

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B. Pharm Degree Examination – 30-Oct-2024

Time: Three Hours**Max. Marks: 70****PHARMACEUTICAL ORGANIC CHEMISTRY – I (RS-4)****Q.P. CODE: 2628**

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) Write the mechanism and stereochemistry of SN2 and SN1 reactions
b) Explain the kinetics and mechanism of E2 reaction
2. a) Explain electrophilic aromatic substitution reaction. Write the mechanism of sulphonation in benzene
b) Write the mechanism of cycloaddition reaction with example
3. a) How naphthalene is prepared by Haworth's synthesis and give its chemical properties
b) Write any three methods of preparation of cycloalkanes

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

4. Define isomerism. Write the classification of structural isomerism with suitable example
5. Explain dehydration of alcohol with suitable example
6. Discuss Aldol condensation with mechanism
7. Discuss the effect of substituents on basicity of aliphatic and aromatic amines
8. What is diazotization and give its mechanism?
9. Discuss Claisen condensation reaction with mechanism
10. Write conversion of carboxylic acid into acid chloride, ester and amide
11. Write a note on activating and de-activating groups with suitable example

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

12. Define Alkane and Alkenes with example
13. Write the structures of anthracene and acetone
14. What is mesomeric effect?
15. What are nucleophiles and leaving groups?
16. Define Saytzeff's rule
17. Write the IUPAC names of a) Isobutane b) Ethylmethyl ketone
18. What are amines and why they are basic nature?
19. Define Kolbe's reaction?
20. What is E₁ and E₂ reaction?
21. **Why chloroacetic acid is more acidic than acetic acid**
