

**Q.P. Code: 404326**

**Reg. no.:** .....

Fourth Year Pharm D Degree Examinations, August 2015

**Biostatistics & Research Methodology**

**Time: 3 Hours**

**Total Marks: 70**

- Answer all questions
- Draw diagrams wherever necessary

**Essay:**

**(3x10=30)**

1. Explain the assumptions of parametric tests. Describe various types of t-tests with suitable examples.
2. Explain the methodology of analysis of paired and independent data with suitable examples. Define power of a study and discuss the factors affecting it.
3. Explain the methodology involved in the conduct of case control study and prospective cohort study. Discuss the influence of confounding factors.

**Short notes:**

**(8x5=40)**

4. Discuss the type of theoretical distributions with example.
5. Explain the techniques of analyzing the data from observational studies.
6. Explain the methodology involved in randomization and blinding during a clinical trial.
7. Discuss the method for Chi square test for association with example.
8. Explain the purpose and methodology of correlating ranked data.
9. Discuss the types of errors in a hypothesis testing.
10. Mention the determinants of sample size. Describe the calculation of sample size for comparison of two means.
11. Discuss the applications of bar diagram and scatter plots with neat diagrams.

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