VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)
Pharm.D DEGREE EXAMINATION - February 2020
Fourth Year

BIOSTATISTICS AND RESEARCH METHODOLOGY

Time: Three hours   Maximum: 70 marks

I. Write essays on any **TWO** questions: (2 x15 = 30)

1. Develop a protocol for a phase I study of clinical trial.
2. Two different types of drug A and B where tried on certain patient for increasing weight. 5 persons were given drug A and 7 persons were given drug B. The increasing in weight (in pounds) is given below.

Drug A	25	35	42	48	50		
Drug B	31	18	22	28	40	51	60

Do the drugs differ significantly with regard to their effect in increasing weight? Table value is 2.228.

3. Discuss the usefulness of computers in improving hospital pharmacy services in a large hospital.

II. Write short answers on any **SIX** questions: (6 x 5 = 30)

4. Write notes on relative risk and attributable risk.
5. Explain Chi-square test and its requirements.
6. Define epidemiology. Explain in detail various study designs used in epidemiology.
7. How to construct and label the graphs giving suitable examples?
8. Brief the following term: Average, mean and histogram.
9. Discuss the merits and demerits of non- parametric test.
10. A batch of tables was shown to have 60% with no defects,25% slightly chipped, 10% discolored and 5% dirty. Construct a pie chart from these data.
11. Discuss the interventional studies in clinical study design.

III. Write short notes on any **FIVE** question: (5 x 2 = 10)

12. Define Null hypothesis.
13. What are standard errors?
14. Define sample size?
15. What is prevalence?
16. What is correlation?
17. Write note on P value.

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