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Total No. of Pages : 02

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### B.Pharma (2011 to 2016) (Sem.-2) PHARMACEUTICAL CHEMISTRY-III (Organic Chemistry) Subject Code : BPHM-203 M.Code: 46213

Time: 3 Hrs.

Max. Marks: 80

## **INSTRUCTION TO CANDIDATES :**

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

## **SECTION-A**

- 1. Answer briefly :
  - a) Bonding orbitals
  - b) Debye
  - c)  $sp^3$  hybridization in ammonia
  - d) Soft acid
  - Mer.com e) Intramolecular hydrogen bonding
  - f) Secondary bonding
  - g) Enantiomerism.
  - h) Resolution of racemic mixture
  - i) Optical inactivity in meso compounds
  - i) Geometry of carbanion ion
  - k) Bimolecular elimination reactions
  - 1) Crown ethers
  - m) Acidity constant of acids
  - n) Mixed acid used for nitration of Benzene
  - o) Acidity of picric acid



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## **SECTION-B**

- 2. Explain concept stereoselectivity and stereospecificity with example of each.
- 3. Explain any two reactions involving carbene reaction intermediate.
- 4. Compare stereochemical aspect of SN1 and SN2 reactions in alkyl halide.
- 5. Give two postulates of Baeyer's strain theory. What are its limitations?
- 6. Explain the mechanism of electrophilic addition of hydrogen halide to unsymmetrically substituted alkenes.

## **SECTION-C**

- 7. a) Describe the preparation of alcohol by oxymercuration-demercuration of alkenes.
  - b) Williamson synthesis of ether is nucleophilic substitution reaction. Justify.
- 8. a) Explain the mechanism of Freidal Craft alkylation in Benzene.
  - b) Explain the mechanism of nucleophilic addition in aldehyde by citing example of Aldol condensation.
- 9. a) Describe electrophilic substitution in Naphthalene.
  - b) Compare acidity of benzoic acid and phenol.
- 10. Write chemical reactions for :
  - a) Sulfonation of benzene
  - b) Formation of acid by hydrolysis of nitrile.
  - c) Conversion of acid to acid chloride.
  - d) Formation of diazonium salt.
  - e) Formation of sodium salicylate from sodium phenoxide.

# 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.