



**Avinashilingam Institute for Home Science and Higher Education for Women**  
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD [now MoE]  
Re-accredited with an 'A++' Grade by NAAC CGPA 3.65/4, Category I by UGC  
Coimbatore - 641 043, Tamil Nadu, India

**Continuous Internal Assessment Test II – October 2025**  
**I Semester**

**Class: I M. Ed**

**Max. Marks: 60**  
**Time: 2 Hrs**

**25MEDC03-Introduction to Educational Research and Statistics**

**Course outcomes**

- CO1** Independently search for, integrate and critically assess research information within the field of education.
- CO2** Design different data collection methods and conduct an in depth interview, a focus group, qualitative case study and a mixed method study.
- CO3** Construct instruments for the measurement of different psychological sociological, technological and other Educational factors.
- CO4** Enter, analyze and interpret the results of the data using SPSS and Microsoft Excel.
- CO5** Apply basic concepts in Statistics to educational research.

**PART – A**

**Choose the correct answer**

**6 x 1 = 6**

1. Sampling error refers to: **CO4K2**  
a. Mistakes made while coding data  
b. The difference between the sample estimate and the true population parameter  
c. Errors due to faulty measuring instruments  
d. Bias introduced by the researcher
2. Which of the following is a probability sampling method? **CO4K1**  
a. Purposive sampling                      b. Random sampling  
c. Convenience sampling                  d. Quota sampling
3. Which type of error occurs when the selected sample does not represent the population? **CO4K2**  
a. Measurement error                      b. Sampling error  
c. Instrument error                          d. Non-sampling error
4. Which of the following tools uses group interaction to collect data? **CO3K1**  
a. Checklist                                      b. Questionnaire  
c. Focus group discussion                  d. Rating scale
5. A parameter refers to: **CO5K2**  
a. A numerical value that describes a sample      b. A numerical value that describes a population  
c. A measure of variability in scores              d. An error in sampling
6. Continuous measures are variables that: **CO5K2**  
a. Can take only fixed whole numbers              b. Represent categories only  
c. Can take any value within a range              d. Cannot be measured quantitatively

**PART – B**

**Answer ALL questions**

**3 x 6 = 18**

**Each answer should not exceed 200 words**

7. a. What is reliability? Name any two methods of testing reliability. **CO3K2**  
(or)
7. b. What is validity? Differentiate internal and external validity. **CO3K2**
8. a. What are the uses of statistics in educational research? **CO4K2**  
(or)
8. b. Illustrate any four types of graphical representation that could be used in educational research. **CO4K2**
9. a. If mean equals 99, median is 52 and standard deviation is 14, Calculate Pearson's first coefficient of skewness. **CO4K3**  
(or)
9. b. The marks obtained by 10 students in a test are: **CO4K3**  
12, 15, 10, 18, 20, 25, 30, 28, 22, 15.  
Find out the measures of central tendency.

**PART – C**

**Answer ALL questions**

**3 x 12 = 36**

**Each answer should not exceed 800 words**

10. a. Explain any four tools that could be used in educational research with its merits and demerits. **CO3K2**  
(or)
10. b. Explain any four sampling techniques with its merits and demerits. **CO3K2**
11. a. What are the characteristics of a normal probability curve? **CO5K2**  
(or)
11. b. Explain the different scales of measurement. **CO5K2**

12. a. The weights (in kg) of 10 children are:  
20, 22, 25, 18, 30, 28, 24, 26, 32, 35.  
Calculate the Quartile deviation.

CO4K3

(or)

12. b. Calculate the standard deviation for the following data.

CO4K3

| Class interval | Frequency |
|----------------|-----------|
| 10-19          | 5         |
| 20-29          | 12        |
| 30-39          | 8         |

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