Total No. of printed pages = 5

63/2 (SEM-3) EDN 3.2

2022

(Held In 2023)

EDUCATION

(Theory Paper)

Paper Code : EDN-3.2

(Statistics in Education)

Full Marks – 80

Pass Marks – 32

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions : 2×5=10

   (a) What do you mean by Skewness and Kurtosis ?

   (b) What is Standard Deviation ?

   (c) Mention any two uses of correlation.

   (d) Given, Mean = 50 and SD = 14 for a distribution, convert the raw score into a Z score.

[Turn over

(e) Find out the average deviation of the following scores : 2, 5, 8, 9, 42.

2. Answer the following questions : 5×4=20

(a) Elucidate the applications of Normal Probability Curve.

(b) Write five characteristics of chi-square test.

(c) Write the concept of measures of variability and explain its different types.

(d) Discuss the uses of Mean, Median and Mode.

3. Answer any *two* questions of the following : 10×2=20

(a) Given the following data for two tests :

Marks in History(X)	Marks in Geography(Y)
$M_x = 25$	$M_y = 30$
$\sigma_x = 1.7$	$\sigma_y = 8$

$r = 0.72$

Determine the regression equations and predict

(i) The marks in English of a student whose mark in History is 65.

(ii) The mark of a student in History whose mark in English is 50.

(b) A one rupee coin is tossed in the air 100 times and the recorded results of these 100 throws indicate 40 heads and 60 tails. Using the chi-square test, find out whether this result is better than mere chance.

(c) Calculate co-efficient of correlation of the given ungrouped scores by product moment method and interpret the result.

x = 15, 12, 26, 19, 14, 10

y = 13, 12, 16, 15, 19, 21

4. Answer the following questions : 15×2=30

(a) What do you mean by Quartile Deviation and describe its uses ? Find out the Quartile Deviation from the following distribution.

C.I.	10-14	15-19	20-24	25-29	30-34	35-39
f =	1	2	4	5	8	10

C.I.	40-44	45-49	50-54	55-59	60-64	65-69
f =	6	4	4	2	3	1

7=8=15

Or

Distinguish between one tailed and two tailed test. A science teacher wanted to know the relative effectiveness of lecture-cum-

2. demonstration method over the traditional lecture method. He divided his class into equal random groups A and B and taught group A by the lecture-cum-demonstration method and group by B by the lecture method. After teaching for three months, he administered an achievement test to both groups. The data collected were as under.

5+10=15

	Group – A	Group – B
Mean	43	30
SD	8	7
No. of students	65	65

3. (b) Differentiate between parametric and non-parametric test. Write the assumptions and its steps for calculation of one-way.

6+9=15

Or

In a study, the effectiveness of the method of memorization was to be determined. For this purpose, 3 groups of ten students, each randomly selected from class 7 of a school were taken and each group was made to adapt a particular method of memorization.

In the end, the performance was tested. The number of nonsense syllables correctly recalled by the students of these groups is presented below :

Group : I 12, 10, 11, 11, 8, 10, 7, 9, 10, 6

Group : II 14, 8, 19, 15, 10, 11, 13, 12, 9, 12

Group : III 8, 11, 13, 9, 7, 5, 6, 8, 7, 10

Apply the analysis of variance technique for testing the significance of difference between group means. 15