

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Define Tabulation. Explain the different parts of a table.
17. The students got the following percentage of marks in Mathematics and Statistics. Find the Karl Pearson coefficient of correlation.

Mathematics (X)	20	35	15	40	10	35	30	25	40	30
Statistics (Y)	25	30	20	35	20	25	25	35	35	30

18. A bag contains 5 white and 8 red balls. Two drawings of 3 balls are made such that -
- (a) balls are replaced before the second trial and
 - (b) the balls are not replaced before the second trial.
- Find the probability that the first drawing will give 3 white and the second drawing 3 red balls in each case.
19. Explain the applications of chi-square test.
20. Discuss about Sources of information in Scientific Methodology.

S.No. 6070

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(For candidates admitted from 2016–2021 batch)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Biochemistry – Elective

• BIOSTATISTICS

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 2 = 20$)

Answer ALL the questions.

1. What are four main functions of Statistics?
2. Define Classification.
3. Define Quartile deviation.
4. What is Regression Analysis?
5. Define Random Experiment.
6. Define binomial distribution.
7. What do you mean by Standard Error?
8. Write down the applications of 't' test.
9. What is H index?
10. Define Impact Factor.

PART B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain the sources of Secondary data.

Or

- (b) Draw a Histogram and hence find the modal wage.

Weekly wages in Rs. (Mid value)	310	330	350	370	390
No. of Labourers	25	50	75	60	15

12. (a) Calculate Mean and Mode from the following:

Marks	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	5	8	10	17	6	4

Or

- (b) Find the regression equation of x and y from the following data:

$$\sum x = 24, \sum y = 44, \sum xy = 306, \sum x^2 = 164,$$

$$\sum y^2 = 574, N = 4$$

Find the value of x when $y = 6$.

13. (a) A bag contains 7 red and 5 white balls. 4 balls are drawn at random. What is the probability that

- (i) All of them are red and
(ii) Two of them are red and two of them are white?

Or

- (b) Define the following with examples.

- (i) Sample Space.
(ii) Conditional Probability.
(ii) Favorable events.

14. (a) Explain the procedure for testing the statistical hypothesis..

Or

- (b) Explain CRD Analysis.

15. (a) Write a short note on preparation of index cards.

Or

- (b) Define hypothesis and write their characteristics.