

APPLIED BIOCHEMISTRY & MOLECULAR BIOLOGY

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Draw diagrams wherever necessary.

Essay

(3x10=30)

1. Define glycolysis. Explain the reactions involved and add a note on its bioenergetics.
2. Explain the biosynthesis and degradation of cholesterol.
3. Describe the steps involved in the initiation of protein synthesis and add a note on its regulation.

Short notes

(14x5=70)

4. Explain briefly about urea cycle and its significance.
5. What is active site of an enzyme. List out the characteristics and describe the rigid template model.
6. Explain the DNA damage and repair mechanism.
7. What is deamination. Describe the reaction and its significance.
8. Explain briefly translation.
9. Explain the uronic acid pathway with its significance.
10. What is heme? Explain the metabolism of heme.
11. Explain about ETC.
12. Biosynthesis of purine nucleotides.
13. Explain the various metabolic actions of insulin.
14. Bioconversion of polysaccharides to glucose-1-phosphate.
15. Explain catabolism of phenylalanine and add a note on its metabolic disorders.
16. Beta oxidation of unsaturated fatty acids.
17. Explain the molecular methods of disease diagnosis.
