Rajiv Gandhi University of Health Sciences, Karnataka
I Year Pharma-D Examination – Sep 2012

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. State and explain Friedel Crafts alkylation with its limitations. Write a note on Friedel Crafts acylation.
2. Write the kinetics, orientation and mechanism involved in E1 and E2 reactions.
3. Explain in detail the mechanism of nucleophilic acyl substitution. Write the effect of different functional groups on the reactivity.

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

4. Explain the stability of conjugated dienes.
5. Discuss the role of solvent in Sn1 and SN2 reaction.
6. Write a note on dehydration of alcohols.
7. Give the mechanism of 1, 2-and 1, 4-addition reaction.
8. Define and explain the terms acids and bases based on lowry-Bronsted and Lewis theories.
9. Write short notes on: (a) Intermolecular forces. (b) Effect of hydrogen bonding on boiling point.
10. Explain with mechanism (a) Benzoin condensation (b) Claisen's condensation.
11. Discuss Markovnikov's rule with suitable example.

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

12. Give Saytzeff's rule with example.
13. Write the preparation and medicinal uses of mephensin.
14. Give the assay of methyl salicylate.
15. Give the structures of (a) 2-Iodo 2-Propanol (b) Ethyl ethanoate.
16. Give the structure and medicinal uses of (a) Vanillin (b) Nitroglycerin.
17. What are Diel's Alder reactions? Give an example.
18. Define activating and deactivating groups with examples.
19. Give the orbital picture of allyl radical.
20 Define polarity of bonds.
21. Which is more stable; trans-2-butene or cis-2-butene? Why?

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