

[illegible]

(Pharmaceutics/Pharmacology/Pharmaceutical Chemistry)
(Common Paper)

Subject Name: - - Research Methodology & Biostatistics
Subject Code: MRM301T

[Max. Marks : 75]

Q1. Short answer question (any five) [3x5=15]

- I** Mention the applications of student's t-test
- II** Define the term crossover design.
- III** Mention various factors affecting review of literature.
- IV** What do you mean by sampling error?
- V** What is truth telling in medical research?
- VI** How will you calculate 'degree of freedom'? Give suitable example.

Q2. Short answer question (any five) [3x5=15]

- I What do you mean by linear and non linear correlation? Give example of each.
- II What do you understand from Research ethics?
- III What do you understand quantitative and non competitive data? Give example of each.
- IV What is P-value for statistical significance? Give its interpretation.
- V What do you mean by dropouts in sampling techniques?
- VI Mention some applications of literature review in research work.

Q3. Medium answer question (any two) [7.5×2=15]

- I Define Correlation. Explain various types of correlation. What are the various methods to determine correlation?
- II Discuss various strategies to eliminate errors in research study.

III- What do you understand by sampling techniques? Discuss various sampling techniques.

- Q4. Medium answer question (any two) [7.5×2=15]**
- I** Explain various strategies to eliminate errors or bias in research.
 - II** Discuss Wilcoxon rank tests with suitable example.
 - III** Describe training of personnel engaged in laboratory animal care.
- Q5. Long answer question (any two) [15×1=15]**
- I** Describe in detail about the guidelines of CPCSEA for laboratory animal facility.
 - II** What are various techniques of non-parametric tests? Explain in detail about determination of chi-square test. Write its application in pharmacy