

Qn.Code: MEDC22

N.V.K.S.D. COLLEGE OF EDUCATION
(AUTONOMOUS)

M.Ed. Degree Second Semester Examination, June 2026
(For the candidates admitted during the academic year 2025-2026)

**Tool Course: EDUCATIONAL RESEARCH METHODOLOGY
AND STATISTICS**

Course code: MED2TC002

Time: 3 Hours

Maximum Marks: 70

SECTION A (10 x 1 = 10 marks)

Answer ALL the questions by selecting the appropriate answers.

1. 'Controlled group' is a term used in
 - a) Historical research
 - b) Experimental research
 - c) Basic research
 - d) Descriptive research
2. Questionnaire is a
 - a) Tool
 - b) Procedure
 - c) Method
 - d) Technique
3. Temperature in Celsius or Fahrenheit is the most popular example of
 - a) A nominal scale
 - b) An ordinal scale
 - c) An interval scale
 - d) A ratio scale
4. The term used to describe three or more individuals who mutually choose each other in a sociometric test is
 - a) Star
 - b) Pair
 - c) Clique
 - d) Gang
5. The most fundamental characteristic of a good research tool is
 - a) Reliability
 - b) Validity
 - c) Adequacy
 - d) Economy
6. The consistency, stability, or repeatability of the scores obtained from a research tool is referred to as
 - a) Validity
 - b) Usability
 - c) Discriminability
 - d) Reliability
7. A research tool used to observe and record the frequency or duration of specific predefined behaviours is
 - a) Rating scale
 - b) Checklist
 - c) Questionnaire
 - d) Inventory
8. A classic example of an aptitude test widely used in academic and career settings is
 - a) The Graduate Record Examinations (GRE)
 - b) Rorschach Inkblot Test
 - c) Minnesota Multiphasic Personality Inventory (MMPI)
 - d) Thematic Apperception Test (TAT)
9. The Kuder Preference Record is used to assess
 - a) Intelligence
 - b) Interests
 - c) Creativity
 - d) Personality
10. The Eysenck Personality Questionnaire (EPQ) assesses
 - a) Neuroticism and Extraversion
 - b) Intelligence and Creativity
 - c) Interests and Attitudes
 - d) Memory and Learning

SECTION B (5 x 2 = 10 marks)

Answer all the FIVE questions in about 100 words each.

11. Examine the significance of Statistics in educational research.
12. Differentiate between Percentiles and Percentile rank.
13. If the product moment coefficient of correlation of bivariate data is 0, does it mean that the variates are independent? Is the converse true?
14. Describe about 'Degrees of freedom'.
15. What is an Attitude scale? Write any two items of an Attitude scale.

SECTION C (6 x 5 = 30 marks)

Answer any SIX questions in about 200 words each.

16. Calculate Pearson's 'r' from the following: $\sum X=26$, $\sum Y=9$, $\sum X^2=158$, $\sum Y^2=107$, $\sum XY=78$, $N=50$.
17. Explain the concept of a simple regression equation and its utility in predicting an unknown variable in educational research.
18. Discuss the characteristics and applications of normal distribution.
19. Clarify the selection of appropriate tools for a research study.
20. Differentiate Thurstone and Likert methods of constructing scales.
21. What is 'sampling error'? How does it differ from the 'standard error'?
22. Analyse the characteristics and application of Normal Probability Curve.
23. What are measures of position and analyse the utility of Z-scores and Stanine scores in evaluating student performance.

SECTION D (2 x 10 = 20 marks)

Answer BOTH the questions in about 500 words each.

24. a) Explain in detail the techniques of Research. Cite a few research situations where these techniques are applied.

(Or)

b) Describe the steps in the construction and the standardisation of a research tool. Briefly explain the characteristics of a good research tool?

25. a) Define correlation. Distinguish between Rank correlation and Product-Moment correlation. Discuss the specific educational research scenarios under which each of these two methods is appropriately applied.

(Or)

b) Write short note on 'Measures of Central Tendency'. Calculate Mean and Standard Deviation for the following data.

Class Interval	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	20	30	36	52	48	24	18	12	10