

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 1223]

**DECEMBER 2023
(SEPTEMBER 2023 EXAM SESSION)**

Sub. Code: 2077

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 - SEMESTER VIII
PAPER I – BIOSTATISTICS AND RESEARCH METHODOLOGY**

Q.P. Code: 562077

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Discuss about the hypothesis testing of parametric data.
2. Classify different types of data, explain the measures of central tendency with examples.
3. Elaborate on the different phases of clinical trials.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. What is QbD? List the experimental designs used in QbD.
2. Explain in detail about cross-over and parallel clinical study design.
3. Compare and contrast Nonparametric and Parametric data.
4. Explain report writing in research methodology.
5. Explain the measures of dispersion.
6. Discuss the methods of sampling in research study.
7. Discuss – Pie chart, Cubic graph.
8. Explain one way ANOVA and the assumptions in one way ANOVA.
9. Explain student 't' test and its applications.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Standard Error of Mean.
2. Central composite design.
3. Define semi logarithmic plots.
4. Histogram.
5. Types of correlation.
6. Classify observational and experimental studies.
7. Define coefficient of variation.
8. Type I and Type II errors in hypothesis testing.
9. Degrees of freedom.
10. Relationship between sample size and power of the study.
