

Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.Sc. Optometry Degree Examination - 08-May-2026

Time: Three Hours

Max. Marks: 100 Marks

OCULAR ANATOMY, OCULAR PHYSIOLOGY AND OCULAR BIOCHEMISTRY
(Revised Scheme-4)

Q.P. CODE: 3343

(QP contains two pages)

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 in detail about visual pathway and its lesions with a neatly labeled diagram.
2. Explain in detail about primary functions and other physiological functions of cornea under maintenance of corneal transparency, drug permeability and corneal wound healing.

Or

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

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. What is blood aqueous barrier? Explain aqueous production in detail.
4. Differentiate pars plana and pars plicata? Explain about ciliary muscles.
5. Write short note on layers of eyelid.

Or

Write briefly about the layers of retina.

6. What is episclera? Summarize the components of sclera with its foramen.
7. Write briefly about their actions of extraocular muscles? What are the laws governing extraocular motility?
8. Describe about aqueous circulation in another segment. Write short note on aqueous drainage.
9. Write a note on neuro-retinal function of involving retinal synapse and phototransduction.
10. What are the physical and physiological changes observed with aging in crystalline lens? Name the two clinical conditions observed with aging in lens.

Or

Draw a neat diagram and explain the lacrimal drainage system.

11. Discuss the biochemical composition of corneal epithelium and its functions.
12. Role of vitamin A in the synthesis of Rhodopsin and retinal function.

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SHORT ANSWER (Question No 15 & 20 choice)

10 x 3 = 30 Marks

13. What are the layers of tear film? Write its clinical significance.
14. Differentiate major circle of iris and minor circle of iris.
15. Expand IOP and write its clinical significance.

Or

List the layers of conjunctiva.

16. Name the branches of trigeminal nerve and its supply to the ocular structure.
17. What are functions of vitreous? Role of Hyaluronic acid in Vitreous.
18. Near reflex pathway and near triad.
19. Mention the various types of refractive errors seen in clinical practice.
20. What is the first lens like structure observed during embryo stage? What are the various lens fibers seen in an adult lens?

Or

What is blinking? What are the muscles involved in the process of blinking.

21. What is the impact of free radicals on retina? Write about the role of antioxidants.
22. Mention the nutritional and innervational supply of retina.
