

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B. Pharm Degree Examination – 17-Nov-2021

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. a) Explain the factors affecting SN_1 & SN_2 reactions.
b) Enlight the concept of rearrangement reaction of carbocation with suitable examples
2. a) Define activating and deactivating groups with examples.
b) Discuss the mechanism of Nitration and sulphonation of benzene.
3. What happens when propene is treated with hydrogen bromide? Discuss the mechanism involved in the presence and absence of peroxide.

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

4. Discuss the Bayer's strain theory with limitations.
5. Write the kinetics and mechanism of E_1 reaction.
6. What happens when isobutyl alcohol is treated with sulphuric acid? Discuss the mechanism.
7. Discuss allyl radical as resonance hybrid with orbital pictures.
8. Explain the mechanism of Benzoin condensation.
9. Why carboxylic acid are acidic in nature? Write the effect of electron withdrawing groups on acidity.
10. Define and classify poly nuclear hydrocarbons. Outline the Howarth's synthesis of naphthalene.
11. What is Aldol condensation? Discuss the mechanism involved.

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

12. What is Frie's rearrangement? Write an example
13. Define diazocoupling reaction with example.
14. Write the Hoffmann rearrangement with example.
15. Define and classify carbanion with examples
16. State saytzeff's rule.
17. Write the chlorination of methane.
18. Outline the generation of free radicals.
19. Define metamerism with example.
20. Write the structure and IUPAC name of a) Formic acid b) Neopentane
21. Write the structure of a) Acetanilide b) Acetophenone
