

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
 - 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 Rf 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 _____
