Reg. No. : | | | | | | | | | | |

Question Paper Code: 53106

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Civil Engineering

15UCE306 - SURVEYING

(Regulation 2015)

Duration: 1.15 hrs Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Whole circle bearing of line is determined by CO1- R

   (a) Prismatic compass (b) Surveyor compass (c) Theodolite (d) Dumpy level

2. Which of the below is not a classification of surveying? CO1- R

   (a) Marine (b) Basement (c) Astronomical (d) Land

3. The datum adopted for India is at CO2- R

   (a) MSL at Chennai (b) MSL at Karachi (c) MSL at Gujarat (d) MSL at Bombay

4. How many methods of contouring are present? CO2- R

   (a) 5 (b) 3 (c) 2 (d) 4

5. Balancing of traverse is done by CO3- R

   (a) Transit rule (b) Mid ordinate rule (c) Trapezoidal rule (d) Prismoidal rule

6. In leveling, the correction for combined curvature and refraction (in meters) is equal to CO3-R

   (a) $0.00785D^2$ (b) $0.0785\ D^2$ (c) $0.0112\ D^2$ (d) $0.0673\ D^2$

7. In tangential tacheometry staff is held CO4- R

   (a) Vertical (b) Inclined (c) Horizontal (d) Normal

8. During chaining along a straight line, the leader of the party has 4 arrows in his hand while the follower has 6. Distance of the follower from the starting point is CO4-R

(a) 4 chains (b) 6 chains (c) 120 m (d) 180m

9. The first point of the curve is called as CO5- R

(a) Forward tangent (b) Backward tangent (c) Point of intersection (d) Point of curve

10. The degree of the curve is the angle subtended by a chord of …….. length CO5- R

(a) 15.12m (b) 20.32m (c) 25.42m (d) 30.48m

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain the procedure for Reciprocal and Direct ranging. CO1- U (8)

12. The following staff readings were observed successively with a level, the instrument having been moved after the third, sixth and eighth readings. The readings are 2.220, 1.600, 0.980, 2.090, 2.865, 1.260, 0.600, 1.990, 1.405 and 2.685m. Enter the readings in a page of Level book and Calculate the R.L. of points with the staff held on B.M. of 100m. CO2- U (8)

13. The table below gives the lengths and bearings of the lines of a traverse ABCDEA. Calculate the length and bearing of line EA omitted. CO3- U (8)

Line	Length (m)	Bearing
AB	194.1	$85^{O}30'$
BC	201.2	$15^{O}00'$
CD	165.4	$285^{O}30'$
DE	172.6	$195^{O}30'$
EA	---	---

14. Explain how you will determine the Tachometric constants. CO4- U (8)

15. Two tangents intersect at chainage 1250 m; The angle of intersection is 150^{O}. Calculate all the necessary data to set out a circular curve by Rankines method. Assume a peg interval of 20m. CO5- U (8)