2012 Scheme

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.
 - CH₃COCH₃+NH₂OH.HCI
 - CH₃CH-CH-CH₂-CH₃+HBr
 - C₆H₅OH+CHCl₃+KOH
 - C₆H₅NH₂+HNO₂+HCI
 - CH₃CH₂CH₂COOH+LiAlH₄/H₃O⁺
- 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
