PAPER CODE: AHS19012

# KALOJI NARAYANA RAO UNIVERSITY OF HEALTH SCIENCES

**TELANGANA, WARANGAL – 506 002**

**B.Sc. (ALLIED HEALTH SCIENCES), SECOND YEAR DEGREE EXAMINATIONS: MAY, 2025**

## MEDICAL RECORD SCIENCE

## PAPER-III

## BIOSTATISTICS AND HOSPITAL STATISTICS

**Time: 3 Hours** **Max Marks: 80**

**Note:** Answer all questions
Draw diagrams whenever necessary with Black Ball point pen /HB pencil /any dark Color pencil.

---

**Write an essay on any TWO of the following questions: 2 X 10 = 20**

1. Define Biostatistics and explain its importance in healthcare. Discuss any one measure in detail.
2. Define Hospital statistics. Provide examples of how health statistics are utilized in hospitals.
3. What is the importance of sampling research? Describe the different types of sampling methods used in biostatistics and their advantages and limitations.

**Write a short note on any FIVE of the following: 5 X 6 = 30**

4. Discuss the maternal mortality rate (MMR) and its role in assessing maternal health services. Provide a formula and example.
5. Discuss the significance of health indicators like birth rate, death rate and life expectancy in evaluating the overall health of a population.
6. Hospital statistics reporting.
7. Probability.
8. Define Bias & types of bias.
9. What is the cumulative frequency curve and give examples? What types of health care data are commonly represented using cumulative frequency curves? What are the differences between a cumulative frequency curve and Histogram?

**Write briefly on the following: 10 X 3 = 30**

10. Define correlation and regression and explain how they are used in healthcare research?
11. Explain mean, median and mode with an example.
12. How do you calculate Bed occupancy rate (BOR). Explain its significance with an example.
13. Calculate the range and Inter quartile range (IQR) for the following data on patient study durations (in days): 2,4,6,8,10.
14. Create a pie chart for the following data on disease proportion in a hospital: Diabetes (20%), Hypertension (30%), Heart disease(25%), others(25%).
15. Name the sources of hospital statistics.
16. Explain with examples Binomial distribution & Normal distribution.
17. Calculate Mean, median and mode for the following data of patient waiting times (in minutes): 5,10,15,20,25,10.
18. Draw a histogram for the following data on patient admissions: 5,10,15, 15,20,20,20,25.
19. Cumulative frequency polygon.

*******