

Rajiv Gandhi University of Health Sciences, Karnataka
I Year Pharm-D Examination – Dec-2014

Time: Three Hours

Max. Marks: 70 Marks

PHARMACEUTICAL ORGANIC CHEMISTRY

Q.P. CODE: 2854

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 mechanism of E1 and E2 reaction with suitable examples.
2. Discuss the reaction and mechanism involved in
 - a) Aldol condensation
 - b) Knoevenagel reaction.
3. What is electrophilic aromatic substitution? Give the mechanism for the nitration and sulphonation of Benzene.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. State the various theories of acids and bases with suitable examples.
5. Give any four methods for the preparation of cycloalkanes.
6. Define isomerism. Explain structural isomerism with examples.
7. Discuss the effect of substituents on the acidity of carboxylic acids.
8. Write the preparation and uses of Vanillin and saccharin sodium.
9. Write the addition of HBr to unsymmetrical alkenes in the presence of peroxides.
10. Explain the Cannizzaro reaction and its mechanism.
11. Explain the factors effecting S_N1 and S_N2 .

SHORT ANSWERS

10 x 2 = 20 Marks

12. Define Diels-Alder reaction?
13. Why CHCl_3 has a dipole moment, but CCl_4 does not?
14. Define nucleophiles. Give examples.
15. Give esterification reaction with one example.
16. Write the structure of allyl radical and allyl cation.
17. Give the IUPAC names of alcohol and isobutene.
18. What is a carbocation? Give an example.
19. How will you convert acetic acid to acetamide?
20. Write the resonance structures of benzyl radical.
21. What are polar aprotic solvents? Give examples.
