S.NO. 131 BATCH: 2016 Reg. No. \0

END OF SEMESTER EXAMINATIONS, NOVEMBER - 2017
STATISTICS FOR BUSINESS RESEARCH
SUBJECT CODE: 16P3CO11/16P3CC04

MAJOR: M.Com. / M. Com.(CA) **SEMESTER : III**
TIME : 3 HOURS **MAX. MARKS: 70**

SECTION – A (5 X 5 = 25)

Answer Any FIVE Questions:

1. Find the Geometric mean for the data given below:

Marks	Frequency	Marks	Frequency
4-8	6	24-28	12
8-12	10	28-32	10
12-16	18	32-36	6
16-20	30	36-40	2
20-24	15		

2. The annual salaries of a group of employees are given in the following table:

Salaries in Rs.000	45	50	55	60	65	70	75	80
Number of persons	3	5	8	7	9	7	4	7

Calculate the standard deviation of the salaries.

3. Two ladies were asked to rank 7 different types of lipsticks. The ranks given by them are as follows:

Lipsticks	A	B	C	D	E	F	G
Neelu	2	1	4	3	5	7	6
Neena	1	3	2	4	5	6	7

Find Spearman's Rank Correlation coefficient.

4. What are the procedures for testing hypothesis?
5. What are the types of estimation?
6. A random sample of size 16 has 53 as mean. The some of squares of the deviations taken from mean is 135. Can this sample be regarded as taken from the population having 56 as mean? (for v =15, $t_{0\text{-}05}$ = 2.13 for v = 15, $t_{0\text{-}10}$ = 2.95)
7. What are the advantages of Non-parametric tests?
8. A sample analysis of examination results of 500 students was made. It was found that 220 students had failed, 170 had secured a third class, 90 were placed in second class and 20 got a first class. Are these figures commensurate with general examination result which is the ratio of 4:3:2:1 for the various categories respectively. (the table value of X^2 for 3 d.f at 5% level of significance is 7.81)

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SECTION – B (3 X 15 = 45)

Answer Any THREE Questions:

9. Explain the scope of statistics.
10. Calculate the coefficient of correlation between X and Y from the following data and calculate probable error. Assume 69 and 112 as the mean value for X and Y respectively.

X	78	89	99	60	59	79	68	61
Y	125	137	156	112	107	136	123	108

11. Explain the components of Time series Analysis.
12. To assess the significance of possible variation in performance in a certain test between the convent schools of a city, a common test was given to a number of students taken at random from the senior fifth class of each of the four schools concerned. The results are given below. Make an analysis of variance of data.

Schools	A	B	C	D
	8	12	18	13
	10	11	12	9
	12	9	16	12
	8	14	6	16
	7	4	8	15

13. Twenty-four applicants for a position are interviewed by three administrators and rated on a scale of 5 as to suitability for the position. Each applicant is given a "suitability score which is the sum of the three numbers. Although college education is not a requirement for the position, a personnel director felt that it might have some bearing on suitability for the position. Raters made their ratings on the basis of individual interviews and were not told the educational background of the applicants. Twelve of the applicants had completed at least two years of college. Use Mann Whitney U-test to determine whether there was a difference in the scores of the two groups. Use of 0.05 level of significance Group A had an educational background of less than two years of college, while group B had completed at least two years of college.

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