

QP CODE: 104326

Reg. No:.....

First Pharm D Degree Examinations - September 2012

Pharmaceutical Organic Chemistry

Time: 3 Hours

Total Marks: 70

- Answer all questions
- Write equations, draw diagrams wherever necessary

Essays:

(2x10=20)

1. Compare and contrast SN1 versus SN2 with respect to mechanism, kinetics, stereochemistry and reaction conditions.
2. Explain the effect of substituents on reactivity in electrophilic aromatic substitution.

Short Notes:

(10x3=30)

3. Explain the addition reaction of conjugated dienes.
4. Explain Fries rearrangement.
5. Explain the coupling reactions of diazonium salt.
6. Explain the mechanism of sulfonation in the electrophilic aromatic substitution.
7. Describe the preparation, assay and uses of vanillin.
8. Discuss about bond dissociation energy.
9. Friedel Craft's alkylation and its limitations.
10. Discuss Lowry Bronsted theory of acids and bases.
11. Explain molecular orbital theory of benzene.
12. Mechanism of Claisen condensation.

Answer Briefly:

(10X2=20)

13. Mention the structure and name them according to IUPAC
 - Formic acid • Acetaldehyde
14. Explain the mechanism of halogenation of alkanes.
15. Comment on structural effects on the acidity of carboxylic acids.
16. Preparation and medicinal use of salicylic acid.
17. Formulate the reactions of benzaldehyde with
 - Potassium cyanide
 - Lithium aluminium hydride
18. What are protic and aprotic solvents. Give examples.
19. Explain esterification reaction.
20. Preparation and uses of lactic acid.
21. Mention the reaction of conversion of acid to amide and anhydride.
22. Site an example of an aromatic ketone and mention its IUPAC name.
