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Roll No .....

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Total No. of Questions : 10

Total No. of Printed Pages : 5

**PHM-1.2.4. PHARAMACEUTICAL  
CHEMISTRY - III  
(ORGANIC CHEMISTRY-I)**

**( B. Pharmacy 2nd Semester, 2056)**

**Time : 3 Hours**

**Max. Marks : 80**

**Note : Section A is compulsory. Attempt any four questions from Section B and attempt any three questions from Section C.**

**SECTION - A**

**Answer all of the following :**

**(15x2=30 )**

- 1 a) Explain the terms 'Configuration' and 'Confirmation' with examples.

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**Turn over**

(2)

- b) Phenol is more acidic than alcohol (ethanol). Explain the fact based on difference in stabilities of phenoxide and ethoxide ions by drawing the resonance structures
- c) Methyl ketones give positive iodoform test. Give reasons
- d) What is Kolbe reaction? Give the reaction.
- e) What are diastereomers? Give examples
- f) Write the reactions involved in Reimer-Tiemann reactions.
- g) Tertiary Carbocations is more stable than secondary Carbocation. Explain.
- h) How will you convert benzaldehyde into benzoic acid and benzyl chloride?
- i) What is Keto-enol tautomerism ? Explain giving examples.

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(3)

- j) Differentiate enantiomer and diastereomers, giving suitable examples
- k) Write the reactions involved in the conversion of phenol to acetyl salicylic acid.
- l) What is Friedl Craft's alkybtion? What are its limitations?
- m) What happens when phenol is treated with Dimethyl Sulphate?
- n) When do you say a compound is optically active?
- o) How will you differentiate different amines in the laboratory?

**(4)**

**SECTION - B**

**Answer any four questions**

**(4 x 5 = 20)**

2. Write a brief note on SN1 and SN2 reaction. Explain giving the mechanism and reactions involved in it.
3. Write the formation, stability and reactions of Carbocations and Carbenes.
4. Write two methods of preparation of primary aromatic amines. Explain all its reactions.
5. What is Benzoin Condensation? Explain giving mechanism.
6. How will you bring about the following conversion
  - a) Naphthalene to Naphthaquinone.
  - b) Acetylene to vinyl chloride.

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(5)

SECTION - C

Answer any three questions

(3 X 10 = 30)

7. What are phenols? How do they differ from alcohols? Give any two methods of preparations of phenols. Explain all its reactions.
8. Discuss in detail the effect of substituents on reactivity, giving suitable examples
9. Explain the following reaction mechanisms with suitable examples
  - a) Beckmann rearrangement
  - b) Cannizzaro reaction.
10. Write short notes on
  - a) Hydrogen bonding Hybridisation.