

First B.Sc Optometry Degree Supplementary Examinations - March 2013

CHEMISTRY

Time: 3 hrs

Max marks : 80

- Answer all questions
- Draw diagram wherever necessary

Essay:**(2x15=30)**

1. Describe the term chemotherapy and chemotherapeutic agents. What do you understand by term sulpha drugs and mention the method of synthesis and its uses.
2. Discuss in detail the optical isomerism of tartaric acid and differentiate between optical and geometrical isomerism.

Short notes**(5x5=25)**

3. Discuss E1 and E2 mechanism of elimination reactions.
4. Discuss briefly liquid solid adsorption chromatography .
5. What are hormones. Explain their biological importance taking suitable examples .
6. What are carbohydrates and how they are classified .
7. Predict the product of the reactions:
 - $\text{CH}_2=\text{CHCl} + \text{HCl}$.
 - $\text{CH}_3\text{C}=\text{C}(\text{CH}_3)_2 + \text{H}_2\text{O}/\text{H}^+$.
 - Benzene+Secondary butyl chloride
 - $\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl} + \text{Alc.KOH}$.
 - propylene+HBr .

Answer briefly**(10x2=20)**

8. Discuss the methods that can be used to differentiate between geometrical isomers taking the example of maleic and fumaric acid.
9. Give the structures of ascorbic acid and cyanocobalamin
10. The mechanism of Friedel-Crafts reaction.
11. Discuss the stereochemistry of SN1 reactions.
12. What are emulsions and how they are classified.
13. Mention any two reactions of glucose.
14. Draw the resonance structure of nitrobenzene.
15. How will you get cellulose from its sources.
16. Outline the important uses of benzene.
17. Tyndall effect.

Fill in the blanks**(5x1=5)**

18. Rayon is regenerated form of _____
19. Hybridization of carbon in benzene is _____
20. The nitrating mixture helps the generation of the electrophile _____ in the nitration of benzene.
21. The conversion of enantiomer into the racemic mixture is called _____
22. _____ is a colloid in which the dispersion medium is a liquid and dispersed phase is a solid.
