

**SET
A**

**BACHELOR OF MEDICAL LABORATORY
TECHNOLOGY
FIFTH SEMESTER
RESEARCH METHODOLOGY
BMLT – 502 [SPECIAL REPEAT]
[USE OMR SHEET FOR OBJECTIVE PART]**

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

- Where does the word research come from?
 - Ancient Greek "recherche"
 - Ancient Egypt "recherche"
 - Middle French "recherche"
 - None of these
- Which of the following is a research objective
 - Exploratory
 - Evaluative
 - Predictive
 - All of these
- When to Write Research Objectives_
 - At the beginning of a research project
 - To get the idea of research project
 - At the end of the research project
 - None of these
- To ensure that research objectives are well-defined and achievable, one has to use the SMART criteria. The abbreviation of SMART is
 - Specialized Measurable, Achievable, Relevant, and Time-bound.
 - Specific, Manageable, Attainable, Reliable and Time-bound
 - Specific, Measurable, Achievable, Relevant, and Time-bound.
 - None of these
- Measurement of the consistency of reliability is
 - Test retest
 - Parallel forms
 - Internal consistency
 - All of these
- Which measure of the following is about the accuracy of a measure opt.
 - Validity
 - Reliability
 - Neutral
 - None of these
- Which statement is correct in relating to research methodology
 - The research methodology consists of complete approach aligned towards the attainment of purpose.
 - The research methodology is nothing but the behaviour or tool, employed in selecting and building research technique.
 - Research methodology covers various investigation techniques
 - All of these

8. The reasons to conduct a **literature review** at the beginning of a research project:
 To familiarize yourself with the To ensure that you're not just
 a. current state of knowledge on your b. repeating what others have already
 topic done
 To identify gaps in knowledge and All of these
 c. unresolved problems that your d.
 research can address
9. When a hypothesis has independent and dependent variables are more than two are known as
 a. Complex hypothesis b. Alternative hypothesis
 c. Empirical hypothesis d. None of these
10. The source that index, abstract, organize, compile, or digest other sources in literature review is known as
 a. Primary source b. Secondary
 c. Tertiary sources d. None of these
11. Which of the following is a non- probability sampling
 a. Stratified random sampling b. judgement sampling
 c. Systematic sampling d. None of these
12. The sampling, where the population is divided into strata (or subgroups) and a random sample is taken from each subgroup is known as
 a. Random sampling b. Convenience sampling
 c. Stratified random Sampling d. None of these
13. Data which are mostly non-numerical and usually descriptive or nominal in nature is known as
 a. Quantitative b. Qualitative
 c. Mixed d. None of these
14. The source that data has been collected from first-hand-experience is known as
 a. Primary source b. Secondary source
 c. Tertiary sources d. None of these
15. The analysis which aims to make inferences or predictions about a larger population based on sample data is known as
 a. Descriptive analysis b. Inferential analysis
 c. Diagnostic analysis d. None of these
16. A distribution which deals with only two variables is known as
 a. Univariate b. Bi-variate
 c. Multivariate d. None of these
17. If the two variables move in opposite direction, then the correlation between two variables is
 a. Positive b. Negative
 c. Both d. None of these

18. When the value of Pearson's Correlation coefficient is -1 then the two variables are
- Positive & highly correlated
 - Negative & moderately correlated
 - Positive & moderately correlated
 - Negative & highly correlated
19. Which one is the principle of sound research design
- Identifies the problems
 - Reviews literature around the problem statement
 - Describes sources of data
 - All of these
20. A Research Design in which researcher examines the various variables while including numbers as well as statistics in a project to analyze its findings is known as
- Qualitative research design
 - Experimental research design
 - Quantitative research design
 - None of these

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(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

- What are the different types of research objectives? Explain any four. 2+8=10
- Discuss different key characteristics of research objective. 5+5=10
 - Write 5 objectives of the following research title:
 "Unveiling the Role of Physiotherapy in Restoring Movement and Health: Current Insights and Future Directions"
 Or
 "Haemoglobin Analysis and Clinical Implications: A Profound Study in Medical Laboratory Technology"
- What is research design? Discuss different characteristics of research design. 2+8=10
- What do you mean by literature review? Discuss different sources of literature review. 2+8=10

5. a. Discuss three different types of hypotheses. 6+4=10
b. Is it true that vitamin C has the ability to cure or prevent the common cold? Or is it just a myth? Set up a hypothesis for this with significance level 0.01 and P value 0.03. Give conclusion also.
6. Explain three probability and non-probability sampling techniques. 10
7. a. What do you mean by correlation between two variables? Give two examples. 5+5=10
b. Discuss correlation of variables in terms of number of variables, direction and magnitude.
8. Write short notes on *any two* 5+5=10
a. Reliability vs validity in research
b. Purpose of hypothesis testing
c. Importance of research objectives
d. Convenience vs purposive sampling technique

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