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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech II Year I Semester Supplementary Examinations August-2021**

**SURVEYING**

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a Explain the principle of surveying. **6M**  
b Explain with neat sketch the radiation and intersection method in plane table surveying. **6M**

**OR**

- 2 a Explain the methods of obstacles in chaining. **5M**  
b Where do you suspect local attraction? Find the correct bearings of lines and also compute the inclined angles **7M**

Line	Fore bearing	Back bearing
AB	66°20'	246°20'
BC	139°30'	318° 50'
CD	189°40'	11°20'
DA	300°30'	119° 30'

**UNIT-II**

- 3 a Explain the theory of simple and differential leveling. **6M**  
b What are different difficulties and errors in leveling? **6M**

**OR**

- 4 a Explain the characteristics of contours. **6M**  
b Mention the uses of contour maps in civil engineering field. **6M**

**UNIT-III**

- 5 a Write the procedure to measure horizontal and vertical angles using theodolite. **6M**  
b What are different sources of error in Theodolite survey. **6M**

**OR**

- 6 Determine the RL of the top of the temple from the following data. Station A and B are in line with the top of the temple **12M**

Inst. Station	Reading on BM (m)	Vertical Angle	RL of BM
A	1.085	10°48'	RL of BM = 150.00m
B	1.265	7°12'	AB=50m

**UNIT-IV**

- 7 Two tangents intersect at chainage 1250 m. The angle of intersection is 150°. 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. **12M**

**OR**

- 8 Describe with neat sketch the method of setting a simple circular curve by Rankine's deflection angle method. **12M**

**UNIT-V**

- 9 a Explain the principle of EDM instrument with a neat sketch **6M**  
 b What are different applications of Electronic theodolites **6M**

**OR**

- 10 a What are different model of Total station and explain the various uses of total station. **6M**  
 b Explain about AM and FM modulation. **6M**

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