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Reg. No.....*18-1-19*.....

FIRST SEMESTER M.Ed. DEGREE EXAMINATION, DECEMBER 2018

Education

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. Explain the meaning of construct in the language of research.
2. List the characteristics of a theory that one can search for a research study.
3. Enlist the criteria used in determining the quality of a given print journals articles.
4. What is the difference between an inductive and a deductive hypothesis ?
5. The size of a correlation is in part a function of the variability of the two distributions to be correlated- Explain.

(5 × 2 = 10 marks)

Section B

*Answer any eight questions.
Each question carries 5 marks.*

6. Discuss the major characteristics of qualitative research with the help of one example.
7. Illustrate research as a method of science.
8. Explain the five general purposes of conducting mixed method research.
9. Distinguish between the title of a research and statement of the problem with suitable example (s).
10. The researcher who fails to approach the task of assembling the related literature in a systematic manner from the beginning can become much disorganized. Discuss the suggestions you would give for the researcher to be organised in the literature review.
11. Justify the purposes of different ways of stating hypotheses.
12. Illustrate the following with suitable examples.
 - (a) Sampling frame and sampling unit.
 - (b) Sampling error.
13. Illustrate with an example the steps involved in quota sampling.

Turn over

14. Discuss the uses of standard score. How well did Saral perform in her English coursework compared to the other 50 students, if she scored 70 out of 100 and class mean was 60 and SD 15 ?
15. Following are the marks of class IX students in last month Science Achievement test :—
45, 30, 36, 36, 16, 21, 33, 40, 32, 14, 10, 29, 23, 39, 17, 11, 18, 34, 19, 24, 21, 35, 42, 37
Prove that second quartile = 50th percentile.
16. Explain the two different types of ogive and their applications.
17. Distinguish between rank order correlation and product moment correlation with examples.
(8 × 5 = 40 marks)

Section C

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

18. (a) What is educational research ?
(b) "No educational research project should be undertaken unless its consequences give promise of improving significantly an important educational practice or operation" - Discuss with suitable examples.
(3 + 12 = 15 marks)
19. (a) Describe the ways in which a researcher reaches to a problem formulation.
(b) Enlist the need of both primary and secondary sources of information in the review of related literature.
(c) Illustrate with examples different types of variables in a quantitative research.
(6 + 4 + 5 = 15 marks)
20. (a) Discuss the significance of formulating hypotheses. What are the different types of hypotheses in educational research ? Illustrate.
(b) Explain the different levels of measurement.
(c) Compute mean and standard deviation of the following distribution and interpret the results
- | | | | | | | | | | |
|----------|---|---------|---------|---------|---------|---------|---------|---------|---------|
| CI | : | 80 - 90 | 70 - 80 | 60 - 70 | 50 - 60 | 40 - 50 | 30 - 40 | 20 - 30 | 10 - 20 |
| <i>f</i> | : | 5 | 10 | 15 | 25 | 17 | 14 | 12 | 2 |
- (5 + 4 + 6 = 15 marks)
21. (a) Elucidate the meaning of parameter, statistics, standard error and sampling error.
(b) How do scatter plots help in explaining the concept of correlation? When can one use biserial and point biserial correlation ?
(c) Compute 90 % and 80 % confidence limits for mean 75 and standard deviation 2.75 of the sample size 200.
(4 + 5 + 6 = 15 marks)

[2 × 15 = 30 marks]