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(Printed Pages 3)

(20524)

Roll No.

B.Sc. (Micro.)-I Yr.

3489

B.Sc. (Microbiology)

Examination, May-2024

BIO-PHYSICS

(B-106)

[B.Sc (Micro.)]

Time : Three Hours]

[Maximum Marks : 50

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

1. (a) Define radioisotopes? What is radioactive decay? 2+3
(b) Explain the biophysical principles of Ultra filtration? 5
2. Write short notes on :
 - (a) Properties of open systems. 5
 - (b) Role of diffusion in biological systems 5

3. Define and compare the Ist and IInd law of thermodynamics as applicable to biological system. 10
4. (a) Explain the kinetics of a simple enzymatic reaction. 5
(b) What is role of water in biological systems/processes. 5
5. (a) What is stereo isomerism? Explain with appropriate examples. 4
(b) Explain photosynthesis as a photochemical process. 6
6. Explain the formation of image (the process of vision) in biophysical terms. 10
7. Write short notes on :
 - (a) Electrical properties of biological membranes. 5
 - (b) How is neurotransmission mediated by membrane potential? 5

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8. Explain the different kinds of molecular transport across cell membrane. 10
9. Write short notes on :
- (a) Synopses 5
 - (b) Signal transduction in biological systems 5
10. Explain the biomechanics of :
- (a) Straited muscles 5
 - (b) Cardio vascular system 5