

Rajiv Gandhi University of Health Sciences, Karnataka
IV Year Pharm-D / I Year Pharm D Post Baccalaureate Degree Examination – 10-Nov-2023

Time: Three Hours

Max. Marks: 70

BIostatistics and Research Methodology (OS, RS & RS-2)

Q.P. CODE: 2870 / 2886

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

1. Discuss in detail about various clinical study designs.
2. What are measures of central tendency? Explain in detail the types of measures of central tendency and their characteristics.
3. Discuss different student's 't' tests used to determination level of significance of a clinical study.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

4. Explain Type I and Type II errors in hypothesis testing.
5. What are the general rules for constructing and labelling of a graph?
6. What is coefficient of variation? Explain its importance with example in statistics.
7. Write a note on randomization in clinical study.
8. Hemoglobin value (gm%) were measured before and after vitamin B12 therapy in six human volunteers. Find out if the therapy had any impact on the hemoglobin value (Level of significance 5%, critical value=2.57)

Hemoglobin value (gm%).						
Before therapy	12.2	11.3	14.7	11.4	11.5	12.7
After therapy	13.0	13.4	16.0	13.6	14	13.8

9. Write notes on relative and absolute risk with examples.
10. Explain the applications of computers in patient record database management in a hospital.
11. Explain Willcoxon's signed rank test and sign test.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Inclusion and exclusion criteria in clinical study.
13. Characteristics of normal distribution.
14. Construction of histogram with a suitable example.
15. Degrees of freedom.
16. Define and classify prevalence.
17. Use of computers in inventory control.
18. Discrete and continuous variables.
19. Blinding in clinical study.
20. Pie chart.
21. Differentiate between parametric and nonparametric tests.
