

Rajiv Gandhi University of Health Sciences, Karnataka
III Year B.Sc. Optometry Degree Examination – 08-May-2026

Time: Three Hours

Max. Marks: 100

RESEARCH METHODOLOGY AND STATISTICS (RS-4)

Q.P. CODE: 3353

(QP contains two pages)

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. A group of 20 students recently took a contact lens and physical optics exam. Their scores (Out of 100) are as follows:
76, 82, 89, 72, 95, 68, 91, 83, 78, 88, 73, 87, 80, 84, 77, 79, 90, 86, 75, 81
 - a) Calculate the mean score for the optometry students exam
 - b) Determine the median score
 - c) Compute the standard deviation of the score
 - d) Find the mode of the scores
 - e) Calculate the inter-quartile range for these scores
2. Write on the various study design
OR
Write on case control, cohort and cross sectional types of studies

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. Advantages and disadvantages of cluster sampling
4. Find the average and SD of the following data on incubation periods of whopping cough in 10 patients – 15, 15, 17, 18, 17, 19, 25, 19, 22, 28
5. Explain types of probability sampling
OR
Assume that you are writing your thesis. What are its titles contents? (E.g abstract, etc...)
6. Explain types of non probability sampling
7. Explain about case study method
8. A group of 100 optometry students was surveyed about their preferred type of eyewear. They were asked to choose between three options: glasses, contact lenses and no eyewear (perfect vision). The survey results are as follows. Draw a Pie chart and Bar chart
 - a) 10 prefer Lasik
 - b) 30 students prefer contact lenses
 - c) 20 students have perfect vision and do not use any eyewear
 - d) 40 students prefer glasses
9. Find out mean, median and mode for the distribution of the height of 100 person from the below data

Height (Cm)	170	175	161	168	155	176
Frequency	15	25	20	20	10	10
10. Difference between skewness and kurtosis with diagram
OR
What is dependent and independent variables with example?
11. Write about research method and research methodology
12. Write difference between questionnaire and schedule

SHORT ANSWER

10 x 3 = 30 Marks

13. Differentiate between primary and secondary data
14. Define mean with example
15. Define – population survey
16. What are the uses of sampling?
17. What is a retro and prospective study?
18. What is mean by bias?
19. Importance of vital statistics
20. Define sample and population
21. What is plagiarism?
22. What is record linkage?
