R19

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year II Semester Supplementary Examinations July-2021
APPLIED CHEMISTRY
(Common to CSE & CSIT)

Time: 3 hours   Max. Marks: 60

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

UNIT-I

1	a	Define Electrode Potential. Derive the Nernst equation for a single electrode potential.

8M

b Give a brief account on Glucose Potentiometric Sensor.   4M

OR

2 a What is secondary Battery? Explain the Construction and working principle of Lead acid battery.   6M

b Write notes on Photo Galvanic cell.   6M

UNIT-II

3 a Write a brief note on particle in one dimensional box.   8M

b Discuss the postulates of molecular orbital theory.   4M

OR

4 a What is doping? Explain the role of doping on band structures.   6M

b Explain the energy level diagrams of CO molecule. Explain its magnetic nature and Bond order.   6M

UNIT-III

5 a Explain any one Addition Polymerization mechanism with example.   6M

b Distinguish between Thermoplastics and thermosetting plastics.   6M

OR

6 a What are conducting polymers? How are they classified?   5M

b Describe the preparation, properties and uses of Bakelite.   7M

UNIT-IV

7 a Write notes on Potentiometry.   6M

b Write a short note on Beer-Lambert's Law.   6M

OR

8 a Explain the principle of Gas Chromatography.   4M

b Explain the instrumentation of UV-visible spectroscopy with neat diagram.   8M

UNIT-V

9 a Define Dielectrics? What are the characteristics of Electrical Insulators? 6M

b Write the Properties of Nanomaterials.   6M

OR

10 a Explain in detail about the application of semiconductors?   6M

b Write a note on Fullerenes.   6M

*** END ***