

B.Pharm II Year I Semester (R09) Supplementary Examinations November 2017

**PHARMACEUTICAL ORGANIC CHEMISTRY - II**

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Write the structure and chemical reactions of quinoline.  
(b) Write the structure, aromaticity and basicity of furan and pyridine.
- 2 (a) Discuss the structure and reactions of benzimidazole.  
(b) Write the chemical reactions of pyrazole.
- 3 (a) Define: (i) Optical activity. (ii) Enantiomers. (iii) Meso compound. (iv) Racemic mixture.  
(b) Discuss about relative configuration.
- 4 (a) Explain the open-chain structure, ring structure and oxidation–reduction reactions of glucose.  
(b) Explain why sucrose is called invert sugar.
- 5 (a) Discuss the classification and preparations of amino acids.  
(b) Explain the concept of C-terminal & N-terminal.
- 6 (a) Write a note on  $\alpha, \beta$  - glycosidic linkage and enzymatic hydrolysis of glycosides.  
(b) Explain in detail about hydrogenation and rancidity of oils & fats.
- 7 (a) Write the structures and pharmaceutical significance of uric acid and methylated xanthines.  
(b) Define nucleic acids, nucleotides and the structure of RNA.
- 8 Write the mechanism and applications of:
  - (a) Beckmann rearrangement.
  - (b) Wittig reaction.
  - (c) Mannich reaction.
  - (d) Schmidt reaction.

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