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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)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Master of Education Degree Examination – November 2024
I Semester

Class: I M.Ed.

Time : 3 Hours
Max. Marks : 100

23MEDC03 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, analyse 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

10 x 1 = 10

1. _____ establishes a relationship between variables with the purpose of explaining and predicting phenomena. CO1 K2
a. Knowledge b. Concept c. Theory d. Practical
2. Precise and unambiguous definition of variables in _____ form stipulates the observation and measurement. CO1 K2
a. hypothetical b. scientific c. theoretical d. operational
3. _____ type of research manipulates the variables. CO2 K3
a. Experimental b. Qualitative c. Descriptive d. Historical
4. _____ is not a primary source of data. CO2 K3
a. Oral Testimony b. Relics c. Official Records d. Encyclopedia
5. _____ refers to clear expression of an area of concern that requires a clear understanding and deliberate investigation. CO2 K3
a. Research method b. Research Problem c. Research tool d. Data Analysis
6. The estimate of variation of a sample from population characteristics and from each other is called CO3 K2
a. Sampling b. Sampling error c. Randomization d. Stratification
7. _____ scale has a true zero measurement. CO3 K1
a. Nominal b. Ordinal c. Interval d. Ratio
8. The distribution describes the data is derived from more than one population is CO4 K2
a. Normal b. Skewed c. Bimodal d. Standard
9. Range measures the CO4 K1
a. central tendency b. dispersion c. relationship d. relative position
10. Select the correct statement. CO5 K4
a. Sum of the squared deviations is known as variable
b. Variance is the square root of standard deviation
c. Median is a point, above and below the one-half of scores fall
d. Range is the distance from the mean

Part B **5 x 6 = 30**
Answer ALL questions
Each answer should not exceed 400 words or two pages

- 11.a. List the characteristics of computer-based data analysis. CO1 K2
(or)
11.b. Describe the significance of educational research. CO1 K2
- 12.a. "Most of the educational researches are applied research"- Justify. CO2 K5
(or)
12.b. Compare the trend and evaluation types of descriptive studies. CO2 K4
- 13.a. Describe the steps in evaluating a research problem. CO3 K2
(or)
13.b. Define randomness. Briefly explain simple random sampling. CO3 K3
- 14.a. Differentiate parametric from nonparametric data. List out the appropriate statistics. CO4 K5
(or)
14.b. Describe the characteristics of a normal curve. CO4 K2
- 15.a. Illustrate measures of central tendency with examples. CO5 K3
(or)
15.b. Analyse the merits and demerits of measures of dispersion. CO5 K5

Part C **5 x 12 = 60**
Answer ALL questions
Each answer should not exceed 800 words or four pages

- 16.a. List out the qualities of a good researcher. CO1 K4
(or)
16.b. "The increase in popularity of online courses demands more educational researches" - Justify. CO1 K6
- 17.a. Define validity and reliability in research. Describe its types used in educational research. CO2 K3
(or)
17.b. Distinguish true and quasi experimental designs. Criticize the limitations of true experimental design in the field of education. CO2 K5
- 18.a. Illustrate with an example of a stratified random sampling method. CO3 K4
(or)
18.b. Explain the data collection process in observation technique of research. CO3 K3
- 19.a. Explain the organization of data in SPSS. Critically summarize the benefits of using SPSS over Excel. CO4 K6
(or)
19.b. Describe the different data types in educational research. CO4 K2
- 20.a. Illustrate Skewness with examples. Explain its significance in educational research. CO5 K3
(or)
20.b. Explain the significance of Kurtosis with example. CO5 K3
