



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATION SCIENCES
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF TRIMESTER EXAMINATIONS

UNIT CODE: PHT 316-UNIT NAME: Research Methods in Physiotherapy (main exam)

DATE: 12TH AUGUST 2026 START :6PM STOP:8PM

INSTRUCTIONS

1. All students will have three (2) hours to complete the examination
2. This is an online exam, Attempt all questions as per the instruction
3. It is the student's responsibility to report any page and number missing in this paper.
4. Check that the paper is complete
5. Total number of pages is 6 including the cover.
6. Read through the paper quickly before you start.

All the Best!!

TOTAL: _____/70

PERCENT: _____/100%

POINTS EARNED TOWARDS FINAL GRADE_____/70

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Multiple Choice Questions (20 marks)

1. **What is the first step in the research process?**
 - A. Data collection
 - B. Formulating a research problem
 - C. Formulating a hypothesis
 - D. Research design
2. **What type of research aims to solve a specific, practical problem?**
 - A. Basic research
 - B. Applied research
 - C. Exploratory research
 - D. Descriptive research
3. **Which type of research deals with non-numerical data like words, images, and behaviors?**
 - A. Quantitative research
 - B. Qualitative research
 - C. Experimental research
 - D. Causal-comparative research
4. **A variable that is manipulated or changed by the researcher is known as what?**
 - A. Dependent variable
 - B. Independent variable
 - C. Control variable
 - D. Extraneous variable
5. **What does the term "reliability" mean in research?**
 - A. The research measures what it is intended to measure
 - B. The consistency or repeatability of the research results
 - C. The degree of bias in the study

D. The cost-effectiveness of the research method

6. When a research instrument accurately measures what it is supposed to measure, it is said to have high:

- A. Reliability
- B. Validity
- C. Objectivity
- D. Replicability

7. Which of the following sampling methods relies on selecting participants because they are conveniently available to the researcher?

- A. Simple random sampling
- B. Stratified sampling
- C. Convenience sampling
- D. Purposive sampling

8. In which sampling method is the population divided into subgroups, and a random sample is taken from each subgroup?

- A. Systematic sampling
- B. Stratified sampling
- C. Snowball sampling
- D. Quota sampling

9. Data collected first hand by the researcher for a specific research project is called:

- A. Secondary data
- B. Primary data
- C. Qualitative data
- D. Experimental data

10. Information that was already collected by someone else for another purpose is known as:

- A. Primary data
- B. Secondary data
- C. Empirical data
- D. Raw data

11. Which of the following is an example of a qualitative data collection method?

- A. Structured questionnaires
- B. In-depth interviews
- C. Laboratory experiments
- D. Statistical analysis

12. A testable, tentative statement about the relationship between two or more variables is called a:

- A. Theory
- B. Fact
- C. Hypothesis
- D. Variable

13. What is the primary purpose of a literature review?

- A. To summarize everything ever written on a topic
- B. To broaden the researcher's knowledge and identify gaps in previous studies
- C. To copy the methodology of previous studies
- D. To formulate the final research conclusion

14. Which of the following research designs is used to establish cause-and-effect relationships?

- A. Descriptive design
- B. Correlational design
- C. Experimental design
- D. Historical design

15. What type of study tracks the same group of participants over an extended period?

- A. Cross-sectional study
- B. Longitudinal study
- C. Case study
- D. Pilot study

16. Research that compares groups of participants at a single point in time is called:

- A. Longitudinal study
- B. Cross-sectional study
- C. Time-series study
- D. Trend study

17. What is the main characteristic of a true experimental design?

- A. Observation without intervention
- B. Manipulation of an independent variable and random assignment of participants
- C. Use of secondary data
- D. Exclusive use of qualitative methods

18. What is a "control group" in an experiment?

- A. The group that receives the experimental treatment
- B. The group that does not receive the experimental treatment
- C. The group that drops out of the study
- D. The group selected by convenience sampling

19. What is a "Pilot Study"?

- A. A large-scale final research study
- B. A small-scale preliminary study conducted before the main research
- C. A study conducted by airline pilots
- D. A research paper published in a top-tier journal

20. Which ethical principle requires researchers to inform participants about the study's risks and obtain their agreement?

- A. Plagiarism
- B. Informed consent
- C. Confidentiality
- D. Debriefing

21. What does "plagiarism" involve?

- A. Using another person's ideas or words without giving proper credit
- B. Falsifying research data
- C. Collecting primary data
- D. Publishing the same research twice

STRUCTURED QUESTIONS (20 marks)

22. List and explain four qualities of a good research (4 Marks)

23. Explain three sources of a research problem (3 Marks)

24. Define literature review

25. Explain importance of literature review-3 points (3 Marks)

26. Differentiate between empirical literature review and theoretical

27. What is a research design and explain 2 areas in which research design can be split into (3 Marks)

STRUCTURED QUESTIONS (30 marks)

28. List and explain four types of research designs (4 Marks)

29. Sampling is a core concept when it comes to research. Define

- i. Sampling and explain six reasons for sampling (12 Marks)

30. Identify a research topic and briefly illustrate the following: (Total of 10 marks)

- i. The aim of the study (2)
- ii. TWO objectives of the study (2)

iii. Null and alternative hypothesis of the research (6 marks)

31. List and explain FOUR research instruments that can be used in your research (4 marks)

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