

Rajiv Gandhi University of Health Sciences, Karnataka

I Year Pharm-D Degree Examination – 24-Nov-2022

Time: Three Hours

Max. Marks: 70 Marks

PHARMACEUTICAL ORGANIC CHEMISTRY (RS2)

Q.P. CODE: 2877

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. a) Define activating and deactivating groups with examples.
b) Discuss the mechanism of Nitration and sulphonation of benzene.
2. Explain kinetics, mechanism, stereochemistry and reactivity of S_N2 reaction
3. Explain electrophilic addition reactions to Alkenes, giving examples. Write the general mechanism involved.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

4. Write the kinetics and mechanism of E_2 reaction.
5. Discuss allyl cation as resonance hybrid with orbital picture.
6. Explain Cannizzaro condensation with mechanism.
7. What is peroxide effect? Write its mechanism
8. Discuss the stability of conjugated dienes with examples.
9. Explain ionisation of carboxylic acid and write the structure of carboxylate anion.
10. Explain Claisen condensation with example.
11. Compare acidity among Formic acid, Acetic acid and Trichloroacetic acid.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Classify hydrogen bonding with examples.
13. What is isomerism? Give example.
14. Write the structures of: a) 3-methyl-2-butanone b) 2-Hexenal
15. Which molecule is Polar and why, CH_3Cl and CH_4 ?
16. **Explain reactivity of free radical substitution in alkanes.**
17. What is crossed – aldol condensation? Give one example.
18. Why phenols are acidic in nature
19. Give one example of Diazocoupling reaction.
20. Give one example of displacement reaction.
21. Write the structure and uses of Mephensin hydrochloride.
