

(3 Hours)

[Total Marks : 80

N.B 1. Question No.1 is compulsory

2. Attempt any three questions out of the remaining questions.

3. Draw suitable diagrams wherever necessary.

Q.1 Explain the following

5X4=20M

- (a) Activation energy and transition state
- (b) Derive Henderson Hasselbach equation
- (c) Difference between photophosphorylation and oxidative phosphorylation
- (d) Classification of Vitamins

Q.2 (a) Discuss various non-covalent interactions in biological systems

8M

(b) Discuss the classification of enzymes

7M

(c) Differentiate between C3 and C4 plants

5M

Q.3 (a) What are lipids? How are they classified?

10M

(b) Explain ETC in detail.

10M

Q.4 (a) Explain Citric acid cycle in detail.

10M

(b) Explain the secondary and tertiary structures in detail.

10M

Q.5 (a) Explain the mechanism of transamination and deamination

10M

(b) Explain Z Pathway

10M

Q.6 (a) Explain the different factors affecting enzyme activity

8M

(b) Laws of thermodynamics in detail

7M

(c) Classification of carbohydrates

5M