Roll No.

Total No. of Pages :02

Total No. of Questions : 18

Pharm. D (Sem.–1)

## PHARMACEUTICAL ORGANIC CHEMISTRY Subject Code : 1.4 M.Code : 26508

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTION TO CANDIDATES :

- 1.SECTION-A contain SEVEN questions.<br/>question will carry TWO marks each.Attempt any FIVE questions. Each<br/>Attempt any SIX
- 2. SECTION-B contains EIGHT questions (Short Essay Type). questions. Each question will carry FIVE marks.
- 3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

## SECTION-A

- Q1 Briefly explain intramolecular hydrogen bonding with one example.
- Q2 Name various factors responsible for polarity in covalent bond.
- Q3 Draw structure of chair form of cyclohexane and specify orientation and conformation of each of the two hydrogen present on its all six positions.
- O4 Give two important differences between SN1 and SN2.
- O5 Give any one example of Markovnikov's addition reaction.
- Q6 What is Hyperconjugation?
- Q7 Explain the resonance stabilization in benzyl radical.

## SECTION-B

- Q8 Explain the stereochemistry of SN1 and SN2 reaction mechanisms in alkyl halide.
- Q9 Discuss orientation and reactivity of biomolecular elimination (E2) reaction.
- Q10 Explain the role of carbonyl group in carboxylic acid and its derivatives in nucleophilic acyl substitution.

- Q11 With the help of resonance stabilization, explain acidity of phenol and compare it with benzoic acid.
- Q12 Explain bimolecular displacement mechanism for nucleophilic aromatic substitution. Compare it with mechanism of aliphatic nucleophilic substitution.
- Q13 Classify isomerism with suitable examples.
- Q14 Discuss basicity of aliphatic and aromatic amines. Comment on effect of substituents on basicity of aromatic amines.
- Q15 What is diazotization reaction? Describe two classes of reactions undergone by diazonium salt with one example of each.

## SECTION-C

- Q16 Describe general steps in electrophilic aromatic substitution reactions. Explain theory of its activation and deactivation by various substituents present in benzene derivatives.
- Q17 Explain the mechanism of following name reactions :
  - a. Cannizzaro reaction
  - b. Reformatsky
  - c. Witting

Q18 Give method of preparation, test for purity, assay and important uses of any two :

- a. Vanillin
- b. Salicylic acid
- c. Benzyl benzoate

NOTE : Disclosure of identity by writing mobile number or making passing requ est on any page of Answer sheet will lead to UMC case against the Student.