

Supply

Rajiv Gandhi University of Health Sciences, Karnataka
VIII SEMESTER B. PHARM DEGREE EXAMINATION – 29-Apr-2025

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. Describe the different measures of central tendency. Calculate mean and standard deviation for the given data of fasting blood sugar level [mg/dL] of 20 patients –
120, 120, 130, 110, 111, 130, 104, 127, 129, 116, 120, 103, 102, 101, 100, 104, 132, 129, 110, 119

OR

What is hypothesis? What are different types of hypothesis? Explain how you formulate the hypothesis with a suitable illustration

2. Discuss the protocol for an experimental study design

SHORT ESSAYS

7 x 5 = 35 Marks

3. Discuss different methods of sampling

OR

What are non-parametric tests? Explain chi square test-goodness of fit test

4. Explain correlation, types of correlation and its applications

OR

Explain ANOVA and its applications

5. Explain regression analysis to assess the influence of independent variable on continuous variable
6. Explain the application of factorial design in pharmaceutical product development
7. Discuss the applications of EXCEL and SPSS programmes in statistical analysis
8. What is QbD? List the experimental designs used in QbD
9. Explain clinical trial phases

SHORT ANSWERS

10 x 2 = 20 Marks

10. Relationship between sample size and power of the study
11. Application of Post Hoc tests
12. Define coefficient of variation
13. What is interventional study?
14. Define discrete and continuous variables
15. Inclusion and exclusion criteria
16. Characteristics of normal distribution
17. Define bias in clinical study and methods to overcome bias
18. Define and explain probability
19. Explain – Histogram and Pie chart
