

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**I Year B.Sc. Optometry Degree Examination - 19-May-2025**

**Time: Three Hours**

**Max. Marks: 100**

**BASIC BIOCHEMISTRY AND NUTRITION (RS-4)**

**Q.P. CODE: 3340**

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 an account of Wald's visual cycle
  2. Give an account of  $\beta$ -oxidation of fatty acids
- OR**
- Write an essay on the iron metabolism in the body

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

**10 x 5 = 50 Marks**

3. Describe the structure of phospholipids
  4. Give an account of Biotin
  5. Describe the components of electron transport chain
- OR**
- Explain the importance of dietary fibers in nutrition
6. Classify carbohydrates
  7. Explain the structure and functions of muscle proteins
  8. Describe the mechanism of enzyme action
  9. Describe the steps of aerobic glycolysis
  10. Define peptides. Mention the biologically important peptides
- OR**
- Explain the structure and functions of mRNA
11. Write a note on sources, RDA, biochemical functions of phosphate
  12. Explain the digestion and absorption of carbohydrates

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

**10 x 3 = 30 Marks**

13. Mention any three differences between RNA and DNA
  14. Endoplasmic reticulum
  15. Ninhydrin test for protein
- OR**
- Reducing disaccharides
16. Write short note on polysaccharides
  17. Mention the normal ranges of total proteins, albumin and globulin
  18. Write any four clinical important enzymes
  19. Ketone bodies
  20. Essential aminoacids
- OR**
- Low birth weight
21. Respiratory quotient of foodstuffs
  22. Biochemical functions of selenium

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