R18

Reg. No: ☐☐☐☐☐☐☐☐☐☐

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech II Year II Semester Supplementary Examinations July-2021
SURVEYING & GEOMATICS
(Common to CE & AGE)

Time: 3 hours   Max. Marks: 60

PART-A
(Answer all the Questions 5 x 2 = 10 Marks)

1	a	Define magnetic meridian and true meridian.	2M
	b	Define contour interval and horizontal equivalent.	2M
	c	Write a note on movable hair method in tachometric surveying.	2M
	d	Draw a neat sketch of reverse curve.	2M
	e	Define wavelength.	2M

PART-B
(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	Briefly, explain the principles of surveying.	5M
	b	Write short notes on types of errors.	5M

OR

3	Explain in detail the classifications of surveying	10M

UNIT-II

4   The following staff readings were observed successively with level, the instrument has been moved forward after the second, fourth and eighth readings: 0.875, 1.235, 2.310, 1.385, 2.930, 3.125, 4.125, 0.120, 1.875, 2.030 and 3.765. The first reading was taken with the staff held upon a benchmark of elevation 132.135m. Enter the readings in level book-form and reduce the levels. Apply the usual checks. Find also the difference in level between the first and the last points.   **5M**

OR

5	a	Define contour. State the various characteristics of contour lines.	5M
	b	Mention the uses of contour in civil engineering works?	5M

UNIT-III

6   The vertical angles to vanes fixed at 0.5m and 3.5m above the foot of the staff held vertically at a point were - 00° 30' and + 10 °12' respectively. Find the horizontal distance and the reduced level of the point, if the level of the instrument axis is 125.380meters above datum.   **10M**

OR

7	a	Write about parts of the Transit Theodolite. Explain in detail.	6M
	b	What are the different errors in theodolite work? How are they eliminated?	4M

UNIT-IV

8	a	Write short notes on types of circular curves.	6M
	b	Define degree of curve. Derive a relation between the radius and degree of a curve.	4M

OR

9   Describe with sketch the method of setting a simple circular curve by Rankine's   **10M**
deflection angle method.

UNIT-V

10   a Explain in detail about the infrared type of EDM instrument.   **6M**
    b Write short notes on total stations.   **4M**

OR

11   a Explain about AM and FM modulation.   **5M**
    b List out and explain the properties of EM waves.   **5M**

END