

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B.Sc. Optometry Degree Examination - 27-Nov-2023

**Time: Three Hours**

**Max. Marks: 100 Marks**

### **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 in detail about the ten microscopic layers of retina. Explain the gross anatomy of retina observed through ophthalmoscope.
2. What is accommodation? What are the changes observed during the act of accommodation within the eye? Write a note on factors responsible for maintaining the lens transparency.

**Or**

Explain briefly about Vitreous zones. Enlist the vitreal attachments in an order from strongest to weakest.

#### **SHORT ESSAYS (Question No 5 & 10 choice)**

**10 x 5 = 50 Marks**

3. Write short note on development of optic cup and lens vesicle.
4. Explain in detail about histological layers of conjunctiva.
5. Write short note on the layers of cornea.

**Or**

Explain the fissures and foramen present in the orbital walls. Write about their significance.

6. Differentiate versions and vergence. Write a note on laws governing extraocular motility.
7. What are the histological layers of Iris?
8. Write short note on light reflex pathway.
9. Explain the physiology of eyelid opening and closure.
10. Explain the glucose metabolism in the cornea.

**Or**

Explain conventional and unconventional aqueous outflow.

11. What are the functions of tear film? Enumerate the chemical composition of tear film.
12. What are the biochemical compositions of lens and its functions?

#### **SHORT ANSWER (Question No 15 & 20 choice)**

**10 x 3 = 30 Marks**

13. Brief on the structures lining the anterior chamber.
14. What are the layers of Choroid? Write short note.
15. What are the soft tissues of orbit?

**Or**

Write a note on muscle of ciliary body.

16. Which cranial nerve innervates the four of six extraocular muscles? Which other parts of eye does it supply?
17. What is intra ocular pressure? How do you measure it?
18. What are limbal stem cells? How do they help in cornea wound healing?
19. What is stereopsis? Give two examples of situations in day-to-day life where stereopsis is utilized.
20. Write the location and function of Blood Retinal Barrier.

**Or**

Mention various types of collagen fibers present in the ocular structures.

21. What is Wald's visual cycle?
22. List the biochemical composition of Vitreous.

\*\*\*\*\*