

Rajiv Gandhi University of Health Sciences, Karnataka

VIII Semester B. Pharm Degree Examination – 16-Nov-2022

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

LONG ESSAYS

2 x 10 = 20 Marks

1. Discuss briefly about determination of sample size for simple comparative experiments and for confidence interval of specific width.

OR

Explain the hypothesis testing of non-parametric data.

2. How is QbD based product development better. Explain the steps involved in it.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Classify different types of data. Explain any three measures of dispersion with examples.

OR

Classify and list the tests used for hypothesis testing of parametric data.

4. Classify and explain different types of t- tests.

OR

Explain Pearson's correlation and Spearman's correlation.

5. Explain Wilcoxon signed rank test and Mann Whitney U test.
6. Explain in detail about cross-over and parallel clinical study design.
7. Explain about homogeneity of variance, homoscedasticity, α , β and post parametric testing.
8. What are Mixture Designs? List their applications.
9. Explain linear regression. How is it applied for pharmaceutical sciences?

SHORT ANSWERS

10 x 2 = 20 Marks

10. Define discrete and continuous variables.
11. Pie charts.
12. Types of correlation.
13. What is Control Space
14. Difference between ANOVA and student t test.
15. What factors qualifies mode to be the best measure of central tendency?
16. Define α and β error.
17. Degree of freedom.
18. Classify observational and experimental studies.
19. What is interventional study?
