

V

(20516)

Roll No. ....

B. Sc. (Biotech.)-I Year

**NS-3456****B. Sc. (Biotechnology) Examination, May 2016****BIO-PHYSICS****(B-102)****(New)***Time : Three Hours]**[Maximum Marks : 50**Note : Attempt any Five questions. All questions carry equal marks.*

1. Draw the structure of Eye (human). Explain its working and defects. 10
2. Why pH ranges from 0-14 only? Explain the concept of buffers. 10
3. What are the high energy biomolecules? Explain their role in energy transductions. 10

4. Write short notes on the following : 2½×4
  - (a) pKa
  - (b) Isoelectric point
  - (c) Proton hopping
  - (d) Enzymes.
5. Explain the following : 5×2
  - (a) Enzyme substrate reactions
  - (b) Antigen antibody interactions.
6. Explain the Intra and Inter-nuclear interactions in biological systems. 10
7. Write short notes on the following : 2½×4
  - (a) Chirality
  - (b) Hormones
  - (c) Photosynthesis
  - (d) Vision faults.

8. What is Lambert-Beer law? Explain in detail. 10
  
9. Explain the primary and secondary structure of proteins. 10
  
10. Explain the laws of thermodynamics. How they become applicable on biological systems? 10