Q.P. Code: 20CE0104 **R20**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B. Tech II Year I Semester Supplementary Examinations November-2022

SURVEYING & GEOMATICS

(Common to CE & AGE)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1 Explain briefly about the differences of prismatic compass and surveyor compass. **L2 12M**

OR

2 **a** Briefly explain the principles of surveying. **L2 6M**

b Write short notes on types of errors. **L1 6M**

UNIT-II

3 **a** Define contour. State the various characteristics of contour lines. **L1 6M**

b Mention the uses of contour in civil engineering works. **L2 6M**

OR

4 The following readings have been taken from a page of an old level book. It is required to reconstruct the page. Fill up the missing quantities and apply the usual checks. **L3 12M**

Station	BS	IS	FS	Rise (+)	Fall (-)	RL	Remark
1	3.125					?	B.M
2	?		?	1.325		125.505	CP
3		2.320			0.055	?	
4		?		?		125.850	
5	?		2.655		?	?	CP
6	1.620		3.205		2.165	?	CP
7		3.652			?	?	
8			?			123.090	T.B.M

UNIT-III

5 **a** Write about parts of the Transit Theodolite. Explain in detail. **L1 6M**

b What are the different errors in theodolite work? How are they eliminated? **L1 6M**

OR

6 The following readings were taken by a tacheometer with the staff held vertical. The tacheometer is fitted with Analytic lens and the multiplying constant is 100. Find out the horizontal distance from A to B and the R.L of B. **L3 12M**

Inst. Station	Staff station	Vertical angle	Staff readings	Remarks
A	BM	-6°00'	1.100,1.153, 2. 060.	R.L. of B.M =
	B	8°00'	0.982, 1.105, 1.188	976.000

UNIT-IV

7 Two tangents intersect at chainage 1250 m. The angle of intersection is 1500. Calculate all data necessary for setting out a curve of radius 250 m by the deflection angle method. The peg intervals may be taken as 20 m. prepare a setting out table when the least count of the Vernier is 20". Calculate the data for field checking. **L3 12M**

OR

8 **a** Write short notes on reverse curves. **L1 6M**

b Explain the procedure of setting out of curve by two theodolite methods. **L2 6M**

UNIT-V

9 **a** Explain in detail about the infrared type of EDM instrument. **L2 6M**

b Write short notes on total stations. **L2 6M**

OR

10 **a** Explain about AM and FM modulation. **L2 6M**

b What is modulation? Explain the necessity of modulation. **L2 6M**

*** END ***