Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.Pharm Degree Examination – 10-Jan-2020

Time: Three Hours   **Max. Marks: 70 Marks**

PHARMACEUTICAL ORGANIC CHEMISTRY – I
(Revised Scheme 3)
Q.P. CODE: 2604

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two)   **2 x 10 = 20 Marks**

1. Explain the reactivity and orientation in electrophilic aromatic substitution with a note on activating and deactivating groups.

2. Explain the following
   a) Diazotisation and its applications.
   b) Basicity of amines.

3. Explain the mechanism of
   a) Free radical chain reaction
   b) Anti-Markovnikov's rule

SHORT ESSAYS (Answer any Six)   **6 x 5 = 30 Marks**

4. Write three methods of preparation of cycloalkanes.
5. Explain: Saytzeff's rule and Hoffmann's elimination.
6. Explain theory of strainless ring and molecular orbital concept in cyclohexane.
7. Discuss factors affecting SN_1 and SN_2 reactions.
8. Explain 1,2 and 1,4-addition mechanism with example.
9. Explain mechanism of sulphonation of benzene.
10. Discuss the effects of substituents on acidity of phenols.
11. Explain Cannizzaro reaction and crossed Cannizzaro reaction with examples.

SHORT ANSWERS   **10 x 2 = 20 Marks**

12. What are protic and aprotic solvents? Give examples.
13. Define carbenes with structures.
14. State Huckel's rule.
15. What happens when toluene is nitrated, write reaction?
16. Write reaction: n-butyl alcohol is treated with a mineral acid.
17. Write the structures and IUPAC names of a) Glycerol b) Neopentane.
18. What is Reimer-Tiemann reaction? Write reaction.
19. Define a) nucleophile b) electrophile.
20. Explain: keto enol tautomerism.
21. How do you convert, Carboxylic acid to anhydride?

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