

KALOJI NARAYANA RAO UNIVERSITY OF HEALTH SCIENCES
TELANGANA STATE, WARANGAL – 506 002
MPH FINAL YEAR DEGREE EXAMINATIONS: NOVEMBER 2025
BIostatistics and Data Management
PAPER – I

Time: 3 Hours.

Max Marks: 70

Note: Answer all questions.

Give Diagrammatic representation wherever necessary.

Write an essay on the following:

2 X 10 = 20

1. Define Survival analysis. Define Censoring and types of censoring. Give scenarios where a researcher can perform survival analysis.
2. Differentiate Parametric and Non-parametric test and explain any two parametric tests.

Write a short note on the following:

6 X 5 = 30

3. Define the Errors in testing of Hypothesis.
4. Give an example from your field of interest where a Mann Whitney U test would be appropriate.
5. Given the mean and standard deviation of serum iron values for healthy men are 120 and 15 micrograms per 100ml respectively. In a sample of 500 cases, assuming Normality.
 - a. Calculate the reference range.
 - b. Find the number of individuals with serum iron values less than 135 microgram.
6. Define Randomization. Explain sequence generation and allocation concealment in RCTs.
7. Following is a survival data in years of 15 subjects with Lung cancer. Death is defined as an event. Find the number of censored and calculate the median survival time
9,15,4,3+,2,12,10+,4,6,9+,8,15,8,7+,5
8. Among 157 diabetic men, the mean SBP was 146mm Hg with a standard deviation of 27. We wish to know if, based on these data, can we conclude that the mean SBP for a population of diabetic men is greater than 140. Given: Z value=1.64

Write briefly on the following:

10 X 2 = 20

9. Define Left censoring.
10. What is Shapiro wilk test and state the use.
11. Why ANOVA is called 'Analysis of variance' and why not 'Analysis of means'?
12. When is Fishers exact test appropriate?
13. What is p value and state the use of it?
14. Define logistic function.
15. What are the assumptions of multiple linear regression.
16. What are different methods in studying correlation between any two continuous variables.
17. Describe what is meant by repeated measure.
18. Define one side and two-sided test.
