

Rajiv Gandhi University of Health Sciences, Karnataka

Second Semester B.Pharm Degree Examination – 25-Oct-2024

Time: Three Hours

Max. Marks: 75 Marks

Pharmaceutical Organic Chemistry-I

Q.P. CODE: 5006

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
All the questions are compulsory

LONG ESSAYS

2 x 10 = 20 Marks

1. Write the kinetics, mechanism and orientation involved in E1 and E2 reactions
OR
Why amines are basic? Discuss the effect of substituents on the basicity of amines
2. Discuss the mechanism of a) Diel – Alder reaction b) Aldol condensation

SHORT ESSAYS

7 x 5 = 35 Marks

3. Discuss Markownikoff's rule with example
OR
Discuss the role of solvent in SN₁ and SN₂ reaction
4. State and explain Perkin condensation
OR
Give the mechanism of 1,2- and 1,4- addition reaction to conjugated dienes
5. Discuss the mechanism and stereochemistry of SN₂ reaction.
6. Explain the effect of substituents on the acidity of carboxylic acids.
7. What are carbocations? Discuss their stability.
8. Give any two qualitative tests with reaction for aliphatic amines.
9. Draw structure and give IUPAC name for a) ethyl alcohol b) Acetone c) Acetic acid
d) Picric acid e) Toluene

SHORT ANSWERS

10 x 2 = 20 Marks

10. What is free radical? Give their order of stability.
11. Define nucleophile. Give examples.
12. Write the structure and uses of amphetamine.
13. Draw the structure of vanillin and chloral hydrate.
14. Write the structure and uses of chlorobutanol.
15. What is inductive effect?
16. Write any two qualitative tests for esters.
17. **Define Ozonolysis with examples**
18. Draw the structures of lactic acid and citric acid.
19. Write the structure of a) 3-nitro-2-bromopropanoic acid b) 4-hydroxybutyne.
