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Name.....

Reg. No.....

SECOND SEMESTER M.Ed. DEGREE (2017 SCHEME) EXAMINATION  
JULY 2022

M.Ed.

MED 08—ADVANCED EDUCATIONAL RESEARCH AND STATISTICS

Time : Three Hours

Maximum : 80 Marks

I. Answer *all* the questions. Each question carries 2 marks :

- 1 Define Degrees of Freedom.
- 2 When checklist can be preferably used as a tool in educational research ?
- 3 What is the difference between bibliography and reference ?
- 4 What does the value 'R Squared' measure in a regression model ?
- 5 Write a note on Mann Whitney Test.

(5 × 2 = 10 marks)

II. Answer *eight* questions out of twelve. Each question carries 5 marks :

- 6 How can you use interview as a technique for educational research ? Mention the different types of interviews and how it is used for different research purposes ?
- 7 Write in detail about the procedure of standardization of a research tool (e.g. Rating scale) for a quantitative research.
- 8 Write short note on the following :
  - (a) Confidence interval.
  - (b) Hermeneutics in Research.
- 9 Give the conceptual understanding of the term 'percentile' by giving a suitable example.
- 10 Distinguish between Type I and Type II errors with suitable illustrations ?
- 11 Write in detail about Ex-post facto research ? What is the importance of Ex-post facto research in Education ?
- 12 Explain in detail about 'phenomenological research'. In what situations one has go for phenomenological study in Education ?

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- 13 The scores in different tests for five subjects are given in the table. Compute the Pearson's correlation coefficient for the given data and interpret the results.

Subjects	English	Mathematics	Science	Hindi	Social Science
Test 1	4	6	4	8	3
Test 2	5	4	6	2	4

- 14 Write a note on the significance of sample mean. Explain with reference to confidence limits.
- 15 Distinguish between statistic and parameter in research.
- 16 What are the different types of Triangulation methods used in qualitative research ?
- 17 The following are the data for two tests. Determine the regression equations and predict the probable score in Mathematics of a student whose score in English is 30.

	English	Mathematics
Mean	24	28
SD	1.8	2.1
Coef. of Correlation		$r_{xy} = 0.92$

(8 × 5 = 40 marks)

- III. Answer any *two* questions out of four. Each question carries 15 marks :

- 18 What do you understand by the technique Analysis of Variance (ANOVA) ? What are the underlying assumptions for ANOVA ? Explain the steps in detail.
- 19 In a study teacher trainees were asked to express their preference for different subjects. The data were recorded as follows. Do you think the choice of subject is depended on sex of the teacher trainees

Teacher Trainees	Science	Social Science	Languages	Computer Science	Mathematics	Total
Male	35	45	15	30	25	150
Female	30	25	15	10	20	100

(Note : critical values of Chi-square for  $df = 4$  is 9.488 (@ 0.05 level) 13.277 (@ 0.01 level)





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20. Explain in detail about experimental designs. What are the different types of experimental designs? Highlight the specific designs of each category with emphasis on its applicability in educational research.
21. How to prepare a good research report. Highlight the major points to be taken care giving importance to the format, content and chapters. Highlight the important aspects under each chapters of educational research report.

(2 × 15 = 30 marks)

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