



RAN-2206000303060016

Third Year Bachelor of Physiotherapy (Supplementary)

Examination September - 2025

Research Methodology and Biostatistics (New)

Time: 3 Hours]

[Total Marks: 80

સૂચના : / Instructions

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નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

☛ **Third Year Bachelor of Physiotherapy (Supplementary)**

Name of the Subject :

☛ **Research Methodology and Biostatistics (New)**

Subject Code No.: **2206000303060016**

Seat No.:

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Student's Signature

SECTION-I Research Methodology (40 Marks)

Q. 1. What is Research? What is Research Proposal? Why it is required?
Describe a suitable format for Research proposal. **(10)**

OR

Q. 1. What is a hypothesis? Describe different types of hypothesis?
Describe characteristics of good hypothesis. **(10)**

Q. 2. **Write Short Notes (Three out of Four)** **(15)**

1. Reliability and Validity
2. Advantages of Ethics in Research
3. Difference between Case control study & Cohort study
4. Principles of Human Research

Q. 3. Write Short Notes (Five out of Six) (15)

1. Common scientific misconducts in research with example
2. Randomized Blinding Trial
3. Advantages and disadvantages of cross sectional study designs
4. Primary & Secondary Literature
5. Accuracy of tests
6. Plagiarism

SECTION-II Biostatistics (40 Marks)

Q. 1. What is sampling? Describe different sampling techniques. (10)

OR

Q. 1. What are measures of dispersion? Explain any two measures of dispersion. (10)

Q. 2. Write Short Notes (Three out of Four) (15)

1. Define Probability, mutually exclusive events, independent event, and equally likely event.
2. Describe different methods for Presentation of Data.
3. A random sample of size 9 had a mean $\bar{x} = 3$ and S. D = 1.73, Test at the 5% level of significance. Formula: $t =$
4. Briefly explain the different steps in Data Processing

Q. 3. Write Short Notes (Five out of Six) (15)

1. Parametric Test and Non Parametric Test
2. Correlation and regression
3. Define Mean, Median and Mode with one example of each
4. Rules of tabulation
5. Application and Uses of Biostatistics as a Science
6. Calculate mean and standard deviation for the following set of data.

Sr. No	1	2	3	4	5	6	7
Variable	9	10	8	9	9	8	8