

**FACULTY****B. Pharmacy 2/4 II Sem. (Non CBCS) (Backlo) Examination, July 2019****Subject: Pharmaceutical Organic Chemistry II****Time: 3 Hrs****Max. Marks: 70****Note: Answer all questions. All questions carry equal marks.**

1. (a) Explain the mechanism of sulphonation and Friedel crafts alkylation. 8  
(b) Explain in detail  $4n+2$  rule and aromaticity. 6  
**OR**
2. (a) Add a note on Heats of hydrogenation. 6  
(b) Write the structure and electrophilic reactions of Naphthalene. 8
3. (a) Explain in detail about Optical isomerism. 7  
(b) Explain Sequence rules to determine R and S configuration. 7  
**OR**
4. (a) Explain in detail about Cis Trans isomerism. 8  
(b) Define and explain Elements of symmetry. 6
5. (a) Discuss the method of preparation and electrophilic substitution reactions of Thiophene. 10  
(b) Write the structure and specific uses of drug compounds containing Pyridine and Indole. 4  
**OR**
6. (a) Explain the reactions of Pyrrole. 8  
(b) Discuss the Oxidation reactions of Quinoline and Isoquinoline. 6
7. (a) Write any two methods of preparations of Benzimidazole and Phenothiazine. 8  
(b) Write the structure and specific uses of drug compounds containing  
i) Phenam ii) Cepham iii) Triazole. 6  
**OR**
8. (a) Write the method of preparation and reactions of Pyrazole. 8  
(b) Write the structure and specific uses of drug compounds containing  
i) Oxazine ii) Benzofuran iii) Tetrazole 6
9. (a) Describe the mechanism of the following reactions. 8  
i) Fries rearrangement ii) MPV reduction  
(b) Write two applications of Lithium aluminum hydride and Lead tetra acetate. 6  
**OR**
10. (a) Write two applications of Selenium oxide and Perchloric acid. 6  
(b) Describe the mechanism of the following reactions. 8  
i) Beckmann rearrangement ii) Birch reduction.

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