2018

EDUCATION

EDN: 3.2

STATISTICS IN EDUCATION

Full Marks: 80

Time: 3 Hours

The figures in the margin indicate full marks for the questions

A. Answer the following questions (within 50 words): **2×5= 10**

1. What is sample?
2. What is correlation?
3. Explain the concept of dispersion.
4. Mention any two characteristics of Normal Probability Curve.
5. Mention any two merits of standard deviation.

B. Answer the following questions **5×4= 20**

1. What is chi-square test?
2. Discuss the concept of one-tailed test.
3. Explain QD. Mention its merits and demerits.
4. Discuss non-normal distribution in terms of skewness.

C. Answer any two from the following questions: **10×2= 20**

1. In a school, 100 students are assigned into five grades on the basis of their academic performance- A 10, B 20, C 40, D 20 and E 10 students. The grade distribution is normal. Test the hypothesis by x^2 test. **10**
2. The mean of a frequency distribution is 100 and SD is 20. Assume the distribution is normal-
   a. Find the limit above 30%.
   b. Find the middle 70%. **5+5=10**

P.T.O.

3. The scores of two groups of 10 students based on a performance test are shown below:

Group X	18	34	22	15	17	32	33	23	50	11
Group Y	24	38	35	19	41	33	22	38	42	18

Compute the means for both groups and test the significance of the difference between these two means. **10**

D. Answer any two from the following questions: **15×2= 30**

1. a) The popularity of five TV brands is rated by three experts. The recorded data is shown below-

Rating of Experts	TV Brands				
	Sony	Samsung	LG	Panasonic	Vizio
X	3	4	1	5	2
Y	4	5	2	1	3
Z	1	3	4	2	5

Test the difference between groups by adopting the analysis of variance technique. **15**

Or

b) Write short notes on: **5+5+5= 15**

i. One-tailed and two-tailed test
ii. Null hypothesis
iii. Co-efficient of correlation

2. a) What is 't' distribution? Two groups are matched on the basis of intelligence. One group is from professional courses and other from academic courses. Their vocational ability is compared and the data is shown below:

	Professional Group	Academic Group
Mean	104.45	104.62
SD	32.60	31.28
Size of the group	125	125

P.T.O.

Does the groups differ significantly? **5+10=15**

Or

b) Explain the concept of parametric and non-parametric tests. Point out some major differences between them. **8+7= 15**

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