

[LP 1019]

OCTOBER 2019

Sub. Code: 1902

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. Sampling and sampling techniques with examples.
2. a) Concept of accuracy and precision with example.
b) Calculate the diagnostic accuracies i.e., sensitivity, specificity, positive predictive value, negative predictive value and positive likelihood ratio for the following data.

		Gold standard		Total
		Positive	Negative	
Reference test	Positive	18	20	38
	Negative	2	80	82
Total		20	100	120

II. Write notes on:

(10 x 6 = 60)

1. Types of data and measurement scales with example.
2. Calculate the standard deviation and coefficient of variation for the following data: 20, 30, 45, 12, 30, 40, 12.
3. Binomial distribution and Poisson distribution with examples.
4. Power and error.
5. Parametric test used for comparing means (two groups-paired and unpaired, and more than two groups).
6. Calculate Spearman correlation coefficient between two scores.

X	2	5	10	8	10	4	1	7	4	9
Y	1	7	10	7	9	3	2	6	5	10

7. Concept of standard error and confidence intervals.
8. Scatter diagram and Pearson's correlation coefficient.
9. Procedure of Chi-square test and uses.
10. How to compare two survival curves?
