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

B. Tech I Year I Semester Supplementary Examinations August-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 a Define Electrode Potential. 3M
b Derive the Nernst equation for a single electrode potential and write its applications. 9M

OR

- 2 a Define electrochemical sensor and their applications. 4M
b Draw the neat sketch of electrochemical sensor and explain its construction, working principle. 8M

UNIT-II

- 3 a Derive Schrodinger wave equation? 8M
b Explain the significance of the Ψ and Ψ^2 . 4M

OR

- 4 a Explain the energy level diagrams of CO and NO molecule. 7M
b Explain Heisenberg Uncertainty principle. 5M

UNIT-III

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

OR

- 6 a Describe the preparation, properties and uses of Carbon Fibers 7M
b Describe the preparation, properties and uses of Nylon-6, 6. 5M

UNIT-IV

- 7 a Explain the working principle of Atomic Absorption Spectrometer (AAS). 6M
b Write a note on atomic absorption and molecular absorption. 6M

OR

- 8 a Explain principle and instrumentation of UV-visible spectroscopy with neat diagram. 8M
b What are the applications of Gas Chromatography? 4M

UNIT-V

- 9 a Write a short note on Complementarity. 6M
b What is meant by Nanomaterials? How is Nanomaterials Classified? 6M

OR

- 10 a What is basic lock and key principle? 6M
b Write a note on Super Capacitors. 6M

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