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Rajiv Gandhi University of Health Sciences, Karnataka

Second year B.Pharm Degree Examination – August 2010

Time: Three Hours **Max. Marks: 70 Marks**

APPLIED BIOCHEMISTRY
(Revised Scheme 3)

Q.P. CODE: 2609

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. List out the factors affecting enzyme activity and derive an equation to show that the enzyme activity is proportional to the substrate concentration
2. What is glycolysis? Describe the reactions involved and add a note on its bioenergetics
3. Describe the reactions involved in the de novo biosynthesis of fatty acids

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Describe the role of thiamine as a coenzyme
5. Describe the reciprocal regulation of glycogenesis and glycogenolysis
6. What is the ketogenesis? Describe it and add a note on its importance
7. Describe the structure and functions of tRNA
8. Describe the reactions of urea cycle
9. What is oxidative deamination? Describe the reaction and its significance
10. Describe the breakdown of purines and its clinical implications
11. Describe one test each to assess metabolic and detoxification capacity of liver

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Name two bile acids and write the structure of any one
13. What is prosthetic group of an enzyme? Give an example
14. Define iso-enzyme and give one example
15. What are essential fatty acids? Give an example
16. Write the chemical structure of phosphatidic acid and mention one role
17. What is mRNA? What is its function in the body?
18. What do you mean by Okazaki fragments? When are they formed?
19. Define uncouplers of ETC and give one example
20. List out the requirements of phenylalanine hydroxylase reaction
21. Role of cytochromes in electron transport chain

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