

B.Pharm. CBCS Pattern Semester-IV  
**BP 401T - Pharmaceutical Organic Chemistry-III**

P. Pages : 2

Time : Three Hours



**GUG/W/23/11990**

Max. Marks : 75

- Notes :
1. Diagrams and Chemical equation should be given wherever necessary.
  2. Discuss the reaction, mechanism wherever necessary.
  3. All questions are compulsory.

**1. Multiple choices questions.**

**20x1  
=20**

- i) Isomers which are different in their spatial arrangement are.
  - a) Optical isomer
  - b) Enantiomers
  - c) Diastereomers
  - d) Stereo isomers
- ii) Isomers which rotate plane polarized light are optically inactive.
  - a) True
  - b) False
- iii) Meso compounds have plane of symmetry.
  - a) True
  - b) False
- iv) Racemic mixtures are optically inactive.
  - a) True
  - b) False
- v) D and L represents -----.
  - a) Absolute configuration
  - b) Relative configuration
  - c) Both
  - d) None
- vi) Resolution of racemic mixture can be carried out by ----- methods.
  - a) Chemical
  - b) Biochemical
  - c) Physical
  - d) All of these
- vii) Isomers which are non-superimposable mirror images of each other are enantiomers.
  - a) True
  - b) False
- viii) Molecules which have elements of symmetry are optically active.
  - a) True
  - b) False
- ix) R represent ----- absolute configuration.
  - a) Clockwise
  - b) Anti-clockwise
  - c) Both
  - d) None of these
- x) Diastereomers are not mirror images of each other.
  - a) True
  - b) False
- xi) The hormone cortisone contain the steroid core as.
  - a) Estrane
  - b) Androstane
  - c) Cholestane
  - d) Pregnane
- xii) Reductive amination of pyruvic acid, using ammonia and NaBH<sub>4</sub>, gives which of the following amino acid.
  - a) Glycine
  - b) Valine
  - c) Alanine
  - d) Proline

2. Long Answer question solve **any two**. **2x10**  
**=20**
- i) Discuss the conformational isomerism in cyclic and acyclic compound.
  - ii) Write a note on.
    - a) Racemization and resolution of racemic mixture.
    - b) Elements of Symmetry.
  - iii) Write the synthesis, chemical reaction and medicinal uses of Pyrrole and Furan.
3. Short answer questions solve **any seven**. **7x5**  
**=35**
- i) Write note on asymmetric synthesis.
  - ii) Discuss about absolute configuration assignment for compounds containing more than one chiral carbon.
  - iii) Give difference between enantiomers and diastereomers.
  - iv) Discuss the reaction and mechanism of Skraup Quinoline synthesis.
  - v) Discuss Oppenauer oxidation and Birch reduction in detail.
  - vi) Explain the mechanism and stereochemistry involved in Beckmann's Rearrangement reaction.
  - vii) Define the term stereoisomer. Explain the properties of optical and geometrical isomers giving examples.
  - viii) Outline the reactions of pyridine. Discuss the basicity of pyridine in detail.
  - ix) Explain stereoselective and stereospecific reactions.

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