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Total No. of Pages : 02

Total No. of Questions : 10

## B.Pharma. (Sem.–2)

## **PHARMACEUTICAL CHEMISTRY-III (Organic Chemistry)**

### Subject Code : BPHM-203

#### M.Code: 46213

#### Date of Examination : 17-12-2022

Time: 3 Hrs.

Max. Marks : 80

### **INSTRUCTION TO CANDIDATES :**

- 1. SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.

### **SECTION-A**

- 1. Answer briefly :
  - a) sp<sup>3</sup> hybridization in water
  - b) Polarity in NF<sub>3</sub>
  - c) Effect of Intermolecular hydrogen bonding on solubility of alcohol
  - d) Hard and soft base
  - e) Imine amine tautomerism.
  - f) Protic solvents.
  - g) Diastereomerism.
  - h) Optically inactivity in racemic mixture
  - i) Relative configuration
  - j) Unimolecular elimination reactions
  - k) Orbital picture of benzene.
  - l) Test for tertiary alcohol.
  - m) Saytzeff's rule.

- n) Tollen's reagents
- o) One chemical test for aromatic compounds.

## **SECTION-B**

- 2. What is configuration? Give rules to assign absolute configuration around chiral carbon.
- 3. Explain any two reactions involving nitrene reaction intermediate.
- 4. SN1 reactions in alkyl halide proceeds with inversion of configuration and retention of configuration. Why?
- 5. On the basis of Baeyer strain theory, discuss the relative stability of cyclobutane and cyclopropare.
- 6. Explain the formation of carbonyl compounds by ozonolysis of alkenes.

## SECTION-C

- 7. a) Describe the preparation of ether by alkoxymercuration-demercuration of alkene.
  - b) Describe the oxidation of primary secondary alcohol.
- 8. a) Describe addition of ammonia derivatives aldehyde.
  - b) Discuss the basicity of aniline.
- 9. a) Compare alkyl and acyl nucleophilic substitution reactions.
  - b) Describe two synthetic applications of benzene diazonium salt.

### 10. Write chemical reactions for:

- a) Nitration of benzene
- b) Formation of acid by carbonation of Grignard reagent
- c) Conversion of acid to amide
- d) Hofmann degradation of amide
- e) Formation of salicylaldehyde from phenol.

# NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.