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(20425) Roll No. .
B.Sc. (Bio-Tech.) - I Year

3456
B.Sc. (Biotechnology)
Examination, April-2025

BIOPHYSICS

(B-102)

(B.Sc. Biotech)

Time : Three Hours] [Maximum Marks : 50

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

- 1/ What is the chemical makeup of living cells? What are the four chemicals of life? 10
2. Write notes on: 10
 - (a) Buffers
 - (b) pH

3. Explain the role of hormones and growth factors in living cell. What are three hormones related to growth? 10
4. Explain the followings: 10
 - (a) Electrochemical gradient
 - (b) Charismatic hypothesis
5. What is the importance of biological macromolecules in a living cell? 10
6. Explain the generation and reception of sonic vibrations. 10
7. Explain standard distribution with its properties. 10
8. Explain standard error. Find the sample size for the given standard deviation 10 and the standard error with respect to sample mean is 2. 10

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9. What is the mechanism of signal transduction in cell? 10

10. Define correlation. Find the Pearson correlation coefficient between x and y for the given following population data. (Take $1/\sqrt{7}=0.378$) 10

x	600	800	1000
y	1200	1000	2000