

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1022]

OCTOBER 2022

Sub. Code: 1902

**M.Sc. PUBLIC HEALTH
FIRST YEAR (Candidates admitted from 2017-2018 onwards)
PAPER II – PRINCIPLES OF BIO-STATISTICS**

Q.P. Code : 281902

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Concept of accuracy and precision with example.
b) Calculate the diagnostic accuracies ie., sensitivity, specificity, positive predictive value, negative predictive value and positive likelihood ratio for the following data.

Reference Test	Gold Standard Test	
	Positive	Negative
Positive	18	20
Negative	2	80

2. a) What are the Parametric tests and Non Parametric tests used for Analysis?
b) What are the situations used for Non-parametric Tests?

II. Write notes on:

(10 x 6 = 60)

1. Brief on Scales of measurement with examples.
2. Discuss the graphical methods of finding outlier and use of connecting lines in diagrams.
3. Explain Measures of Central Tendency by comparing its merits and demerits.
4. What are the steps used for construction of Questionnaire?
5. Importance of sampling and sample size calculation in research.
6. List out the Characteristics of Normal Distribution.
7. Calculate 95% confidence interval for a sample of 49 Women with bleeding disorder who had given birth by the end of 1997 with mean 27.01 and standard deviation 5.13. (Table value $t=2.1011$ for 48 degrees of freedom).
8. Chi-square Test.
9. Key survey data of National Importance.
10. Survival Probability and Survival curve.
