Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 08-Nov-2024

Time: Three Hours **Max. Marks: 75 Marks**

PHARMACEUTICAL ORGANIC CHEMISTRY - II
Q.P. CODE: 5009

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. Give the general mechanism of electrophilic aromatic substitution reaction with suitable example. Discuss the orientation effect of Hydroxyl and Nitro groups in benzene.

   OR

   a) What are phenols? Explain acidity of phenols.
   b) What are aromatic amines? Explain basicity of aromatic amines.

2. What are fatty acids? Explain significance and reactions of hydrolysis, hydrogenation, rancidity and drying of oils.

SHORT ESSAYS **7 x 5 = 35 Marks**

3. Define Friedel-Craft's alkylation. Explain the reaction and mechanism.

   OR

   Explain resonance phenomena and Huckel's rule of aromaticity.

4. Give any two methods of preparation and chemical reactions of aromatic acids.

   OR

   Give any two methods of synthesis of phenols. Discuss the qualitative tests of phenols.

5. Describe any one method to determine acid value with its significance.
6. Write the synthesis of Anthracene and Phenanthrene.
7. Write the structure and medicinal uses of naphthalene, Anthracene, diphenylmethane and phenanthrene.
8. Explain ring opening reactions of cyclopropane.
9. Describe Bayer's strain theory of cycloalkanes and its limitations?

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

10. Write the structure and uses of DDT and chloramines.
11. Define Electrophiles. Give two examples.
12. Define Saponification value. Give is significance.
13. Define Iodine value. Give its significance.
14. Give the sources of fats and oils.
15. Define and classify poly nuclear hydrocarbons.
16. Give the nitration reaction of Anthracene.
17. Give the halogenation reaction of naphthalene.
18. **Write the structures of Resorcinol & Saccharin**
19. How do you synthesize cycloalkanes from aromatic compounds?

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