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Roll No.

B.Sc. (Bio-Tech.)-II Sem.

NS-3465

B.Sc. (Bio-Tech.) Examination, June-2023

BIOENERGETICS AND BIO-MEMBRANES

(B-202)

(B.Sc. Bio-Tech)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any five questions. All the questions carry equal marks.

1. What is respiration ? Where does glycolysis occur in a cell ? Explain its different steps. 10
2. What is fermentation ? Describe the two main types of fermentation. 10
3. Describe Urea cycle. What is the mechanism of removing excess of ammonia in plants ? 10

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4. Write detailed note on the following : 2×5=10

(a) ATP-driven active transport

(b) High energy compounds

5. Discuss the fluid mosaic model. How has this model been modified in view of recent information ? 10

6. Write short notes on the following : 4×2½=10

(a) Transamination

(b) Deamination

(c) Flip-flop

(d) Ketone bodies

7. Discuss various steps of citric acid cycle. Also give the estimates of water, CO₂ and formation of ATP. 10

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(3)

8. Write detailed note on the following : $2 \times 5 = 10$

(a) Significance of Pentose Phosphate Pathway (PPP)

(b) Free energy

9. Differentiate between : $2 \times 5 = 10$

(a) α -oxidation and β -oxidation of fats

(b) Aerobic respiration and Anaerobic respiration

10. Discuss first law of thermodynamics. 10