

First Year B.Sc Optometry Degree Supplementary Examinations May 2023
General Physiology & Ocular Physiology
(2014 Scheme)

Time: 3 hrs**Max marks: 80**

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary
- Write section A and section B in separate answer books (32 Pages). Do not mix up questions from section A and section B.

Q P Code: 113013**Section A – General Physiology****Marks: 40****Essay:****(10)**

1. Define Landsteiner's law. Explain the physiological basis, inheritance and significance of ABO system of blood grouping. (2+2+3+3) (3x5=15)

Short notes:

2. Transmission of impulses across a chemical synapse.
 3. Define cardiac output. Give the normal values. Explain the factors influencing cardiac output. (1+1+3)
 4. Describe the metabolic actions of cortisol. (5x2=10)

Answer briefly:

5. Functions of saliva.
 6. Define and classify hypoxia.
 7. Draw and label a neuron.
 8. Clinical features of acromegaly.
 9. List the functions of cerebellum.

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

10. Normal serum calcium level ----- mg per hundred ml.
 11. Hyaline membrane disease is due to the deficiency of -----
 12. Goiter is due to the deficiency of -----.
 13. Most common type of anemia in India is -----
 14. When heart rate is 100 per minute, cardiac cycle time will be -----seconds.

Q P Code: 114013**Section B – Ocular Physiology****Marks: 40****Essay:****(10)**

1. Describe the photochemical changes taking place in the visual receptors during stimulation. Explain the role of vitamin A in vision. (5+5) (3x5=15)

Short notes:

2. Explain the pathway for pupillary light reflex.
 3. Aqueous humour production.
 4. Structure of retina.

Answer briefly:**(5x2=10)**

5. Hypermetropia
 6. Tests for colour blindness.
 7. Explain blind spot.
 8. Protective mechanism in the eye.
 9. Explain cataract. Mention the causes for cataract.

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

10. Myopia is corrected using -----lens.
 11. Weakness to perceive red colour is known as -----
 12. Dilatation of pupil is known as-----
 13. Convergence of two eye balls is caused due to the contraction of -----muscle
 14. The ratio number of rods to cones is -----
