

**Semester Pattern: 2024-25**

**Instructions to submit Third Semester Assignments**

1. Following the introduction of semester pattern, it becomes **mandatory for candidates to submit assignment for each course.**
2. Assignment topics for each course will be displayed in the A.U, CDOE website (**[www.audde.in](http://www.audde.in)**).
3. Each assignment contains 5 questions and the candidate should answer all the 5 questions. Candidates should submit assignments for each course separately. (5 Questions x 5 Marks =25 marks).
4. Answer for each assignment question should not exceed 4 pages. Use only A4 sheets and write on one side only. **Write your Enrollment number on the top right corner** of all the pages.
5. Add a template / content page and provide details regarding your Name, Enrollment number, Programme name, Code and Assignment topic. Assignments without template/ content page will not be accepted.
6. Assignments should be handwritten only. Typed or printed or photocopied assignments will not be accepted.
7. **Send all Third semester assignments in one envelope.** Send your assignments by Registered Post to The Director, Center for Distance and Online Education, Annamalai University, Annamalai Nagar – 608002.
8. Write in bold letters, “**ASSIGNMENTS – THIRD SEMESTER**” along with PROGRAMME NAME on the top of the envelope.
9. Assignments received after the **last date with late fee** will not be evaluated.

**Date to Remember**

Last date to submit Third semester assignments : **15.04.2025**

Last date with late fee of Rs.300 (three hundred only) : **30.04.2025**

**Dr. T. SRINIVASAN**

Director

# **CENTRE FOR DISTANCE AND ONLINE EDUCATION**

## **S020 – M.Sc. CHEMISTRY**

### **SECOND YEAR – III SEMESTER**

#### **ASSIGNMENT TOPICS**

#### **020E2310: ORGANIC CHEMISTRY - III**

1. Discuss the following (a) Retro Diels-Alder reaction (b) Pericyclic reactions.
2. How do you use the following reagent in organic synthesis (a) Lithium dimethyl cuprate (b) Trimethylsilyliodide.
3. Investigate the organic reaction mechanism by kinetic and non-kinetic methods.
4. Discuss the asymmetric synthesis with chiral substrate.
5. Give the brief account on synthesis and applications of PVC, Bakelite, Nylon 6,6 and Buna-S-rubber.

#### **020E2320 INORGANIC CHEMISTRY - III**

1. Derive the Born equation step by step and explaining each term present in it.
2. Discuss about the isopoly and heteropolyacids.
3. Explain the kinetics of phase transitions and rate equations.
4. Discuss the preparation and structure of metal alkene complex (Zeise's salt) and explain the bonding nature.
5. Give a brief account on "Alkene hydrogenation reaction"

#### **020E2330: PHYSICAL CHEMISTRY - III**

1. Explain the methods of protection of metals from corrosion.
2. Discuss the following (a) Lead-acid battery (b) Lithium-iron battery.
3. Give a brief account on conductometry method.
4. Discuss the Raman spectra with examples.
5. Explain the chromophores, auxochromes and discuss the factors influencing the positions and intensity of absorption bands.