

# **2012 Scheme**

**QP CODE: 112006**

**Reg. No: .....**

## **First Year B.Pharm Degree Supplementary Examinations December 2020**

### **Pharmaceutical Chemistry - II**

#### **(Organic Chemistry)**

**Time: 3 Hours**

**Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
- *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Write equations wherever necessary.*

**Essay**

**(3x10=30)**

1. Elaborate  $sp$ ,  $sp^2$  and  $sp^3$  hybridization in carbon compounds with suitable examples.
2. Discuss electrophilic substitution reactions of benzene with mechanism.
3. Explain any five nucleophilic addition reactions of Aldehydes and discuss its mechanism.

**Short notes**

**(14x5=70)**

4. Alkynes are less reactive than alkenes for electrophilic addition reaction. Justify.
5. Explain the bayers strain theory and its limitations.
6. Explain any two methods of preparations and three reactions of monocarboxylic acids.
7. Explain inductive effect and factors associating inductive effect.
8. Explain Saytzeff's rule and explain with suitable example and mechanism.
9. Compare and explain the basicity of trimethyl amine, dimethyl amine and ammonia.
10. Explain five method of preparation of alcohols.
11. Explain reactions and mechanism of the following.
  - Aldol condensation
  - Williamson's synthesis
12. Describe Hofmann's degradation reactions mechanism and its applications.
13. Elucidate the synthetic applications of acetoacetic esters.
14. Explain stability of conjugated dienes.
15. Explain the theory of reactivity and orientation of monosubstituted benzene.
16. Express chain, conformational and geometrical isomerism with example.
17. Construct the structure for following
  - 3-hydroxy butanal
  - 4-bromopent-2-en-1-amine
  - 5-methylhept-3-en-2-one
  - 2-methyl-4-oxo-pentonoic acid
  - 2-methylhept-4-yn-1-ol

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