(FOR THE CANDIDATES ADMITTED   22UZY509

DURING THE ACADEMIC YEAR 2022 ONLY)   REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2024

B.SC. ZOOLOGY   **MAXIMUM MARKS: 50**

SEMESTER-V   **TIME : 3 HOURS**

PART – III
22UZY509 – BIOSTATISTICS AND BIOPHYSICS

SECTION – A   **(10 X 1 = 10 MARKS)**

ANSWER THE FOLLOWING QUESTIONS.   **(K1)**

1. Indicate the measures of central tendency _____

    a) Mean   b) Median, Mode   c) Both a and b   d) correlation

2. Select the properties of a good measure of dispersion_____

    a) rigidly defined   b) based on observation   c) Both a and b   d) None of these

3. Relate the Goodness of fit_____

    a) Student – t test   b) Chi-Square test   c) ANOVA   d) correlation

4. Name the law of thermodynamics, if two bodies are individually in equilibrium with a separate third body, then the first two bodies are also in thermal equilibrium with each other_____

    a) Zeroth law   b) First law   c) Second law   d) Third law

5. Which is used for observing surface topography?

    a) PCR   b) PAGE   c) TEM   d) SEM

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES   **(K2)**

6. Compare the two methods of data collection.

7. Describe the standard deviation.

8. Define the student's t-test.

9. Assess the basic concepts of thermodynamic system.

10. List the optical parts of a compound microscope.

SECTION – B   **(5 X 3 = 15 MARKS)**

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.   **(K3)**

11.   a) Compare discrete and continuous series
                    (OR)
     b) Classify the tabulation and its types.

12.   a) Discuss the regression analysis in detail with neat illustration.
                    (OR)

b) Measure the standard deviation.

X	10	20	30	40	50	60
Y	8	12	20	10	7	3

13. a) Outline the statistical inference for a data.

(OR)

b) A dice is tossed 90 times with the following times, find out the chi square results of the data and provide the inference.

No. of turned up	1	2	3	4	5	Total
Frequency	25	18	10	22	15	90

14. a) Summarise the first two laws of thermodynamics.

(OR)

b) Point out the scope of biophysics.

15. a) Describe the TLC.

(OR)

b) Assess the basics of PAGE and its application.

SECTION – C   (5 X 5 = 25 MARKS)
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Interpret the types of diagrammatic presentation with neat illustration. **(K4)**

(OR)

b) Describe measures of central tendency and calculate the **(K4)**

12	15	11	19	16	20	14	20	12	11

17.a) Calculate the Karl Pearson coefficient of the following data. **(K4)**

X	12	18	16	15	12	10	20	17
Y	6	10	9	8	9	8	12	10

(OR)

b) Find out the standard deviation of the following data. **(K4)**

X	6	7	8	9	10	11	12
Frequency	3	6	9	13	8	5	4

18. a) Briefly explain the techniques to be adapted for the One way ANOVA. **(K5)**

(OR)

b) Describe the assumptions underlying students' T-test. **(K5)**

19. a) Explain in detail the bioluminescence and their significance. **(K5)**

(OR)

b) Explain laws of thermodynamics concerning applications and importance in daily life. **(K5)**

20. a) Draw a neat sketch of TEM , and discuss their principle and its biological application. **(K4)**

(OR)

b) RT-PCR is an onevitable tool in molecular biology-Justify. **(K4)**

ETHICAL PAPER

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