

Code No: B2104/R10

**Set No.1**

**II B.Pharmacy I Semester Supplementary Examinations, May 2017**  
**ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY**

**Time: 3 hours**

**Max Marks: 75**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Define the term heterocyclic compounds and discuss their nomenclature?  
(b) Write a note on aromaticity of pyridine and furan? [8+7]
2. (a) Give a brief account on chemical properties of oxazole and isoxazole?  
(b) Explain the chemical properties of imidazole and thiazole? [8+7]
3. Write a note on (a) Racemic mixture  
(b) Optical activity  
(c) Enantiomers  
(d) chirality [4+4+3+4]
4. Describe the following (a) Osazone formation  
(b) Mutarotation  
(c) Epimerization  
(d) Glycosidic linkage [5+3+3+4]
5. (a) Classify amino acids with suitable examples?  
(b) What are essential and non-essential amino acids? Discuss role of amino acids in synthesis of proteins  
(c) Write about essential and four non-essential amino acids with structures?. [5+5+5]
6. (a) Write the structures of digitalis glycosides and explain about the mechanism of action of cardiac glycosides  
(b) Describe the source, structure and uses of cardiac glycosides [8+7]
7. (a) Write the structures & uses of uric acid, caffeine, theophylline and theobromine  
(b) Give a brief account on structure of DNA and RNA [8+7]
8. Write the detailed mechanism and applications of:
  - (a) Beckmann rearrangement
  - (b) Phillips condensation reaction
  - (c) Mannich reaction
  - (d) Michael addition reaction [4+3+4+4]

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