Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CE) (2018 Batch) (Sem.–3)

SURVEYING & GEOMATICS

Subject Code : BTCE-301-18

M.Code : 76370

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Write briefly :

1. What is meant by 5° curve? What will be the corresponding radius of the curve?
2. What is traverse? What do you mean by balancing of the traverse?
3. State various disadvantages of plane table surveying.
4. What is tacheometry? Describe its uses.
5. What is versed sine of a curve?
6. What is latitude and departure?
7. Name various sensors on board of Indian Remote Sensing Satellites (IRS).
8. What is meant by a Satellite station?
9. How contouring is relevant to levelling?
10. What do you mean by mosaics?

SECTION-B

11. What do you mean by photogrammetic surveying?

12. The Chainage of the intersection of two straights having the deflection angle of 50°is 1680.5 m. If the radius of the curve is 450 m, calculate the following :

    a) Tangent distance

    b) Length of curve

    c) Length of long chord

    d) Degree of curve

13. What are the characteristics of contour lines?

14. Write a short note on common ERRORS encounter during use of GPS.

15. What do you mean by LADAR?

SECTION-C

16. The following observations were made using a tacheometer fitted with an anallactic lens, the multiplying constant being 100. Calculate the distance AB, and the RLs of A and B. Find the gradient of the line AB.

Instrument Station	Height of Instrument	Staff Station	Vertical Angle	Hair readings	Remarks
O	1.55	A	4°30'	1.155,1.755,2.355	R.L. of O=150.00
O	1.55	B	10°15'	1.250,2.000,2.750	

17. What is a three point problem? How is it solved by various methods? Explain each in detail.

18. What is electromagnetic spectrum? Explain the interaction of EMR with earth surface. Explain wave model of EMR.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.