

First Year B.Pharm Degree Examinations - September 2013

**(2012 - Scheme)****PHARMACEUTICAL CHEMISTRY - II**  
**(Organic Chemistry)****Time: 3 Hours****Total Marks: 100**

- Answer all Questions.
- Write equations wherever necessary.

**Essay****(3x10=30)**

1. Explain Bayers strain theory and its limitations. Add a note on stability of cyclohexane with the help of Sachse Mohr theory.
2. Explain the reaction and mechanism involved in Cannizaro's reaction & Benzoin condensation.
3. Explain the mechanism, kinetics and stereochemistry of SN<sub>1</sub> Reaction.

**Short notes****(14x5=70)**

4. Define and mention the mechanism of Kharasch effect.
5. Classification and general methods of preparations of alcohols.
6. Explain aldol and crossed aldol condensation.
7. What is the mechanism of Hofmanns degradation of amides
8. Nomenclature rules and classification of amines. Discuss its basicity.
9. Discuss the action of HI on ethers. Add a note on Williamsons synthesis.
10. Explain the concept of resonance and hyper conjugation.
11. Nitration and sulphonation reaction of benzene.
12. Mention two methods of synthesis and any three chemical reactions of carboxylic acids.
13. Explain the halogenation reaction of alkanes.
14. Stereo specific reduction of alkynes.
15. What is Walden inversion. Explain.
16. Mention examples of addition reactions in alkenes. Add a note on Bayer's oxidation.
17. Explain the low reactivity of halo benzenes towards the nucleophilic substitution.