

**First Year B.Sc Optometry Degree Supplementary Examinations
December 2017**

CHEMISTRY

(2010 Scheme)

Time: 3 hrs

Max marks : 80

- Answer all questions
- Draw diagram wherever necessary

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

1. What you meant by the term vitamin B complex. Give the structure and biological activities of any three water soluble vitamins.
2. What are electrophilic substitution reactions. Give two examples. Discuss the stereochemistry of SN^1 reactions.

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

3. How are colloidal solutions purified.
4. How can you convert glucose to fructose and fructose to glucose.
5. Differentiate between enantiomers and diastereomers.
6. Distinguish between lyophilic colloids and lyophobic colloids.
7. Differentiate between optical isomerism and geometric isomerism.

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

8. How does meso tartaric acid differ from racemic tartaric acid.
9. Define R_f value. How is it useful in the characterization of a compound.
10. What are carbanions and mention two examples.
11. What you meant by racemization.
12. Give an example for SN^2 reactions.
13. Briefly explain an optical property of colloids.
14. The importance of starch and cellulose.
15. Explain electromeric effect.
16. What are oligo saccharides. Give examples.
17. What is peroxide effect.

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

18. On hydrolysis sucrose givesand
19. The number of optically active carbon atoms present in lactic acid is... ..
20. The precipitation of colloidal particles is known as
21. Night blindness is caused due to the deficiency of
22. The geometry of sp hybrid orbitals is
