

**(2010 scheme)**

**Biochemistry and Nutrition**

**Time : 3 hrs**

**Max marks : 100**

- **Answer all questions**
- **Draw diagrams wherever necessary**

**Essays:** **(2x10=20)**

1. Define glycolysis. Describe the steps of glycolysis and a note on energetics and regulation. (1+4+2+2=10)
2. Explain the sources, biochemical functions and deficiency manifestations of vitamin A (1+5+4=10)

**Short notes:** **(10x5=50)**

3. Digestion of lipids
4. Organization of electron transport chain ( diagram only)
5. Classification of enzymes
6. Basal metabolic rate
7. Biochemical functions of calcium
8. Significance of TCA cycle
9. Urea cycle
10. Electrophoresis
11. Compounds formed from tyrosine
12. Renal regulation of pH.

**Answer briefly:** **(10x3=30)**

13. Difference between DNA and RNA
14. Niacin
15. Essential fatty acids
16. Lactose intolerance
17. Principles of colorimetry
18. Blood buffers
19. Specific dynamic action
20. Glutamic acid
21. Fatty liver
22. Mitochondria