

Rajiv Gandhi University of Health Sciences, Karnataka

VIII Semester B. Pharm Degree Examination – 23-Oct-2024

Time: Three Hours

Max. Marks: 75

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 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

OR

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

2. Discuss the protocol for an experimental study design

SHORT ESSAYS

7 x 5 = 35 Marks

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

OR

Explain ANOVA and its applications

4. Discuss Wilcoxon Rank Sum test and Mann Whitney U test

OR

Define 't' test. Explain the different situations where paired and unpaired 't' tests applied

5. Discuss the applications of EXCEL and SPSS programmes in statistical analysis
6. Discuss the methods of sampling in research study
7. Explain linear regression and its application in pharmaceutical product stability testing
8. Explain with examples – Histogram, Pie chart
9. Explain the concept of DOE

SHORT ANSWERS

10 x 2 = 20 Marks

10. Applications of SAS
11. What is interventional study?
12. Chi square test
13. Features of normal distribution pattern
14. Report writing in research study
15. Define blinding in clinical study
16. Sign test
17. Probability
18. Central composite design
19. Explain: Range, Interquartile range
