

Second Year B.Pharm Degree Supplementary Examinations - August 2014

**APPLIED BIOCHEMISTRY & MOLECULAR BIOLOGY****Time: 3 Hours****Total Marks: 100**

- Answer all Questions.
- Draw diagrams wherever necessary.

**Essay****(3x10=30)**

1. What are lipids. Classify them and mention the steps involved in beta-oxidation of fatty acids. (2+4+4=10)
2. List out the various metabolic pathways of carbohydrate metabolism. Describe the Emden Mayer-Hoff pathway in detail. (5+5=10)
3. What is hemoglobin. Discuss the porphyrin biosynthesis and formation of bile pigments. (2+4+4=10)

**Short notes****(14x5=70)**

4. Explain the competitive enzyme inhibition with example.
5. Enumerate the ketone bodies and explain their biosynthesis in the body.
6. Watson and Crick model of DNA.
7. Mention any five isoenzymes of clinical importance with its significance.
8. Explain transamination of amino acids with a suitable example.
9. Mention the metabolic disorders of urea cycle.
10. Explain the functions of various cell organelles with cell diagram.
11. Various components of electron transport chain.
12. Classification of enzymes.
13. Gene expression
14. What are 'Essential fatty acids', mention with suitable examples.
15. Genetic engineering.
16. Diabetic mellitus.
17. What are nucleosides and nucleotides and explain its chemistry.

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