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## SECOND SEMESTER M.Ed. DEGREE EXAMINATION, JUNE 2018

## MED 08—ADVANCED EDUCATIONAL RESEARCH AND STATISTICS

(2017 Admissions)

Time: Three Hours

Maximum: 80 Marks

- I. Answer all questions. Each question carries 2 marks:
  - 1 What do you mean by 'Triangulation' in Research?
  - 2 Explain the terms 'ibid' and 'op cit'?
  - 3 What is meant by 'standard error of mean'?
  - 4 Write any four advantages of statistical software by specifically taking any one among them?
  - 5 Explain the concept 'sociogram'?

 $(5 \times 2 = 10 \text{ marks})$ 

- II. Answer any eight questions of twelve. Each question carries 5 marks:
  - 6 What are the qualities of a good research questionnaire?
  - 7 Describe Ex-Post facto research.
  - 8 Explain the significance of phenomenology in qualitative research?
  - 9 Write the characteristics of 'Good Research Report?
  - 10 Distinguish between Type I and Type II errors with suitable illustrations.
  - 11 Mention the characteristics and advantages of Linear Regression.
  - 12 What are the different types of quasi experimental designs? Explain.
  - 13 State the conditions on which ANCOVA is used?
  - 14 Give out conceptual analysis of 'Mixed methods of Research'?
  - 15 Given the following data

Marks in Physics (X)

Marks in Civics (Y)

 $M_{\chi} =$ 

80

 $M_{v} = 70$ 

 $SD_{x} \approx$ 

 $SD_v = 8$ 

r = 0.78

Determine the regression equation and predict the marks in Civics of a student whose marks in Physics is 70.

Turn over

16 Two groups of teachers selected randomly from two different types institutions, were administered an attitude scale and the following data was collected:

Institution	N	$\mathbf{M}$	SD
1	 40	60	6
2	 50	55	5

Do the groups differ significantly in their attitude?

17 What do you know about SPSS? Enumerate the advantages of statistical softwares in quantitative research?

 $(8 \times 5 = 40 \text{ marks})$ 

- III. Answer any two questions out of four. Each question carries 15 marks:
  - 18 What is Analysis of Variance? Discuss the Assumptions and Procedure for calculating ANOVA? In which circumstances the technique of ANOVA is preferred over z or t tests?
  - 19 What are the assumptions based on which parametric and non-parametric tests are used?

    Using Chi-square check whether there is any association between the sex and nature of work for the following data:

Sex	Nature of Work		
•	Skilled	Unskilled	
Male	50	30	
Female	15	35	

- 20 Explain the different approaches of qualitative research with special focus on phenomenology, ethnography, grounded theory and naturalistic enquiry?
- 21 Prepare a model research proposal for any of the current topics in Education? Explain the Criteria for a good research report?

 $(2 \times 15 = 30 \text{ marks})$