Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharma-D (Post Baccalaureate) Degree Examination – Aug / Sep 2011

Time: Three Hours   **Max. Marks: 70 Marks**

BIOSTATISTICS AND RESEARCH METHODOLOGY

Q.P. CODE: 2870

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. Explain different observational study designs.

2. What is hypothesis? What are the different types of Hypothesis? Explain how do you formulate the hypothesis with a suitable illustration?

3   Explain different methods of describing the data using measures of central tendency.

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

4. Explain how the computers can be used in inventory control in hospital pharmacy?

5. Define coefficient of variation. Explain its importance over standard deviation with an illustration.

6. Explain the accounting and general ledger systems

7. Describe the method of drawing histogram for a continuous data with an illustration

8. Write a note on Epi info software

9. a) Define Type-I and Type-II errors
    b) Define confidence level and power of the test

10. What are the underlying assumptions of one way ANOVA? Explain under what circumstances ANOVA is most preferred type of statistical data analysis?

11. What are the assumptions under which Chi-square test can be applied to analyze data? If these assumptions fail which alternative statistical test do you suggest for analyzing data? For what type of data chi-square test is applied?

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

12. Student's t-test
13. Quantitative and qualitative variables
14. Pearson's correlation
15. Degrees of freedom
16. Mann – Whitney test
17. Semi logarithmic plots
18. Percentiles
19. Odds ratio
20. Inclusion and exclusion criteria
21. Standard error of mean

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