

## Pharmaceutical Organic Chemistry : BP 401 T

P. Pages : 2

Time : Three Hours



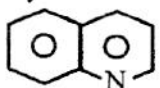
AW - 2348

Max. Marks : 75

- Notes :
1. All question carry equal marks.
  2. Answer **All** question.
  3. Illustrate your answer necessary with the help of neat sketches.
  4. Discuss the reaction, mechanism wherever necessary.
  5. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Multiple choice questions.

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- i) The number of degrees of rotation observed if 1 dm tube is used and concentration of compound is 1 g/ml
  - a) Optical rotation
  - b) Specific rotation
  - c) Geometric rotation
  - d) Conformation
- ii) When equimolar quantities of dextro and levorotatory isomers are mixed together it is called as
  - a) Meso compound
  - b) Keto compound
  - c) Racemic mixture
  - d) Diastereoisomers
- iii) A carbon atom to which Four-different group are attached is a
  - a) Achiral center
  - b) Chiral center
  - c) Active center
  - d) Inactive center
- iv) Identify the following structure  

  - a) Indole
  - b) Quinoline
  - c) Isoquinoline
  - d) Naphthalene
- v) Single heterocyclic ring called as -
  - a) Fused ring
  - b) Diacyclic
  - c) Monocyclic
  - d) None of above
- vi) Reserpine an anti hypertensive drug which heteroaromatic ring in its structure
  - a) Indole
  - b) Isoquinoline
  - c) Quinoline
  - d) Imidazole
- vii) Gauche and anti forms are
  - a) Conformational Isomers
  - b) Racemic mixture
  - c) Geometric Isomers
  - d) Optical Isomers

viii) Electrophilic aromatic substitution occurs in the following order

- a) Benzene > Pyrrole > Furan      b) Pyrrole > Benzene > Thiophene  
c) Thiophene > Pyrrole > Furan      d) Pyrrole > Thiophene > Furan

ix) Caffeine contains which heteroaromatic ring

- a) Pyrimidine      b) Purine  
c) Pyrrole      d) Oxazole

x) NaBH<sub>4</sub> and LiAlH<sub>4</sub> are

- a) Oxidizing agents      b) Neutralizing agents  
c) Complexing agents      d) Reducing agents

b) Solve following questions -

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- 1) Write about chiral molecule
- 2) Stereo Isomerism in biphenyl compound.
- 3) Syn and Anti system.
- 4) Stereospecific reaction
- 5) Oxazole

2. Long answer type questions **any two**.

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- 1) Discuss DL, RS and EZ nomenclature
- 2) Stereospecific and stereoselective reactions.
- 3) Write a detailed account on furan and imidazole.

3. Short answer type questions **any Seven**.

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- 1) Atropisomerism
- 2) Reactions of chiral molecules.
- 3) Explain racemic mixture and meso compounds are optically inactive.
- 4) Claisen-Schmidt condensation.
- 5) Birch reduction.
- 6) Pyridine
- 7) Quinoline.
- 8) Sequence rules and RS system.
- 9) Conformational isomerism of ethane.

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