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 First 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 First 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 – FIRST 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 First semester assignments	:	20.11.2024
Last date with late fee of Rs.300 (three hundred only)	:	30.11.2024

Dr. T.SRINIVASAN
Director

CENTRE FOR DISTANCE AND ONLINE EDUCATION
S020- M.Sc. CHEMISTRY
FIRST YEAR – FIRST SEMESTER (2024-2025)
ASSIGNMENT TOPIC

020E1110: ORGANIC CHEMISTRY- I

1. Discuss the unique structural features of azulene and heteroannulenes that contribute to their aromacities.
2. Illustrate S_N2 mechanism, detailing the stepwise process and the involvement of nucleophilic intermediates.
3. Sketch and explain the SE_2 and SE_i mechanisms in detail, emphasizing the stepwise nature of the process.
4. Discuss briefly about Walden inversion and asymmetric transformation.
5. Illustrate the Norrish type I and type II reactions with examples.

020E1120: INORGANIC CHEMISTRY- I

1. Discuss the following with suitable examples.

   a) Nuclear activation analysis

   b) Isotopic dilution method

2. Explain the concept of "Lanthanide contraction "and discuss its consequences
3. Discuss about the structural features and function of haemoglobin and myoglobin.
4. Examine the mechanisms, structures and therapeutic potential of platinum (Pt) complex in the context of their anticancer activity.
5. Discuss about Zeolite synthesis.

020E1130: PHYSICAL CHEMISTRY – I

1. Derive the Maxwell relations.
2. Explain the determination of fugacity in various methods.
3. Discuss the Maxwell, Boltzmann and Bose-Einstein Statistics
4. Write note on the following:-
   (i) Photosensitization
   (ii) Chemiluminescence
   (iii) Photosynthesis
   (iv) Semiconductors
5. What are the unique properties of nanotubes and how would one study those?

020E1140: APPLIED CHEMISTRY

1. Discuss the various types of polymerization with suitable example.
2. What is meant by electroplating? and discuss the types of electroplating with applications.
3. Explain the heavy metal pollutions and its preventions.
4. Elaborate the refining process of crude oil.
5. Discuss the following :-
   (i) Synthetic method of Ammonia.
   (ii) Mixed fertilizers and its significance.