

**First Year B.Sc Optometry Degree Regular/Supplementary Examinations  
December 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**

**Essay:**

**(10)**

1. Define Erythropoiesis. Describe the stages of erythropoiesis. Explain the factors affecting erythropoiesis

**Short notes:**

**(3x5=15)**

2. Describe the hormonal regulation of blood calcium
3. Describe the structure of respiratory membrane and the factors affecting diffusion across it.
4. Explain the conducting system of heart

**Answer briefly:**

**(5x2=10)**

5. Defaecation reflex
6. Cystometrogram
7. Functions of thalamus
8. Stretch reflex
9. Taste pathway

**One-word answer:**

**(5x1=5)**

10. The hormone responsible for milk ejection is.....
11. The ascending tract carrying pain sensation from body is .....
12. The most potent stimuli for stimulation of peripheral chemoreceptors is.....
13. The cell responsible for HCl secretion in stomach is.....
14. The pacemaker of human heart is .....

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**Q P Code: 124013**

**Section B – Ocular Physiology**

**Marks: 40**

**Essay:**

**(10)**

1. Name the photoreceptors in human eye. Enumerate the photo pigments present in each of them. Describe the mechanism of photo transduction

**Short notes:**

**(3x5=15)**

2. Describe the mechanism of accommodation
3. Describe dark adaptation and its mechanisms
4. Explain intraocular pressure- its normal value, functions and measurement

**Answer briefly:**

**(5x2=10)**

5. Hypermetropia
6. Any two diagnostic tests for colour vision
7. Corneal metabolism
8. Smooth pursuit movements of eye
9. Cataract

**One-word answer:**

**(5x1=5)**

10. The primary visual cortex is Brodmann's area.....
11. Night blindness is due to deficiency of.....
12. The chart used for testing near vision is.....
13. The normal visual acuity for each eye is.....
14. When light falls on noncorresponding points in retina it results in.....

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