

Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharm-D (I Year Pharm D Post Baccalaureate) / IV Year Pharm-D Degree Examination – 23-Nov-2022

Time: Three Hours

Max. Marks: 70 Marks

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. What is hypothesis? What are different types of hypothesis? Explain how you will formulate a hypothesis with a suitable example.
2. Explain the role of computers in patient medication profiles
3. Describe the methods of measurement of central tendency.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

4. Discuss observational studies.
5. List the elements that need to be incorporated in a clinical study protocol?
6. Describe how Mean is the most appropriate measure of centrality with suitable example?
7. Explain linear regression? How is it applied for pharmaceutical sciences?
8. The following is the data on gain in body weight of two groups of young rats(28 to 30 days) maintained on two types of diet (high and low protein). Calculate whether the change in the body weight is observed due to diet or not using unpaired paired student t-test
(Critical value=1.83)

Group A (high protein diet)	95	98	101	90	89	105	110	85	100	102
Group B (low protein diet)	72	79	80	75	81	78	88	72	73	74

9. Write notes on Incidence and prevalence.
10. What characteristics of data can be represented by (a) Histogram (b) Pie Chart (c) Semi logarithmic plots?
11. Explain α and β errors in hypothesis testing.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Power of study
13. Confidence interval
14. Define blinding in clinical study.
15. Differentiate SD and SEM.
16. Difference between nominal and ordinal type of data.
17. Define scatter plots.
18. p-value
19. Mann Whitney U tests.
20. Relative Risk
21. Explain one way analysis of variance.

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