

First Year Pharm D Degree Examinations – June 2016

**Pharmaceutical Organic Chemistry****Time: 3 Hours****Total Marks: 70**

- Answer all Questions.
- Write equation wherever necessary.

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

1. Describe the method of preparation, principle involved in the assay and medicinal uses of the vanillin and aspirin.
2. Discuss the mechanism, kinetics, stereochemistry and choice of solvent for  $SN_1$  reactions.
3. Mention the reaction and explain the mechanism involved in the bromination of phenol. Predict the major products obtain from the above reaction and justify your answer.

**Short notes:****(8x5=40)**

4. Define dipole moment and its significance
5. What is Zaitsev's rule and explain with an example.
6. Explain the free radical mechanism of chlorination of methane.
7. Resonance stabilization of allyl radical.
8. Mention the reaction along with mechanism involved in cannizzaro reaction.
9. Mention an example with equations for diazotization and coupling reaction.
10. Mechanism for addition-elimination type of nucleophilic aromatic substitution reaction.
11. Mention the structures for the following:
  - 2-methyl, 1-pentene
  - 3-chloro, hexanoic acid
  - 1-bromo, cyclohexanone
  - Methyl propanoate
  - 2, 4, 6 tri nitro phenol

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