2012 Scheme

QP CODE: 112006 **Reg. No: ……..**

First Year B. Pharm Degree Supplementary Examinations January 2023

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 the facts supporting Kekule structure of benzene.
2. Explain electrophilic addition to alkenes. Discuss any three electrophilic addition reactions of alkenes with mechanism.
3. Discuss various types of hybridization in carbon compounds with examples.

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

4. Explain diazotization reaction. Explain its reaction mechanism.
5. Classify alcohol and write a note on dehydration of alcohol.
6. Cyclohexane-chair conformation is most stable than boat conformation. Justify.
7. Why halo benzenes are low reactivity towards nucleophilic substitution reactions. Explain.
8. Explain reaction and mechanism of the following.
    - Perkins reaction
    - Fries rearrangement
9. Explain free radical substitution reaction. Explain the reaction mechanism with an example.
10. Explain any two preparations and three reactions of aldehydes.
11. Predict the products of the following reactions.
    - $CH_3COCH_3+NH_2OH.HCl$
    - $CH_3CH\text{-}CH\text{-}CH_2\text{-}CH_3+HBr$
    - $C_6H_5OH+CHCl_3+KOH$
    - $C_6H_5NH_2+HNO_2+HCl$
    - $CH_3CH_2CH_2COOH+LiAlH_4/H_3O^+$
12. Explain dicarboxylic acid.
13. Explain, methods of preparation and synthetic utility of malonic acid esters.
14. Explain hyper conjugation and mesomeric effects.
15. Explain about Markownikoff's rule mechanism with examples.
16. Describe Hofmanns degradation of amides with mechanism.
17. Sketch the structure for following
    - 2, 4 hexadione
    - Methyl-2-butenoate
    - 3-chloro pentanal
    - 2-methylhep-4yn-l-ol
    - 2-(aminomethyl) pentanoic acid

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