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: 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**).
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 Second 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 : 01.11.2024
Last date with late fee of Rs.300 (three hundred only) : 15.11.2024

Dr. T.SRINIVASAN
Director

S 020 - M. Sc CHEMISTRY - CDOE

SECOND YEAR - III SEMESTER

ASSIGNEMENT TOPICS

[CDOE Students enrolled during the Academic year 2023 -24 (July 2023-batch)]

020E2310 - ORGANIC CHEMISTRY - III

1. Discuss the Retrosynthetic analysis by using the group disconnection method (synthesis of TM_1, TM_2, and TM3).
2. Summarize the uses of the following reagents in organic synthesis
   (a) Sodium borohydride, (b) Lithium aluminium hydride.
3. Explain the Aldol condensation with example.
4. Write a note on the following,
   (i) Protection of mercapto group,
   (ii) Protection of amino group.
5. Discuss the preparation, properties and uses of polyethylene.

020E2320 - INORGANIC CHEMISTRY - III

1. Discuss the radius ratio rule and its application for determining the shape of molecules.
2. Write a note on metalloboranes and metallocarboranes.
3. Elaborate the kinetics of phase transitions and rate equations.
4. Explain the inert gas rule (18-electron rule) with examples and discuss their limitations.
5. Discuss the following (a) wacker process, (b) Monsanto acetic acid synthesis.

020E2330 - PHYSICAL CHEMISTRY - III

1. Discuss the applications of electrochemical series.
2. Derive the Butler-Volmer equation and discuss the terms involved it.
3. Write a note on Amperometric titration methods.
4. Explain the following (a) Overtone bands, (b) Hot bands.
5. Discuss the principle and uses of IR spectroscopy for the structural elucidation of organic compounds.