

Enrollment No.

M.PHARM**II Year (IIIrd Semester) (COMMON FOR ALL BRANCHES)****Research Methodology and Biostatistics (MRM-301T)****[Time: 3:00 Hours]****[Max. Marks: 75]****Note: Attempt all questions. Each questions carry equal marks.****Q1. Attempt any five questions****[5×3=15]**

- Give brief account on history of medical research.
- Explain the term 'degree of freedom'
- What is veterinary care?
- Write a note on placebo.
- Give a brief account on criticisms of orthodox medical ethics.
- Explain conflicts of interest in medical research.

Q2. Attempt any five questions**[5×3=15]**

- Explain vendor relationship in medical research.
- What are dropouts in sampling techniques?
- Explain the term crossover design.
- Standard operating procedures for animal care in laboratory.
- Explain animal husbandry.
- Strategies to eliminate errors in research study.

Q3. Attempt any two questions**[2X7.5=15]**

- Explain the Data Collection Procedure. How data are statistically analyzed by Mann Whitney U test?
- What is Chi square test? How it is performed?
- Discuss various types of research.

Q4. Attempt any two questions**[2X7.5=15]**

- Discuss various ethical issues in Research.
- Conflicts between autonomy and beneficence in medical research.
- Explain and illustrate the procedure of selecting a random sample.

Q5. Attempt any one question**[1X15=15]**

- Explain in detail about WMA declaration of Helsinki on ethical principles for medical research involving human subjects.
- Discuss the techniques of analysis of variance (ANOVA) for one way classification giving suitable examples.