O.P.Code: 20HS0804

**R20** 

H.T.No.

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

## B.Tech I Year II Semester Regular & Supplementary Examinations August-2023 ENGINEERING CHEMISTRY

(Common to CE & AGE)

Time: 3 Hours

(Answer all Five Units  $5 \times 12 = 60$  Marks)

Max. Marks: 60

UNIT-I

1	Describe the est	imation of hards	ness by FDTA	method	

CO1 L3 12M

OR

2 a Explain about demineralization of brackish water by Electrodialysis. CO1

CO1 L2 6M

**b** Explain about demineralization of brackish water by Reverse Osmosis.

CO1 L2 6M

UNIT-II

3 a Explain the Construction and working of Lead acid battery.

CO2 L2 6M

**b** Describe the Construction and Working of Methanol – Oxygen Fuel **CO2** 

CO2 L3 6M

cell.

OR

4 Explain various factors influencing the rate of corrosion.

CO<sub>2</sub> L<sub>3</sub>

12M

UNIT-III

5 a Distinguish between Thermoplastics and thermosetting plastics.

CO3 L4

4 6M

**b** Describe the preparation, properties and uses of Bakelite.

CO<sub>3</sub>

L3 6M

OR

6 Explain the analysis of Coal (Proximate and Ultimate) With its CO3 L2 12M Significance.

UNIT-IV

What is meant by composites? Classify the composites materials.

CO<sub>4</sub>

L1 12M

OR

8 Define Cement. Explain in detailed about manufacture of Portland Cement.

**CO4** 

L2 12M

UNIT-V

9 Write any two methods synthesis of colloids with suitable examples.

CO<sub>5</sub>

L1 12M

OR

10 Write a brief note on Applications of Colloids and Nano materials.

CO<sub>5</sub>

L1 12M

\*\*\* END \*\*\*