

Paper-V : Research Methodology and Biostatistics

Time allowed: 3 hrs.

Max. Marks: 100

Note: Attempt total five question. Attempt one question from each section and fifth question from any of four sections

Section A

1. Define research and its importance in physiotherapy. Also write down limitations of research? (20)
2. What are the ethical issues in research also write about structure of consent form? (20)

Section B

3. A. Write down about validity. (2X10)
B. Reliability
4. A. Write down about sampling? (2X10)
B. Write about structure of research proposal?

Section C

5. A. Calculate mean of the following grouped data: (10)

CI	f
0-5	5
5-10	6
10-15	8
15-20	9
20-25	11
25-30	7

- B. Following has been given the mean hemoglobin levels. The mean hemoglobin of the population is 12mg/ dl. Is mean value of patients is different from mean value of population? The table value of t is 2.262 and SD is 1.80. (10)

Hemoglobin of 10 patients: 10.5, 9.6, 8.5, 8, 11, 7, 7.5, 8.5, 9.5, 12

6. Write down about measures of central tendency with example of grouped and ungrouped data. (20)

Section D

7. A. Convert the following data into frequency distribution:

11, 13, 15, 19, 12, 14, 16, 19, 20, 22, 16, 18, 19, 21, 23, 25, 26, 18

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

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Sr.No.8219

Exam Code: 106703
Sub. Code : 001051

Bachelor of Physiotherapy - 3rd Year (B.P.T.)
(Old Syllabus) (Batch 2022-26)
(2225)

Paper-V Research Methodology and Biostatistics

Time allowed: 3 hrs.

Max. Marks: 100

Note: Candidates must attempt 5 questions, selecting one question from each section, each question carries 20 marks. The fifth question may be attempted from any section.

Section – A

Ques 1- What is research? Explain in detail the importance, characteristics and purpose of research in clinical practice. (20)

Ques 2- Explain the ethical issues faced in research and write in detail about informed consent and its importance. (20)

Section – B

Ques 3- Give a detailed explanation of the structure of a research proposal and write a note on literature review. (20)

Ques 4- Explain the levels of measurement in research and explain validity and reliability in detail. (20)

Section – C

Ques 5- A physical therapist is tracking the progress of 10 patients recovering from knee surgery using a standard pain scale (0-10, where 10 is maximum pain). The pain scores reported by the patients during their first post-operative week are recorded as:

6, 8, 7, 5, 9, 6, 4, 7, 6, 10

Analyze the group's central tendency in pain levels, calculate the following for this dataset: Mean, Median & Mode. (20)

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Sr.No.7972

Exam Code: 106703
Subject Code : 1051

Bachelor in Physiotherapy - 3rd Year (B.P.T.) (Batch 2020-24)
(2523)

Paper-V : Research Methodology and Biostatistics

Time allowed: 3 hrs.

Max. Marks: 100

Note: There are **EIGHT** questions of equal marks. Candidates are required to attempt **FIVE** questions, selecting at least **ONE** question from each section. The **FIFTH** question may be attempted from any section.

SECTION-A

1. Explain the importance, characteristics, purposes and limitations of research in clinical practice in detail.
2. Write in detail about the various elements of informed consent. Also add note on various ethical issues in research.

SECTION-B

3. What are the steps involved in review of literature? Discuss about the structure of a research proposal.
4. Write in detail about Descriptive research.

SECTION-C

5. Describe various measures of central tendency with their merits and demerits in detail. Give example for each measure.
6. Write in detail about ANOVA.

SECTION-D

7. What do you mean by measures of dispersion? Obtain standard deviation of the following data:

X	4	7	11	3	13	16	12	8	10
Y	5	2	3	6	2	2	3	5	2

8. What is Correlation? Discuss different types of correlation with merits and demerit of each type.

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