

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

**B.PHARM. DEGREE EXAMINATION – JULY 2019
Second Semester**

PHARMACEUTICAL ORGANIC CHEMISTRY - I

Time : Three hours

Maximum: 75 marks

I. Write essays on any **TWO** questions: (2 x 10 = 20)

1. a) Write the E₁ and E₂ reactions of alkylhalides and explain with its kinetics and order of reactivity and rearrangement of carbocations. (7)
- b) Write a note on saytzeff orientation and evidences. (3)
2. Write the following names reactions with the mechanism.
 - a) Aldol condensation (2½)
 - b) Benzoin condensation (2½)
 - c) Perkin condensation (2½)
 - d) Cannizaro reaction. (2½)
3. a) Write SN₁ versus SN₂ reactions and factors affecting SN₁ and SN₂ reactions? (5)
- b) Write a note on basicity of amines and effect of substituents on basicity? (5)

II. Write short answers on any **SEVEN** questions: (7 x 5 = 35)

4. Explain inductive effect of carboxylic acids and write in detail about qualitative tests of carbohydrates?
5. Write the structure and uses of ethylalcohol, glycerol. Chlorobutanol, benzylalcohol, propylene glycol.
6. Write a note on nucleophilic addition reactions of carbonyl compounds and explain with its mechanism.
7. Explain stereochemistry of SN₁ and SN₂ reactions of alkylhalides.
8. Classify organic compounds with structures and write the IUPAC name.
9. Explain SP³ hybridization in alkanes and SP² hybridization in alkenes with examples?
10. Write the E₁ versus E₂ reactions and factors effecting E₁ and E₂ reactions.
11. Write the free radical addition reactions of conjugated dienes with reactions.
12. Explain electromeric effect of carbonyl compounds and write the qualitative tests of carbonyl compounds?

