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Rajiv Gandhi University of Health Sciences, Karnataka

I Year Pharm-D Examination – NOV 2016

Time: Three Hours

Max. Marks: 70 Marks

2 x 10 = 20 Marks

 $6 \times 5 = 30$ 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)

- a) What are alkenes? Give the rules for their nomenclature with examples. 1. b) Explain the addition of carbenes to alkenes.
- 2. What is meant by orientation and reactivity on aromatic rings? Discuss the orientation effect in nitrobenzene and chlorobenzene.
- 3. Explain SN₂ reactions with reference to a) Mechanism b) Stereo chemistry c) Structure of substrate d) Role of solvents.

SHORT ESSAYS (Answer any Six)

- Define dehydrohalogenation. Write the reactivity and orientation in E_1 reaction. 4.
- 5. Explain the mechanism involved in a) Cannizzaro's reaction b) Friedel-Craft's acylations
- 6. Give the synthesis, assay and uses of Sachharin Sodium.
- 7. Explain the basicity of Amines.
- 8. Write a note on phase transfer catalysis.
- 9. Giving mechanisms explain the Markonikov's rule and Anti-Markonikov's rule.
- Define acidity. Explain the effect of substituents on the acidity of the carboxylic acids. 10.
- Give the synthesis and uses of Aspirin. How it is tested for the presence of free Salicyllc acid? 11.

SHORT ANSWERS

- Define dipole moment. Why dipole moment of CCl₄ is zero? 12.
- 13. What is Knoevengle's reaction? Give one example.
- 14. Define protic and aprotic polar solvent with examples.
- 15. Write the structure of (a) Methyl 4-oxopentanoate (b) 5-Amino-3-hexanol.
- 16. What is optical isomerism? Give one example.
- 17. Why boiling point of the o-Aminophenol is lesser than the P-Aminophenol?
- 18. What is hyperconjugation? Give example.
- 19. Give the structure and uses of a) Citric acid b) Tartaric acid
- 20. What is 1, 2-hydride shift? Give example.
- 21. Define free radicals. Give examples.

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