Q.P. CODE: 1206 **Reg. No: .....**

FIRST YEAR B. PHARM DEGREE EXAMINATION, AUGUST 2011

PHARMACEUTICAL CHEMISTRY -II

(Organic Chemistry)

Time: 3 Hrs **Max. Marks: 100**

- **Answer all questions**
- **Write equations wherever necessary**

Essay **(2x10 = 20)**

1. Write a note on resonance, hyperconjugation, mesomeric effect and inductive effect with examples.
2. Explain the mechanism and synthetic application of Cannizaro's reaction and Hofmann's degradation.

Write short notes on: **(10 x 5 = 50)**

3. What is Kharasch effect. How does it give rise to anti-Markovnikov 's product.
4. Discuss three methods of preparation of alcohols and how do you distinguish between 1-propanol and 2-propanol.
5. Explain Walden's inversion with example.
6. What is Williamson's synthesis. Explain the action of hydro-iodic acid on ethers.
7. Classify amines with two examples for each and explain how they are separated in a mixture.
8. Explain the effect of substituents in electrophilic aromatic substitution.
9. Write two methods of synthesis and three chemical reactions of carboxylic acids.
10. Explain Kolbe-Schmidt reaction.
11. Write two examples of dehydrohalogenation and mention the mechanism of E_2 elimination reaction.
12. Write two methods of synthesis of nitriles and explain their reactivity.

Answer briefly : **(10 x 3 = 30)**

13. Why aldehydes are more reactive than ketones in nucleophilic addition reaction.
14. Draw the picture of alkyl cation and explain its stabilization.
15. Explain Baeyer's strain theory.
16. Arrange the following in the increasing order of acidic strength:HCOOH, CH_3COOH, CH_3CH_2COOH, ChCOOH.
17. Explain keto-enol tautomerism in alkynes.
18. Explain Oppenauer oxidation.
19. What type of hybridisation is found in alkanes, alkenes and alkynes. Explain with one example for each.
20. Explain why chair form of cyclohexane is more stable than boat form.
21. Give the mechanism of hydrolysis of esters.
22. Explain why vinyl chloride is less reactive than ethyl chloride and allyl chloride is more reactive than vinyl chloride.

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