Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 04-Nov-2026

Time: Three Hours **Max. Marks: 100 Marks**

RESEARCH METHODOLOGY AND STATISTICS (RS-4)

Q.P. CODE: 3353

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Explain different mortality rates with example
2. Discuss probability and non-probability sampling methods with their application in optometry

   OR

   Describe different measures of variation with its merits and demerits

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Write a note on merit and demerits of sampling
4. Differentiate research methodology and research methods
5. Describe vital statistics in optometry

   OR

   What is scatter diagram? Explain the relevance of scatter diagram in ophthalmic research
6. Discuss reliability in detail
7. Define percentile and quartile. Explain its application briefly
8. Interpret which one has higher variability of the following two sets of data:

Waiting time at reception counter	Mean: 7.5 mts	S.D: 3.5 mts
OPD attendance per day	Mean: 82	S.D: 8.2

9. Enumerate the concept of kurtosis
10. Discuss hypothesis with examples

    OR

    Explain research design
11. Explain different methods of data collection
12. Differentiate dependent and independent variables

SHORT ANSWER **10 x 3 = 30 Marks**

13. Write a note on use of histogram
14. Explain the properties of nominal and ordinal scale with example
15. Calculate median and mode for the data 2,4,6,8,5,7,8,4,3,7,8,4
16. Disease registries
17. Briefly write about population survey
18. Concept of normal distribution
19. Explain in detail procedure to calculate quartile and inter-quartile range
20. Write briefly hospital records
21. Explain ratio
22. Incidence vs Prevalence

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