



Paper id: 253107

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BPHARM
(SEM II) THEORY EXAMINATION 2024-25
PHARMACEUTICAL ORGANIC CHEMISTRY I

TIME: 3 HRS

M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

1. **Attempt all questions in brief.**

10 x 2 = 20

- a. What is chain isomerism?
- b. What is the silver mirror test?
- c. What is the peroxide effect?
- d. Outline the Diels-Alder reaction of conjugate dienes.
- e. Explain why formic acid is stronger than acetic acid?
- f. What do you mean by the Wurtz reaction?
- g. What do you understand by Saytzeff's rule?
- h. Write down the structure and uses of iodoform and chloroform.
- i. What is the order of reactivity of 1°, 2°, and 3° alkyl halides?
- j. Write the IUPAC name of the following:

I.

II.

SECTION B

2. **Attempt any two parts of the following:**

2 x 10 = 20

- a. Write the general rules for IUPAC nomenclature of organic compounds with examples.
- b. Differentiate in between E¹ and E² reactions. Discuss the mechanism and factors affecting the E¹ and E² reactions.
- c. Demonstrate various methods of synthesis and chemical reactions given by aliphatic amines.

SECTION C

3. **Attempt any five parts of the following:**

7 x 5 = 35

- a. Discuss the mechanism and factors affecting SN₁ and SN₂ reactions.
- b. Write down the preparation and chemical reactions of alkyl halides.
- c. Write down the reaction and mechanism of the aldol and crossed aldol condensation.
- d. Explain the stability and effect of a substituent on the acidity of carboxylic acids.
- e. Discuss in detail about nucleophilic addition reactions of carbonyl compounds.
- f. Discuss preparation, chemical reactions, and uses of monocarboxylic acids.
- g. Discuss the methods for distinguishing between aldehydes and ketones.