

Rajiv Gandhi University of Health Sciences, Karnataka
VIII Semester B. Pharm Degree Examination – 03-Nov-2023

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. Explain the various phases of clinical trials.

OR

Explain regression analysis and its applications in stability testing of pharmaceuticals.

2. Explain the measures of dispersion. Calculate mean, variance and standard deviation for the given data:-

Height(cm)	135-140	141-145	146-150	151-155	156-160	161-165	166-170
Frequency	08	12	18	22	20	14	10.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Define and explain correlation with examples.

OR

Explain student t't' test and its applications.

4. Explain types of observational study designs.

OR

Explain ANOVA and its significance.

5. Discuss null hypothesis, type I and type II errors.
6. Explain the application of factorial design in pharmaceutical product development.
7. Explain with examples- Histogram, Pie chart.
8. Describe the sampling techniques in research study.
9. Discuss Wilcoxon Rank Sum test and Mann Whitney U test.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Chi square test.
11. Power of a study.
12. Confidence interval.
13. Probability.
14. Applications of SAS.
15. Standard error of mean.
16. When is median more important than mean as a measure of central tendency.
17. Optimization techniques.
18. Report writing in research study.
19. Features of normal distribution pattern.
