

VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)

Pharm.D DEGREE EXAMINATION August 2018

Fourth Year

BIostatistics AND RESEARCH METHODOLOGY

Time: Three hours

Maximum: 70 marks

I. Write Essays on any **TWO** questions: (2 x 15 = 30)

1. What are different types of clinical study designs? Explain about case studies and observational studies with examples?

2. Calculate:

a) Coefficient of variation from following data: (8)

x	5	9	14	18	20	24	30
f	3	12	24	38	21	12	5

b) Write about pie charts and scatter plots (7)

3. a) Write about application of compute in inventory control and management reports (10)

b) Discuss the advantages of computerized literature retrieval (5)

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

4. Write the procedure for determination of sample size for simple experiments

5. How do you design the research methodology?

6. What are measures used for central tendency and write its equations and terms

7. Write about labelling of graphs and its significance

8. Enumerate the conditions in which

a) Paired and unpaired t test

b) Parametric and non-parametric tests

c) One way and two way ANOVA tests should be selected

9. Write a note on wilcoxon's signed rank test with examples

10. What are different statistical parameters used in epidemiology

11. What are the uses of computer system in patient medication profiles and give its advantages

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

12. Define sample size

13. What is standard deviation and its importance?

14. Draw a typical histogram and give one advantage of histogram

15. What is confidence interval?

16. What is regression?

17. What is "ledger system"
