

2021/11/11

Rajiv Gandhi University of Health Sciences, Karnataka
VIII Semester B. Pharm Degree Examination – 11-Nov-2021

Time: Three Hours

Max. Marks: 75 Marks

BIostatISTICS AND RESEARCH METHODOLOGY
Q.P. CODE: 5033

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
All the Questions are compulsory

2 x 10 = 20 Marks

LONG ESSAYS

1. Explain the measures of central tendency.
Calculate the mean and standard deviation for the following data on systolic BP of volunteers -

Systolic BP (mmHg)	91-100	101-110	111-120	121-130	131-140	141-150
Frequency	08	14	20	26	24	18

OR

Explain different types of hypothesis. Explain type I and type II errors, level of significance, P value.

2. Explain the different phases of clinical trials.

7 x 5 = 35 Marks

SHORT ESSAYS

3. Explain types of correlation and correlation coefficient. Give suitable examples.

OR

Define probability and explain its significance in statistical inference with examples.

4. What are measures of dispersion? Explain.

OR

Explain ANOVA and its applications.

5. Discuss different methods of sampling.

6. Explain the graphical methods of representing quantitative data.

7. Discuss the applications of EXCEL and SPSS programmes in statistical analysis.

8. What are non-parametric tests? Explain chi square test-Goodness of fit test.

9. Explain the types and advantages of factorial design in formulation development.

10 x 2 = 20 Marks

SHORT ANSWERS

10. Multiple regressions.
11. One tailed and Two tailed tests.
12. Pharmaceutical examples for optimization techniques.
13. Degrees of freedom.
14. Standard error of mean and its significance.
15. Two methods of sample size calculation in research study.
16. Examples of application of regression models in stability testing.
17. Wilcoxon Rank Sum test.
18. Normal distribution of data.
19. Types of Observational study designs.