Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharma-D (Post Baccalaureate) Degree Examination – Mar 2013

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 what are the different risks that can be computed in case-control and cohort studies in epidemiology?
2. Explain the need for testing of hypothesis in pharmaceutical research
3. Explain how computers can be made use in hospital pharmacy?

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

4. Discuss the advantages of computerized literature retrieval
5. Define Standard deviation. The following is the waiting time (in seconds) of patients near a drugs counter in a hospital: 45,38,20,29,33,39,40,37,43, and 40 compute standard deviation
6. Chi-square test
7. Describe the method of drawing Scattered plots
8. Write a note on SAS software
9. Define null hypothesis and alternative hypothesis. On what basis do you formulate this hypothesis?
10. Explain the steps involved in testing the equality of two means using unpaired t-test.
11. The following data on pulse rate was obtained from 10 individuals in a study to assess the effectiveness before and after administration of a drug
    Before 95,89,98,101,90,105,110,85,102,100
    After : 79,72,80,75,78,81,88,73,72,74
    Test whether the drug is effective in reducing the pulse rate after administration by stating suitable hypothesis (Critical value; 1.833)

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

12. Median
13. Quartiles
14. Spearman's rank correlation
15. Tabulation of data
16. Wilcoxon signed rank test
17. Semi logarithmic plots
18. Variance
19. Role of sample size in the calculation of standard error
20. Importance of inclusion and exclusion criteria in selection of subjects in a research
21. Standard error of proportion

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