

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. Write on the various study design
2. Write on hypothesis testing in 10 steps

OR

Write on properties of normal distribution along with graphical form

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. Define – rate, ratio, proportion
4. Explain types of probability sampling
5. Find out mean, median and mode for the distribution of the weights of 150 person form the below data

Weight (Kg)	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	18	37	45	27	15	8

OR

Difference between skewness and kurtosis with diagram

6. Find the average and SD of the following data on incubation periods of whopping cough in 10 patients
12, 13, 16, 18, 17, 14, 15, 19, 14, 16
7. Define sampling principle and explain cluster random sampling
8. Advantages and disadvantages of systematic sampling
9. What is bias? What is recall bias?
10. What do you understand by bar diagram and a sub-divided bar diagram?

OR

What are the role of statistics in optometry

11. Definition and aims of epidemiology
12. List the four stages of natural course of disease

SHORT ANSWER

10 x 3 = 30 Marks

13. Give the name of the methods of testing or hypothesis
14. Define – population survey
15. What are the requisites of reliable data?
16. What is Skewness? Explain
17. What are the uses of sampling
18. Merits and demerits of simple random sampling
19. Enlist methods of probability sampling
20. What is p-value?
21. Importance of vital statistics
22. What is record linkage?