

First Year B.Sc Optometry Degree supplementary Examinations –
May 2016

(2010 Scheme)**CHEMISTRY****Time : 3 hrs****Max marks : 80**

- **Answer all questions**
- **Draw diagram wherever necessary**

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

1. What is meant by hybridization. Discuss the shapes of methane, ethane, ethene and ethyne in terms of hybridization.
2. Mention the structures and names of products obtained when D-glucose and D-fructose with •acetic anhydride •bromine water •conc.HNO₃ •NH₂OH and •ammoniacal silver nitrate solution.

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

3. Explain the resonance effect.
4. Explain the optical nature of tartaric acid
5. Molecular orbital structure of benzene
6. How will you convert D-glucose into D-mannose
7. Classifications of hormones.

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

8. What are electrophiles and mention two examples.
9. Explain electrometric effect.
10. Which of the following are optically active . Why •2-chloropropane
•2-chlorobutane •3-chloropentane
11. What is meant by enantiomer
12. How will you convert benzene to acetophenone. Name the reaction.
13. What are the uses of benzene.
14. Classify the following into monosaccharide, disaccharide and polysaccharide
(fructose, arabinose , maltose, cellulose)
15. What is meant by R_f value and mention its use in chromatography.
16. Name the vitamin whose deficiency causes
•Xerophthalmia •Beri beri •scurvy •pernicious anemia

17. Define and classify buffer solution.

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

18. The co-enzyme form of thiamine is _____
19. The homolytic fission of C-C bond leads to the formation of _____
20. The reagents used for nitration for benzene is _____
21. The separation of the constituents of a mixture by column chromatography depends upon their _____
22. In thin layer chromatography, mobile phase is _____
