

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B. Pharm Degree Examination – 09-Nov-2023

**Time: Three Hours****Max. Marks: 70 Marks****PHARMACEUTICAL ORGANIC CHEMISTRY – I (RS4)****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. Explain E1 and E2 reactions with respect to the mechanism, stereochemistry and kinetics
2. Explain the mechanism involved in a) Perkins condensation b) Claisen condensation  
c) Sandmeyer's reaction
3. Give the mechanism of Markovnikov's rule and Anti-Markovnikov's addition

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

4. Define with example a) Electrophiles b) Nucleophiles
5. Discuss dehydrohalogenation with a suitable example
6. Explain Diel's alder reaction with example
7. What are cycloalkanes? Write any three methods of preparation
8. Why conjugated dienes are more stable than non-conjugated dienes explain
9. Explain crossed Cannizzaro condensation with the mechanism
10. Write the Haworth synthesis of Naphthalene
11. Outline the Mechanism of Aldol condensation

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

12. What is Williamson's synthesis? Give an example
13. Write the structure and IUPAC name of a) Acetaldehyde b) Acetone
14. Define and classify Hydrogen bonding
15. What is a polar protic solvent?
16. **Define Hatu Coupling**
17. Define diazotization reaction with example
18. What is Hoffmann's reaction? Give one example
19. Write the structures of a) 2, 2-Dimethyl propane b) 3-Chloro pentanone
20. Define the inductive effect with example
21. Write the stability of free radicals

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