A N N A M A L A I U N I V E R S I T Y

(Accredited with 'A+' Grade by NAAC)

CENTRE FOR DISTANCE AND ONLINE EDUCATION

Annamalainagar – 608 002

Semester Pattern: 2025-26

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**).
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, Centre 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 : 01.11.2025
Last date with late fee of Rs.300 (three hundred only) : 15.11.2025

DIRECTOR
CDOE

CENTRE FOR DISTANCE AND ONLINE EDUCATION
S020 - M.Sc. CHEMISTRY
SECOND YEAR – III SEMESTER (2025-2026)
ASSIGNMENT QUESTION

020E2310: ORGANIC CHEMISTRY –III

1) Describe the retro-synthetic analysis of camphor.
2) Discuss the synthetic applications of lithium aluminium hydride ($LiAlH_4$) and sodium borohydride ($NaBH_4$).
3) Explain the mechanism of claisen-ester reaction and its role for forming β-keto ester.
4) Give a brief note on the following
    a) Protection of Hydroxyl group.
    b) Protection of mercapto-group.
5) Explain the synthesis and applications of polymers such as polyethylene and polystryrene.

020E2320: INORGANIC CHEMISTRY –III

1) Derive the Born-Lande equation step by step, and explain each term in it with physical significance.
2) Discuss about isopoly anions.
3) Explain Martensitic transformation with examples.
4) Discuss the preparation and structure of metal alkene complexes.
5) Describe the hydro formulation process and its significance in organic synthesis.

020E2330: PHYSICAL CHEMISTRY –III

1) Describe the significance of electrical double layers at the electrode-electrolyte interface.
2) Evaluate the advantage and disadvantages of lead-acid batteries compared to lithium-iron batteries.
3) Discuss the working principle and applications of anodic stripping voltametry.
4) Explain the following
    a) Overtone bands
    b) Hot bands
5) Explain different types of electronic transitions in UV-Visible spectroscopy.