

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**III Year B.Sc. (MLT) Degree Examination - 22-Nov-2024**

**Time: Three Hours**

**Max. Marks: 80 Marks**

**BIOCHEMISTRY – PAPER III (RS-3)**  
**Q.P. CODE: 3159**

Your answers should be specific to the questions asked  
Draw neat, labeled diagrams wherever necessary

**LONG ESSAY (Any Two)**

**2 x 10 = 20 Marks**

1. Name any two sources for vitamin D. Describe its biochemical functions, absorption and deficiency manifestations.
2. What is the biological reference range for Iron? Explain the mechanism of its absorption and the disorders associated with its metabolism.
3. Explain in detail in the nutritional importance of carbohydrates, proteins and lipids.

**SHORT ESSAY (Any Six)**

**6 x 5 = 30 Marks**

4. Define Recommended Dietary Allowances (RDA) and write the factors affecting it.
5. Protein Energy malnutrition.
6. Explain the formation of Bilirubin and add a note on Jaundice.
7. Wald's Visual cycle.
8. Functions of Vitamin E and Vitamin K.
9. Ion Selective Electrodes (ISE).
10. Agarose Gel and Electrophoresis for separation of plasma protein.
11. Explain the HMP shunt.

**SHORT ANSWERS (Any Ten)**

**10 x 3 = 30 Marks**

12. Composition of pancreatic juice.
13. Metabolic alkalosis.
14. Define accuracy, precision and Mean.
15. Ketogenesis.
16. Functions of cholesterol.
17. Acute phase proteins.
18. Translation.
19. Functions of Thyroid hormones.
20. Define BMR.
21. Define mutation and its types.
22. Define isoenzymes with one example.
23. External Quality Control (EQC).

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