

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Optometry Degree Examination - 03-Jun-2024

Time: Three Hours

Max. Marks: 100

OCULAR ANATOMY, OCULAR PHYSIOLOGY AND OCULAR BIOCHEMISTRY (RS-4)

Q.P. CODE: 3343

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice)

2 x 10 = 20 Marks

1. Write a note on the biochemical compositions of lens and their role in lens metabolism. What are the physical and physiological changes observed with aging in crystalline lens?
2. Write in detail about the visual pathway and its lesions with a neatly labelled diagram

OR

Explain the orbital walls. Write briefly about the origin, innervation and actions of extraocular muscles

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. What is Episclera? Summarize the components of the sclera with its foramen
4. Write about the biochemical compositions of aqueous humour. How does the composition vary in anterior and posterior chambers?
5. Explain the histological layers of the eyelid

OR

Write about the lesions in the visual pathway and the defects seen in the visual field

6. A short essay on the mechanism of accommodation
7. What is the lacrimal pump mechanism? Explain in detail
8. Describe the anterior angle structure with a drainage system
9. Brief description of layers of cornea and its functions
10. Explain the visual cycle with a schematic diagram

OR

Write a note on factors affecting corneal hydration

11. Explain in detail the retinal physiology
12. What are the biochemical components of vitreous and its functions?

SHORT ANSWER (Question No 15 & 20 choice)

10 x 3 = 30 Marks

13. Name the branches of the trigeminal nerve and its supply to the ocular structures
14. Name the various types of refractive errors seen in clinical practice
15. Write a note on the nutritional supply of the retina

OR

What are the vitreous zones present in the eye?

16. Differentiate the major circle of iris and the minor circle of the iris
17. What is intra-ocular pressure? How do you measure it?
18. Define the following terminologies: a) Protanopia b) Myopia
19. What are the germinal layers from which the ocular structures are developed? Explain
20. List down the antioxidants present in the retina preventing retinal pathologies

OR

Define scotopic and photopic vision. What structures are responsible for the same?

21. What are the protective mechanisms of the eye?
22. Draw a neat labelled diagram of visual cycle
