



International Islamic University Chittagong
Department of Pharmacy

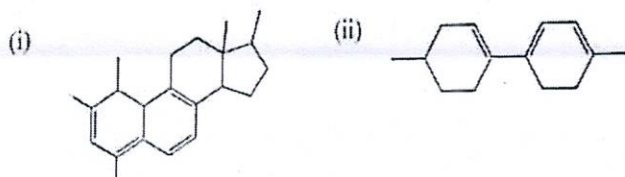
B. Pharm (Hons.) Program
Course Code: **Pharm-3609**
Time: 1 hour 30 minutes

Mid-term Examination

Spring Semester 2024
Course Title: **Pharmaceutical Analysis-II**
Full Marks: 30

*(Answer any **three** questions from the followings. Figures in the right margin indicate marks)*

1. a) Provide a brief description of the instrumentation of a double beam UV spectrophotometer. 3
- b) State the Beer's and Lambert law. Derive Beer's- Lambert laws equation. 3
- c) Define Lambda max (λ_{max})? Write about the types electronic transitions in UV spectroscopy with examples 1+3
2. a) Define wave number, wave length and frequency and make relation among them. 3
- b) Calculate the absorption maximum in dienes using Woodward-Fieser rules for following compounds 2+2



- c) Describe the blue shift and red shift effects with figure and examples. 3
3. a) What do you mean by polarization? Show the effects of polarization on galvanic cell and electrolytic cells using voltage curve. 1+3
- b) Elucidate the Ohmic potential? How it is related to cell potential and applied potential. 3
- c) Why does cell potential differ from the applied potential? 3
4. a) Write down the note on kinetic polarization and concentration polarization. 2+2
- b) What is reference electrode? "An auxochrome is a group which does not itself acts as a chromosphere"-Justify the statement. 1+2
- c) What is electromagnetic spectrum? Cite the deviation of Beer's- Lambert law 1+2