



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**IV Year Pharm-D (I Year Pharm D Post Baccalaureate) / IV Year Pharm-D Degree Examination**  
**- 20-Jan-2020**

**Time: Three Hours****Max. Marks: 70 Marks****BIOSTATISTICS AND RESEARCH METHODOLOGY****Q.P. CODE: 2870 / 2886**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

**LONG ESSAYS (Answer any two)****2 x 10 = 20 Marks**

1. Describe the various types of measures of dispersion and their significance.
2. Discuss briefly the different observational study designs.
3. Explain the applications of computers in a hospital.

**SHORT ESSAYS (Answer any six)****6 x 5 = 30 Marks**

4. Define Epidemiology. Explain types of epidemiological markers.
5. A tablet is produced with a labeled potency of 100mg. The standard deviation is known to be 10. What size sample should be assayed if we want to have 90% power to detect a difference of 3mg from the target? The test is done at 5% level.
6. Explain chi square test and the assumptions of chi square test.
7. Write a note on null and alternate hypothesis.
8. Explain semi logarithmic plot and scatter plot.
9. Describe how mean is the most appropriate measure of centrality with suitable example.
10. Give a detailed account of sample size determination for simple comparative studies.
11. Explain the clinical trial cross over design and its advantages.

**SHORT ANSWERS****10 x 2 = 20 Marks**

12. Inclusion and exclusion criteria in clinical study.
13. Define quantitative and qualitative variables.
14. One tailed and two tailed tests.
15. Confidence intervals.
16. Define regression. Explain types of regression.
17. Inventory control.
18. What is the importance of control group in clinical study?
19. Enumerate the pharmaceutical applications of student t test.
20. Define blinding in clinical study.
21. Define correlation and its types.

\*\*\*\*\*

