

B.Sc. Semester - 2 (NEP-2020) Examination

MARCH/APRIL-2026

BIT: Biostatistics, Biocomputing and Bioinformatics (Minor-2)

Time: 2:00 Hours

Marks:50

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

- Que.1 1) Define Biostatistics and list any three areas where it is applied in biological sciences. (05)
2) Explain the difference between sample and population with suitable biological examples. (05)

OR

- Que.1 1) Describe the steps involved in collection, processing, and presentation of data in a biological study. (05)
2) Explain Arithmetic Mean and Geometric Mean. Mention one application of each in biological research. (05)
- Que.2 1) Explain conditional probability with a suitable biological example. (05)
2) In a sample of 100 plants, 40 are disease resistant. If a plant is selected at random, calculate the probability that it is resistant. (05)

OR

- Que.2 1) What is Student's t-test? Mention its importance in biological research. (05)
2) Define the Chi-square (χ^2) test. State its application in testing genetic ratios. (05)
- Que.3 1) Explain the steps involved in the creation of a drawing using computer software. (05)
2) Write short notes on the main features of MS Word and MS Excel. (05)

OR

- Que.3 1) List the basic components of a computer system. State the function of any two components. (05)
2) Differentiate between input devices and output devices with suitable examples. (05)
- Que.4 1) Define Bioinformatics. Explain any two basic terminologies used in bioinformatics. (05)
2) Explain the scope of bioinformatics in modern biological research. (05)

OR

- Que.4 1) Describe the applications of bioinformatics in medicine, particularly in drug discovery and disease diagnosis. (05)
2) Explain the role of bioinformatics in agriculture and industrial biotechnology with suitable examples. (05)
- Que.5 1) Calculate the Arithmetic Mean of the following data: 5, 8, 10, 12, 15. (05)
2) What is Analysis of Variance (ANOVA)? Explain its application in comparing more than two treatment groups in biological experiments. (05)

OR

- Que.5 1) Define the Internet. Explain any three services provided by the Internet. (05)
2) What is a biological database? Mention its importance in research. (05)
