



## Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharm-D (I Year Pharm D Post Baccalaureate) / IV Year Pharm-D Degree Examination – NOV 2017

**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. How will you design a clinical study methodologically? Explain briefly.
2. Discuss about the hypothesis testing of parametric data.
3. List the applications of computing systems in hospital pharmacy.

#### **SHORT ESSAYS (Answer any six)**

**6 x 5 = 30 Marks**

4. Explain about standard deviation and variance.
5. Explain Pearson's correlation & Spearman's correlation.
6. Calculate the mean for the following data

1 to 6 Age in Years	1 to 6	7 to 12	13 to 18	19 to 24	25 to 30	31 to 36
Frequency	6	11	25	20	15	18

7. Computer medication order entry.
8. Define Epidemiology. Explain types of epidemiological markers.
9. Explain how computers can be used for patient record database management in hospital pharmacy
10. Distinguish between parametric and non parametric test. For what data is Chi Square Test performed.
11. Write notes on relative and attributable risk.

#### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

12. List the characteristics of observational studies.
13. Define coefficient of variation.
14. Characteristics of normal distribution.
15. Define semi logarithmic plots.
16. What is Chi-square test?
17. Type I and Type II errors in hypothesis testing.
18. Computer applications in inventory control of pharmaceuticals.
19. Degrees of freedom.
20. Define surrogate & direct end point.
21. Relationship between sample size and power of the study.

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