QP CODE:104326 **Reg. No: …………………….**

First Year Pharm D Degree Supplementary Examinations December 2019 Pharmaceutical Organic Chemistry

Time: 3 Hours **Total Marks: 70**

- Answer all Questions.
- Write equation wherever necessary.

Essay **(3x10=30)**

1. Define resonance. Explain in detail the nucleophilic substitution in allylic and vinylic substrates.
2. Discus the general mechanism involved in electrophilic aromatic substitution. Mention the products for bromination of nitrobenzene. Name few activating and deactivating groups.
3. Explain the mechanism and evidences for E_2 reactions.

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

4. Hydrogen bonding.
5. Propose a suitable class of solvents to carry out SN_1 and SN_2 reactions. Justify your answer.
6. Explain the nucleophilic aromatic substitution via benzyne mechanism.
7. Explain the reactions involved in the addition of hydrogen bromide to an alkene.
8. Mention the reaction along with mechanism involved in Michael addition.
9. What is Sand Meyer's reaction and mention its importance.
10. Describe the method of preparation and medicinal uses of benzyl benzoate and mephenesin.
11. Mention the structures for the following:

    - 3-methyl butanal
    - 3-chloro, cyclohexanol
    - 1, 3-butadiene
    - Ethyl butanoate
    - Resorcinol

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