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Roll No. .....

4th Sem.
Branch : Civil
Sub. Surveying-II

Time : 3 Hrs. **M.M. : 60**

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 A vertical curve having convexity upward in known as _____.

a) Valley curve b) Summit Curve

c) Tangential Curve d) None of the above

Q.2 An instrument which is used to measure the area of the plan of any shape in known as____.

a) Distomat b) Planimeter

c) Theodolite d) None of the above

Q.3 Total station is a combination of _____.

a) Tacheometer and Theodolite

b) Auto Level & Digital Level

c) Dumpy Level & Compass

d) Electronic Theodolite & EDM

Q.4 While using DGPS in single frequency mode best triangle is obtained between____.

a) Two Receiver & One Rover Station

b) Two Receiver and one satellite

c) One Receiver & Two Satellite

d) Both B & C

Q.5 The radius of 1^0 curve is approximately equal to _____.

a) 1517m b) 1615m

c) 1719m d) 1916m

Q.6 Which among the following is not related to GIS software's?

a) CAD b) Arc GIS

c) Air View d) STAAD Pro

SECTION-B

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

Q.7 When two tangents meet at a point, the point is known as _____ (Apex/Vertex)

Q.8 Full form of G.I.S. is _____ (Geographical Innovation System / Geographical Information System)

Q.9 There are Control Panels in front and at the back of the total station. (True/False)

Q.10 DGPS can yield measurement good to a couple of meters in moving applications and even better in stationary situation. (True/False)

Q.11 Compensator can make complete adjustment in total station. (True/False)

Q.12 We always measure the unknown point from some referenced bench mark is the main concept of _____ (GPS / DGPS)

SECTION-C

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

Q.13 Write the functions of providing the transition curves in highways and railways.

Q.14 Describe the use of various functional keys of a Total Station.

Q.15 An instrument was set up at P and the angle of elevation to a vane 4m above the foot of the staff held at Q was $9^0\ 30^0$. The horizontal distance between P and Q was known to be 2000m. Determine the R.L. of the staff station Q, given that the R.L. of the instrument axis was 2650.380.

Q.16 Write the principle of working of an EDM used in surveying works.

Q.17 Write the applications of remote sensing system in civil engineering surveying works.

Q.18 Write a short note on GPS used in surveying.

Q.19 Describe the use of various parts of a DGPS.

Q.20 Write a short note on "Software used for a DGPS".

Q.21 Describe the various causes of errors in surveying works, while using a DGPS.

Q.22 Describe the procedure of "Prolonging a Line in Forward Direction" using an Electronic Digital Theodolite.

SECTION-D

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

Q.23 A simple circular curve has a radius of 700 m. The two tangents intersect at an angle of 120^0. The chainage of point of intersection in 900m. Find tangent length, length of curve and degree of curve.

Q.24 Explain the procedure of measurement of horizontal angles using a Total Station as a surveying instrument.

Q.25 Explain the procedure of temporary adjustment of an Electronic Digital Theodolite, with the help of diagram.