

# Rajiv Gandhi University of Health Sciences, Karnataka

## Second Semester B.Pharm Degree Examination – 18/Oct/2025

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

All the questions are compulsory

#### LONG ESSAYS

2 x 10 = 20 Marks

1. Explain the term deamination. Explain urea cycle and give the deficiency symptoms of urea cycle enzymes.  
**OR**  
Describe the biosynthesis of pyrimidine nucleotides.
2. What is glycolysis? Elucidate the steps of glycolysis and add a note on its bioenergetics.

#### SHORT ESSAYS

7 x 5 = 35 Marks

3. Explain the degradation of heme.  
**OR**  
Define coenzymes. List the different types of coenzymes associated with Vitamins B-complex.
4. Describe the hormonal regulation of blood glucose level.  
**OR**  
Mention the steps involved in the conversion of cholesterol to bile acids.
5. Explain the semiconservative mode of replication of DNA.
6. Write the formation of ketone bodies.
7. Discuss the biological significance of ATP and cAMP.
8. Explain the components and reactions of electron transport chain.
9. Explain the rotary motor model of oxidative phosphorylation.

#### SHORT ANSWERS

10 x 2 = 20 Marks

10. Define diabetes mellitus and list its chronic complications.
11. Define isoenzyme and give one example.
12. What are okazaki fragments? When are they formed?
13. Name different types of jaundice.
14. List out the inhibitors of ETC.
15. What is enzyme repression?
16. Define nucleosides and nucleotides.
17. What is fatty liver?
18. What is phenylketonuria? Mention its causes.
19. Name the chain terminating codons.

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