope inverted    d) Clamp screw
- Q.2 In a closed traverse the algebraic sum of departure and latitude must be equal to  
a)  $180^\circ$                       b)  $90^\circ$   
c) Zero                      d)  $40^\circ$
- Q.3 The first tangent point is also known as  
a) Point of tangency    b) Point to start  
c) Point of curve    d) Apex
- Q.4 The vertical curve is considered as  
a) Circular Curve    b) Elliptical Curve  
c) Parabolic Curve    d) End Point

(1)

220742

- Q.5 The electronic total station is a combination of  
a) Tachometric theodolite and EDM  
b) Vernier theodolite and EDM  
c) Digital theodolite and EDM  
d) None of the above
- Q.6 The diaphragm of a stadia theodolite is fitted with two additional  
a) Horizontal hairs  
b) vertical hairs  
c) Horizontal and two vertical hairs  
d) none of these

**SECTION-B**

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

- Q.7 What is GPS?
- Q.8 The line of collimation should be perpendicular to \_\_\_\_\_ axis.
- Q.9 The horizontal axis of Altilude level must be \_\_\_\_\_ to the line of collimation.
- Q.10 The usual value of \_\_\_\_\_ constant is 100 in tacheometry.

(2)

220742

- Q.11 A theodolite without stadia hair can be used in\_\_\_\_\_
- Q.12 Direct vernier is based on\_\_\_\_\_principle.

### SECTION-C

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

- Q.13 Define the following
- Horizontal axis
  - Centring
- Q.14 What is Super-Elevation? and define purpose of super elevation?
- Q.15 Write short note on DGPS?
- Q.16 Discuss the methods of tacheometry?
- Q.17 Define Super -Elevation?
- Q.18 Calculate the Length of transition curve to attain a maximum super elevation of 12 cm assuming a rate of super elevation of 3cm/sec. The speed of vehicle is 60km/hour.
- Q.19 What is meant by Transition curve?
- Q.20 What are basic functions of GPS?
- Q.21 How is the closing error in traverse is balanced.
- Q.22 Define remote sensing.

(3)

220742

### SECTION-D

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

- Q.23 Two distances of 85,160 metres were accurately measured out and intercemonstaff held vertical on these points were 0.845 m and 1.595 m respectively . Calculate the Tacheometric constant. Find the distance when the staff intercept is 2.535 m.
- Q.24 Explain the procedure with sketch for setting out curve by the method of offsets from the chord produced.
- Q.25 How will you find the height of a object by theodolite when its base is accessible?

(1760)

(4)

220742