

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Pharm Degree Examination – 05-Jun-2023

Time: Three Hours**Max. Marks: 70 Marks**

PHARMACEUTICAL ORGANIC CHEMISTRY – I **(Revised Scheme 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 Bayer's Strain theory of Cycloalkanes along with its merits and demerits. Write a note on theory of strain in rings
2. Explain the mechanism of:
 - a) E2 and E1 reactions
 - b) Chlorination of methane and Markovnikov's reaction
3.
 - a) Discuss the mechanism involved in sulphonation of benzene
 - b) Write the mechanism and products formed with Friedel crafts alkylation reaction

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

4. What is Aldol condensation? Discuss the mechanism involved
5. Comment, toluene on nitration gives mainly ortho and para substituted product
6. What is Hoffmann's elimination? Explain with examples
7. Explain the Lowry Bronsted theory for acids and bases
8. Discuss the synthetic uses of Sandmeyer's reaction with equations
9. Enumerate the factors affecting SN_1 and SN_2 reactions
10. What is hyper conjugation? Explain with any two examples
11. What is meant by (a) Keto-enol tautomerism and (b) Hydrogen bonding

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

12. What are carbocations? How are they generated?
13. Write a note on Diels-Alder reaction
14. What are Electrophiles? Give two examples
15. Define Carbanions with examples
16. Application of Reimer Tiemann reaction
17. Reformatsky's reaction
18. What is diazotization reaction? Give example
19. What is Protic solvent? Give examples
20. Write the classification of free radicals with examples
21. Define the terms 'dienes' and 'carbene'
