M.Sc. IN PUBLIC HEALTH EXAMS
FIRST YEAR
PAPER II – PRINCIPLES OF BIO-STATISTICS

Q.P. Code : 281902

Time: Three hours   **Maximum : 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. What is Diagnostic Test? Explain about: Sensitivity, Specificity, Positive and Negative Predictive Values with suitable example.

2. Determine the following:
   a) Regression equation of Y on X for the given data.

x	1	3	6	3	2	1
y	2	4	4	2	6	3

   b) Calculate the Pearson r for the following data:
   20, 5, 18, 6, 19, 3, 4, 3, 17, 18

II. Write notes on: **(10 x 6 = 60)**

1. Explain the following terms:
   Mean, Median, Mode with suitable example.

2. Explain graphical representation of data and How do you graphically portray for quantitative and qualitative data.

3. Define the following with symbol
   Two - tailed, Left - tailed, Right - tailed test.

4. Define probability distribution and write short note about the following distributions:
   Binomial Distribution, Normal Distribution, Poisson distribution.

5. Define Reliability, Validity and Accuracy.

6. Explain the necessity for questionnaire constructions and list out steps to Design a Questionnaire.

7. Explain the following:
   a) Inferential statistics   b) Estimation   c) Hypothesis

8. Explain the logic behind a Kruskal-Wallis test and how it differs from ANOVA?

9. Explain linear regression and brief about the assumptions of regression.

10. Define Censoring and discuss different types of censoring.

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