



# Rajiv Gandhi University of Health Sciences, Karnataka

I Year Pharm-D Examination – NOV 2017

Time: Three Hours

Max. Marks: 70 Marks

## PHARMACEUTICAL ORGANIC CHEMISTRY

### Q.P. CODE: 2854

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. What are dienes? Classify them and explain electrophilic addition to conjugated dienes.
2. Explain the effects of -OH group and -NO<sub>2</sub> group on electrophilic aromatic substitution reaction with examples.
3. Discuss the mechanism and stereochemistry of nucleophilic substitution reactions.

#### SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. Explain the mechanism involved in Cannizzaro reaction.
5. Write a note on dehydration of alcohols.
6. Explain the theory of resonance.
7. Give the preparation assay and uses of aspirin.
8. Discuss the acidity of carboxylic acids.
9. How are cycloalkanes prepared?
10. What is the mechanism involved in the addition of HBr to alkenes in the absence of peroxides.
11. Give the reaction and mechanism of Benzoin condensation.

#### SHORT ANSWERS

10 x 2 = 20 Marks

12. What is Hydrogen bonding?
13. State the Saytzeff rule.
14. How will you convert acid to acid chloride?
15. Write the structure and uses of Vanillin.
16. Define heat of hydrogenation.
17. Illustrate the resonance structures of Benzyl cation.
18. Give the structures and uses of dimercaprol and methyl salicylate.
19. Write the structure of cyclohexene and ethanoic acid.
20. Define hyperconjugation. Give examples.
21. Give the Claisen condensation.

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