

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B.Pharm Degree Examination – 05-Jun-2024

**Time: Three Hours****Max. Marks: 70 Marks****PHARMACEUTICAL ORGANIC CHEMISTRY – I (RS-3)****Q.P. CODE: 2604**

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 1, 2-and 1, 4-addition to conjugated dienes. Write the effect of temperature on 1, 2-and 1, 4-addition.
2. Halogens are deactivators, yet ortho-para directors. Justify with relevant examples with mechanism.
3. Write the mechanism of Aldol condensation and Kolbe's reaction.

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

4. Write a note on Hyper conjugation.
5. What is hydrogen bonding? Discuss its applications.
6. What is Diels Alder reaction? Write its mechanism.
7. Write a note on acidity of carboxylic acids with effect of substituent's on the acidity.
8. How the diazo group is replaced? Write the mechanism of Sandmeyer's reaction.
9. What happens when methane is allowed to react with chlorine in presence of light? Give its mechanism.
10. Discuss the stability of conjugated dienes.
11. Write the mechanism of Fries arrangement.

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

12. What is Tautomerism?
13. What are carbenes? How they are generated?
14. What is Smith reaction?
15. What is carbanion?
16. Write the structure of 2-propanol and ethanal.
17. How benzoic acid is converted to benzoyl chloride? Give reaction.
18. What is Williamson's synthesis? Give examples.
19. Define resonance and resonance energy.
20. What is Beckmann's rearrangement?
21. What is Claisen condensation?

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