M.A. Examination 2018
Semester-II
Course : EDN-321
(Techniques of Analysis in Educational Research)

Time : 3 Hours **Full Marks : 70**

Questions are of value as indicated in the margin.

Group -A

1. Attempt **any four** questions: 4×10=40

a) Explain any two basic characteristics of a Normal Probability Curve ? What are its uses in educational research? A group of 485 school students were classified into seven equal sections on the basis of their musical talent: A, B, C, D, E, F and G. Assuming that the students are normally distributed in the said ability, determine how many students should be placed in each one of the seven sections. 2+2+6

b) What is meant by Point-Biserial correlation? Compute the correlation coefficient of Point-Biserial from the data given below.

Score on adjustment scale	Success on Job	Failure in Job
10-19	1	1
20-29	6	1
30-39	8	6
40-49	11	8
50-59	13	9
60-69	4	12
70-79	1	6
80-89	0	3
90-99	1	1

Number of candidates who passed and failed in item 1 and item 2 of a given test are entered in the following Table:

Item 2	Item 1		
		Passed	Failed
	Passed	82	53
	Failed	25	65
		107	118

Compute Phi correlation coefficient between both items. 2+5+3

c) Distinguish significance of a given standard deviation and significance of difference between any two standard deviations? For the scores obtained by 71 boys and 89 girls in Bengali Achievement Test, the standard deviations were 6.59 and 12.33 respectively. Is there any significant difference between these two standard deviations? 3+7

d) What is a 't' test? How does it differ from an 'F' test? Calculate F value from the following set of Achievement Motivation scores of 8 boys and 11 girls of grade nine:
Girls: 14 20 13 18 27 32 16 32 39 24 15
Boys: 10 21 25 12 19 17 11 26
Interpret the obtained F value. 3+6+1

P.T.O.

e) Defferentiate qualitative data from quantitative data in the field of educational research. A group of 09 seventh graders were measured on a Music Test after fifth and tenth trials following practices in music. The obtained scores of the seventh graders are given below: 4+6

Fifth Trial :	12	13	5	20	17	10	16	20	11
Tenth Trial :	17	15	11	13	16	21	25	19	19

Is the performance in music on tenth trial significantly higher than the performance in fifth trail? 6

Group-B

2. Attempt **any four** questions : 4×5=20
   a) Explain Skewness and Kurtosis as measures of testing normality of any distribution.
   b) What are non-parametric statistics? Explain their assumptions.
   c) Distinguish between Type-I an Type-II Errors. How can a researcher reduce th risk of committing error?
   d) In what ways computer and software can be used for analyzing data in qualitative research?
   e) Fifty seven individuals were asked to give their opinion about holding election at state and central levels simultaneously by indicating SA (Strongly Agreed), U (Undecided) and SD (Strongly Disagreed). Out of these 29 marked SA, 13 marked U and the remaining marked SD. Do these obtained results suggest any significant trend of opinion?

Group-C

3. Attempt all the questions : 2×3=6
   a) What is a null hypothesis? Formulate any null hypothesis to apply a t test.
   b) Clarify the meaning of Degrees of Fredom with an example.
   c) Mean and standard deviation for a group of 121 students were 24 and 2.5. Determine the .95 and .99 confidence intervals for the population mean.
4. Attempt all the questions : 4×1=4
   a) In ANCOVA, the co-variate is related to the following -
      (i) Extraneous variable, (ii) Independent Variable, (iii) Intervening variable
      (iv) Dependant variable
   b) Which of the following is not true for parametric statistics?
      (i) F test and data are measured, (ii) Spearman's rho and Unequal size units
      (iii) Absolute zero and z test, (iv) Testing of normality and equal size units
   c) In qualitative research coding refers to :
      (i) Data reduction, (ii) Grouping of data, (iii) Commentary of data
      (iv) Data procurement
   d) Creating and importing data in rich Text Format can be accessed through the following software: (i) ALTAS.ti , (ii) MAXqd (iii) NUD*IST (iv) NVivo

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