REV-01
MOP/10/15

2025/12

SET A

MASTER IN OPTOMETRY
FIRST SEMESTER
RESEARCH METHODOLOGY AND BIOSTATISTICS
MOP-103

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins. **Full Marks: 35**

(Objective)

Time: 15 mins. **Marks: 10**

Choose the correct answer from the following: ***1×10=10***

1. What is the first step in the research process?
   a. Survey of related literature
   b. Identifying the research problem
   c. Developing a research design
   d. Formulating a hypothesis

2. A research design is:
   a. A framework for every stage of the collection and analysis of data
   b. A style in which you present your research findings, e.g. a graph
   c. A way of conducting research that is not grounded in theory
   d. A choice between using qualitative or quantitative methods

3. What is the purpose of a literature review?
   a. To conduct the experiment and collect data
   b. To help you with your general studying
   c. To find out what is already known about your area of interest
   d. None of the above

4. The primary purpose of research ethics is:
   a. To increase research funding
   b. To protect the rights and well-being of research participants
   c. To ensure that research findings are kept confidential
   d. To promote competition among researches

5. Which of the following is the most accurate definition of primary data?
   a. Data that is collected for the first time and specifically for the purpose of the study
   b. Data that is collected and compiled by others
   c. Data that has been previously published
   d. Data that is found on the internet

6. Which of the following is a probability sampling method?
   a. Convenience sampling
   b. Purposive sampling
   c. Snowball sampling
   d. Simple random sampling

7. Increasing the sample size has the following effect on sampling error:
   a. It has no effect on sampling error
   b. It increases the sampling error
   c. It reduces the sampling error
   d. None of the above

8. A parametric test:
   a. Does not based on any assumption of the population
   b. Based on normality assumption of the population
   c. Based on normality assumption of the sample data
   d. None of the above

9. Which of the following test is used in ANOVA?
   a. F
   b. Z
   c. t
   d. χ^2

10. Type I error:
   a. Accepting a null hypothesis when it is true
   b. Accepting a null hypothesis when it is not true
   c. Rejecting a null hypothesis when it is true
   d. Rejecting a null hypothesis when it is not true

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(Descriptive)

Time : 1 hr. 15 mins. Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. Define research. Explain the ethics in research. 2+3=5

2. Define sampling distribution. Explain Type I error and Type II error. Write the steps in conducting testing of hypothesis. 2+3+5=10

3. Discuss the importance of Statistics in research. 10

4. Write in brief the different parametric tests used in data analysis. 10

5. Explain the preferences of non-parametric test in data analysis. 10

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