

Rajiv Gandhi University of Health Sciences, Karnataka

I Year Pharm-D Degree Examination – 09-Nov-2023

Time: Three Hours

Max. Marks: 70

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. Classify the substitutions in electrophilic aromatic substitution reactions. Explain in detail why chlorine acts as ortho and para-director but deactivator.
2. Define Markonikov's rule and Anti-Markonikov's rule. Write their mechanism. Write a note on dehydration of alcohols.
3. Define and write the mechanism of (a) Reimer-Tiemann reaction (b) Fries rearrangement (c) Aldol condensation

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

4. Write the mechanism of nitration and sulphonation of benzene.
5. Briefly explain about the Bayers strain theory with its limitations.
6. Define the dehydrohalogenation. Write the mechanism of E1 and E2 reactions.
7. Define and classify carbocation. Explain the relative stabilities of them.
8. Write a short note on isomerism with suitable examples.
9. Write the IUPAC rules for naming the alkanes with examples.
10. Explain the stereochemistry of SN1 reaction.
11. Discuss acidity of phenols and add a note on effect of substituents on acidity of phenols.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Define protic polar solvent and aprotic polar solvent with examples.
13. Define Claisen condensation with example.
14. Explain hyperconjugation with example.
15. Define Saytzeff's rule. Give one example.
16. Define Lowry Bronsted acid base theory with examples.
17. Write the structure and IUPAC name of a) Tert-Butyl chloride b) Formamide
18. Outline Sandmeyer's reaction.
19. Among cis-2 Butene and trans-2-Butene, which one is more stable and why?
20. Structure and uses of a) Sodium Lauryl Sulphate b) Mephensin
21. How will you convert benzoic acid to methyl benzoate?
