

**Rajiv Gandhi University of Health Sciences, Karnataka  
Second Semester B.Pharm Degree Examination – 08-Dec-2020**

**Time: Three Hours**

**Max. Marks: 75 Marks**

**Biochemistry  
Q.P. CODE: 5007**

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

**LONG ESSAYS (Answer any Two)**

**2 x 10 = 20 Marks**

1. Define and explain the reaction sequences of glycolysis and its energetic.
2. Explain the de novo biosynthesis of fatty acids along with enzyme system involved.
3. Mention the types of RNA. Explain their role in protein synthesis.

**SHORT ESSAYS (Answer any Seven)**

**7 x 5 = 35 Marks**

4. Explain the competitive enzyme inhibition with example.
5. Define carbohydrates. Classify them with examples and their biological significance.
6. Explain the rotary motor model for ATP generation.
7. Describe the hormonal regulation of blood glucose level.
8. Give the structure and biological significance of ATP and cyclic AMP.
9. Define free energy Enthalpy and Entropy. Explain the relation between them.
10. Explain the disorders of lipid metabolism.
11. Explain HMP shunt pathways and its significance.
12. Describe the double helical structure of DNA.

**SHORT ANSWERS (Answer All)**

**10 x 2 = 20 Marks**

13. What is gout?
14. Name the glucogenic amino acids.
15. Define energy rich compounds with examples.
16. What are cofactors? Give examples.
17. Write the uncouplers of ETC.
18. What is  $\beta$ -oxidation of fatty acids?
19. Write the types of diabetes mellitus.
20. What is phenylketonuria?
21. Define and classify Jaundice.
22. Write the differences between DNA and RNA.

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