67 (ERS)

[19-HBPGKOW-M3S(O) 20M]

MA 3rd Semester (Old) Exam., 2019 (W)

EDUCATION

[MED (S3) 09]

(Educational Research and Educational Statistics)

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer any *five* from the following questions (each in around *50* words) : 2×5=10

(a) Describe two important characteristics of research.

(b) Explain the concept of null-hypothesis with an example.

(c) What is descriptive survey research?

(d) Compare between participant observation and non-participant observation.

(e) Write two causes of sampling errors.

(f) Write the conditions for using biserial correlation and point-biserial correlation.

2. Answer any *three* from the following questions (each in around *150* words) : 4×3=12

(a) Distinguish between pure research and applied research with illustrations.

(b) Discuss the different types of historical research.

(c) What is a two-tailed and a one-tailed test of significance? Explain.

(d) Differentiate between regression and correlation. In a correlation study, the following values are obtained :

		X	Y
Mean	:	65	67
Standard Deviation	:	2·5	3·5

Coefficient of correlation = 0·8.

Find both the regression equations from the data given above.

3. Answer any *three* from the following questions (each in around *250* words) : 6×3=18

(a) Write a note on disadvantages of questionnaire method as a tool of research.

(b) What is non-probability sampling? Discuss purposive and snowball sampling as non-probability sampling technique giving appropriate examples.

(c) A sample of 100 boys in an IQ test has a mean of 73 and standard deviation of 15 while a sample of 50 girls in the same test has a mean of 78 and standard deviation of 10. Is there a significant difference in the mean scores of boys and girls? Examine.

(d) Ten competitors in a music competition are ranked by three judges in the following order :

		Competitors									
1st Judge	:	2	3	6	9	4	10	7	5	8	1
2nd Judge	:	10	7	5	1	2	4	6	8	9	3
3rd Judge	:	3	2	10	8	1	9	5	7	6	4

Use the rank-correlation to discuss which pair of judges have the nearest approach to common tastes in music.

(Continued)

4. Answer any *four* from the following questions (each in around *500* words) : 10×4=40

(a) What is a hypothesis? Describe the sources of hypothesis formulation. 2+8=10

(b) What is an ethnographic research approach? Show your acquaintance with the process of analysis and interpretation of data in this type of research. 2+8=10

(c) "Sampling is necessary under certain conditions." Explain this statement. How do you select a random sample from a finite population? Discuss. 2+8=10

(d) (i) Describe the chi-square test of significance and state the various uses to which it can be put. 4

(ii) Five hundred students in a school were graded according to their intelligence and the economic conditions of their homes. Examine whether there is any association between economic conditions in home and intelligence : 6

Economic Condition	*Intelligence*		
	Good	*Bad*	*Total*
Rich	85	75	160
Poor	165	175	340
Total	250	250	500

(e) (i) What is analysis of variance? 2

(ii) Following table gives the marks obtained by 16 students (4 students each) of four schools of a city :

Schools	*Marks of Students*			
School *A*	22	24	27	23
School *B*	20	19	23	24
School *C*	19	17	21	18
School *D*	24	26	29	26

Carry out the analysis of variance to test the significance of the difference between the marks of students of the four schools. 8

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