

INDIRA UNIVERSITY, PUNE

SCHOOL OF PHARMACY- BPHARM

Term End Examination (2025 Pattern) April- May – 2026- Semester – II

Course Name: Pharmaceutical Organic Chemistry-I

Max. Marks: 75

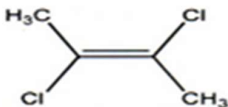
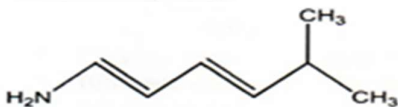
Course Code: BP202T

Time: 3:00 Hrs.

Instructions

- All Questions are Compulsory. Write two sections on separate answersheets.
- Neat diagram must be drawn wherever necessary.
- Figures to the right indicate full marks.

Section : I

Q.1	Solve any FIVE from the following	15 Marks
	a. Give structure and uses of i) Iodoform ii) Vanillin	
	b. Explain the different types of bonds and compare sigma and pi bond.	
	c. Draw structures of compounds from following IUPAC names a) 2-Nitrobutane b) 2-iodo-3-methylhexanoic acid c) 3-Chloro-2-pentanone	
	d. Explain sp^3 hybridization in alkanes.	
	e. Differentiate between chain isomerism and position isomerism	
	f. What are paraffins? Write two uses and one method of preparation of alkanes.	
	g. 1. Write IUPAC names for following structures. a) $(CH_3)_3C-COC_3H_7$  b)  c)	

Q.2	Solve any TWO from the following		20 Marks
	a.	Explain in detail Aldol condensation and Crossed Aldol condensation	
	b.	Give classification of organic compounds on basis of functional group & elemental composition.	
	c.	Classify carbonyl compounds and explain any three methods of preparation and any three nucleophilic addition reactions of aldehydes.	
	d.	Define Nucleophilic Substitution reaction & Write a note on Reaction, Mechanism, Kinetics, Stereochemistry, Energy profile diagram of SN1 Reaction.	
Q.3	Section : II Solve any EIGHT from the following		40 Marks
	a.	Illustrate the electrophilic addition reactions of alkenes with examples explaining the rules governing it.	
	b.	Explain any two qualitative tests used to identify alcohols. Mention the principle and observation involved.	
	c.	Write any three methods of preparation and three reactions of carboxylic acids.	
	d.	Draw structure and give uses of following. Benzaldehyde ii) Citric acid iii) Benzyl alcohol	
	e.	Classify amines and explain separation methods.	
	f.	Define nucleophilic addition reaction and write a note on Aldol condensation.	
	g.	State Qualitative tests, structure and uses of Salicylic Acid ii) Citric acid iii) Methanol	
	h.	Write any two methods of preparation and reaction of alkyl halides.	
	i.	Explain Perkin condensation.	
	j.	Explain Diels–Alder reaction	
