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Roll No. ....

(2)

B. Sc.(Biotech.)-I Year

**NS-3455**

**B. Sc. (Biotechnology) Examination,**

**May 2016**

**Biochemistry**

**(B-101)**

**(New)**

*Time : Three Hours]*

*[Maximum Marks : 100*

*Note : Attempt any five questions. Each question carries  
20 marks.*

1. Classify and enumerate vitamins. Explain functions and deficiency disorder of Vitamin-A including visual process. 20

2. What are the enzymes ? Explain in detail its classification. 20

3. Explain the glyoxalate pathway in detail. 20

4. Write short notes on the following : 5×4=20

(a) Essential and non-essential amino acids

(b) Diabetes mellitus and diabetes insipidus

(c) Normal pH of blood and its regulation

(d) Nucleoside and nucleotide.

5. Write in detail the mechanism of biosynthesis of protein. 20

6. What are the lipids ? Explain their biological importance and classify them. Explain compound lipids. 20

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7. Write short notes on the following :  $5 \times 4 = 20$
- (a) Oxidative phosphorylation
  - (b) Replication and transcription
  - (c) Glycogenolysis
  - (d) Triglycerides.
8. Describe the isolation and purification of enzymes in food processing. 20
9. Describe the chemical structure and properties of monosaccharides and polysaccharides. 20
10. Explain pentose phosphate pathway and draw it. 20