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**B PHARM**
**(SEM VIII) THEORY EXAMINATION 2022-23**
**BIOSTATISTICS AND RESEARCH METHODOLOGY**

*Time: 3 Hours*                                        *Total Marks: 75*

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**Note:** Attempt all Sections.

## SECTION A

1.      **Attempt *all* questions in brief.**                                **10 x 2 = 20**

a.    Null hypothesis.                                https://pharmacyindia.co.in/

b.    Define Karl Pearson's coefficient of correlation.

c.    Confidence interval.

d.    Write the applications of nonparametric tests.

e.    Define degrees of freedom.

f.    Define one-tailed and two-tailed tests.        https://pharmacyindia.co.in/

g.    What is Plagiarism?

h.    Define the Power of a study.

i.    Standard error of the mean and its significance?

j.    Report writing in the research study.

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## SECTION B

2.      **Attempt any two parts of the following:**                        **2 x 10 = 20**

a.    Definehypothesis? What are the different types of hypothesis? Explain how you will formulate
      a hypothesis with a suitable example.    https://pharmacyindia.co.in/

b.    Explain the types and advantages of factorial design in formulation development.

c.    Describe the different measures of central tendency. Calculate the mean and standard deviation
      for the given data on the mid-arm circumference(cm) of 16 children –14, 12, 13, 10, 11, 13, 14,
      12, 12, 11, 10, 13, 12, 11, 10, 14

https://pharmacyindia.co.in/          ## SECTION C

3.      **Attempt any *five* parts of the following:**                        **7 x 5 = 35**

a.    Classify different types of data; explain any three measures of dispersion with examples.

b.    Discuss the hypothesis testing of parametric data.

c.    Explain types of correlation and correlation coefficient. Give suitable examples.

d.    Explain ANOVA and write its applications.    https://pharmacyindia.co.in/

e.    Define Plagiarism in Research? How to remove Plagiarism in a Research Paper?

f.    What are non-parametric tests? Explain the chi-square test-Goodness of fit test.

g.    Discuss the applications of EXCEL and SPSS programs in statistical analysis.