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**B. Pharmacy (Fourth Semester)
EXAMINATION, April-May, 2015**

(New Course)

**PHARMACEUTICAL CHEMISTRY-IV
(Organic Chemistry-III)**

Time : Three Hours]

[Maximum Marks : 70

Note : Attempt any five questions. All question carry equal marks.

1. What are heterocyclic compounds ? Explain the structure and reactions of any two of the following : 14
 - (a) Quinoline **CSVTUonline.com**
 - (b) Imidazole
 - (c) Pyrimidine
2. Write the reaction and mechanism of the following : $3\frac{1}{2}$ each
 - (a) Mannich reaction
 - (b) Beakmann reaction
 - (c) Diels Alder reaction
 - (d) Birch reaction

[2]

3. Write methods of preparation, chemical reactions and conformational analysis of cyclohexane. 14
4. What are amines ? Describe basicity and general methods of preparation of amines. 14
5. Write notes on any two of the following : 7 each
 - (a) Electrophilic aromatic substitution reactions
 - (b) Organic reagents used in synthesis
 - (c) Aromaticity of benzene
6. (a) Write general method of preparation and reaction of aniline. 7
 - (b) Write in detail about method of preparation and acidity of phenol. 7
7. What are esters ? Describe nomenclature, preparations and applications of Malonic esters. 14