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Name.....

Reg. No.....

**FIRST SEMESTER M.Ed. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, DECEMBER 2020**

M.Ed.

MED 04—INTRODUCTION TO EDUCATIONAL RESEARCH AND STATISTICS

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 2 marks.

1. List the typical stages in any research.
2. How do theories qualify as a source of research problem ?
3. What are the purposes of the hypothesis in research ?
4. List the four elements needed to determine the minimum sample size.
5. Briefly explain the relationship between the skewness of a distribution of scores and the resulting values of the mean, median, and mode.

(5 × 2 = 10 marks)

Section B

Answer any eight questions.

Each question carries 5 marks.

6. Illustrate research as a method of science.
7. Among the most fruitful sources for beginning researchers are their own experiences as educational practitioners"- Justify the statement.
8. Discuss the steps involved in Hypotheses testing.
9. Write a short note on mixed method research.
10. Correlation coefficients should not be interpreted in terms of percentage of perfect correlations- Explain.
11. Explain the meaning of operational definition with an example.
12. Distinguish between Type I and Type II errors with the help of an example.

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13. Write a short note on normal probability curve.
14. Distinguish between the title of a research and statement of the problem with suitable example (s).
15. Explain the extreme values of a variable. How do you study these extreme values through Box-Plot diagram ?
16. Explain the merits and demerits of different measures of dispersion.
17. Explain the conditions for applying the different types of correlation with examples. (8 × 5 = 40 marks)

Section C

Answer any **two** questions.
Each question carries 15 marks.

18. A) What do you understand by the term 'Research' ?
B) Discuss the criteria, objectives and qualities of a good research.
C) Describe the different methods of non-probability sampling. (2 + 8 + 5 = 15 marks)
19. A) Discuss the concept of population and sample with the help of an example.
B) Explain the need of both primary and secondary sources of information in the review of related literature. What is their roles at different stages of research ? (5 + 10 = 15 marks)
20. A) What are different types of correlation ?
B) Explain the conditions for applying the different types of correlation with examples.
C) Calculate the rank order correlation for the following data :
- | | | | | | | | | | | | |
|--------|---|----|----|----|----|----|----|----|----|----|----|
| Test 1 | : | 84 | 38 | 51 | 79 | 66 | 38 | 68 | 46 | 79 | 38 |
| Test 2 | : | 26 | 60 | 48 | 34 | 41 | 60 | 38 | 56 | 34 | 60 |
- (4 + 5 + 6 = 15 marks)
21. A) Discuss briefly about selection of sample in qualitative and quantitative research.
B) Construct an ogive for the following distribution of scores :
- | | | | | | | | | | | | | | |
|--------|---|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| Scores | : | 159.5- | 149.5- | 139.5- | 129.5- | 119.5- | 109.5- | 99.5- | 89.5- | 79.5- | 69.5- | 59.5- | 49.5- |
| | | 169.5 | 159.5 | 149.5 | 139.5 | 129.5 | 119.5 | 109.5 | 99.5 | 89.5 | 79.5 | 69.5 | 59.5 |
| f | : | 1 | 5 | 13 | 45 | 40 | 30 | 51 | 48 | 36 | 10 | 5 | 1 |
- C) In the operation of a school system in a certain city, 70% of the money spent goes for instruction, 12% for operation and maintenance, and 18% for auxiliary agencies, fixed charges and incidentals. Construct a pie diagram to show the relation of these expenditure. (5 + 6 + 4 = 15 marks)