

Q.P.Code 104013

Reg. No.:.....

First Year B.Sc Optometry Degree Supplementary Examinations - April 2014

CHEMISTRY

Time : 3 hrs

Max marks : 80

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

Essay: (2x15=30)

1. What are buffer solutions. Derive the Henderson's equation for acidic and basic buffer systems.
2. What are electrophilic substitution reactions. Explain the mechanism with examples.

Short notes (5x5=25)

3. Differentiate between optical isomerism and geometrical isomerism.
4. Explain what peroxide effect is.
5. What is epimerization. How will you convert glucose to its epimer.
6. Explain the role of vitamin A in night vision.
7. How does -I effect of chlorine effect the acid strength of halogenated propionic acids.

Answer briefly (10x2=20)

8. What are anomers and mention an example.
9. Name two steroid hormones and mention its biological role.
10. How does mesotartaric acid differ from racemic tartaric acid.
11. Structure of vitamin C
12. What is meant by Walden inversion.
13. What is meant by resonance.
14. Explain the function of an emulsifier.
15. What is meant by the term sulpha drug.
16. What is principle of TLC.
17. What are carbohydrates and how are they classified.

Fill in the blanks (5x1=5)

18. Deficiency of vitamin B₁₂ causes the disease.....
19. Tyndall effect is a/anproperty.
- 20.....is a natural polymer.
21. An equimolar mixture of the two enantiomers of a substance is.....
- 22.....is a bivalent carbon intermediate which contains two non bonded electrons.
