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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations December-2021**APPLIED CHEMISTRY**

(Common to EEE & ECE)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 Define Electrode Potential. Derive the Nernst equation for a single electrode potential and write its applications. L1 12M

OR

- 2 a What is primary Battery? Write a brief note on Zinc-Air battery. L1 6M
b Write a short note on Alkali metal sulphide batteries. L1 6M

UNIT-II

- 3 a Explain Planck's Quantum Theory. L2 6M
b Write a brief note on particle in one dimensional box. L1 6M

OR

- 4 Draw the molecular orbital diagrams of Oxygen molecule (O₂) and Nitrogen molecule (N₂). Explain their magnetic nature and bond order. L2 12M

UNIT-III

- 5 a Explain the Anionic addition polymerization mechanism with example. L2 6M
b Explain the Condensation or Step growth polymerization mechanism with example. L2 6M

OR

- 6 a Distinguish between Thermoplastics and thermosetting plastics. L4 6M
b Describe the preparation, properties and uses of Bakelite. L2 6M

UNIT-IV

- 7 Explain principle and instrumentation of UV-visible spectroscopy with neat diagram. L2 12M

OR

- 8 What are the methods do you follow to separate from the Liquid Mixtures? L1 12M

UNIT-V

- 9 Write a brief note on Fullerenes and Carbon nano tubes L1 12M

OR

- 10 a Write a note on Super Capacitors. L1 6M
b Define Dielectrics. What are the characteristics of Electrical Insulators? L1 6M

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