

**First Year B. Sc Optometry Degree Regular/Supplementary Examinations**  
**January 2023**  
**Paper II – Physiology**  
**(2016 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. Do not mix up questions from section A and section B.

**Q P Code: 123013****Section A – General Physiology****Marks: 40****(10)****Essay:**

1. Define Systolic and Diastolic blood pressures. Write their normal values. Explain the short term and long term regulation of blood pressure.

**Short notes:****(3x5=15)**

2. Describe the factors affecting erythropoiesis
3. Define Glomerular Filtration Rate. Enumerate the factors affecting Glomerular filtration rate.
4. List five differences between upper motor neuron lesion and lower motor neuron lesion.

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

5. Functions of bile
6. Intrapleural pressure changes during normal respiration
7. Functions of middle ear
8. Actions of Antidiuretic hormone
9. Mechanism of referred pain

**One-word answer:****(5x1=5)**

10. Normal platelet count is .....
11. The only hypoglycaemic hormone in body is .....
12. The heart sound produced due to closing of mitral and tricuspid valve is .....
13. The carbohydrate digesting enzyme present in saliva is .....
14. The bluish discolouration seen in skin and mucous membranes due to presence of reduced haemoglobin  $> 5$  gm% is .....

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**Q P Code: 124013****Section B – Ocular Physiology****Marks: 40****(10)****Essay:**

1. With the help of a diagram, explain the visual pathway and the effect of lesions at various levels

**Short notes:****(3x5=15)**

2. Describe the photochemistry of vision
3. Explain the Young Helmholtz theory of colour vision
4. Describe any two errors of refraction

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

5. Dark adaptation
6. Glaucoma
7. Nystagmus
8. Protective mechanisms in the eye
9. Structural characteristics of fovea centralis

**One-word answer:****(5x1=5)**

10. The photopigment present in rods is .....
11. The primary visual cortex lies in the .....lobe of cerebral cortex
12. The chart used to test colour vision is.....
13. The intraocular pressure is measured by .....
14. The total dioptric power of normal human eye is.....

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