

FIRST SEMESTER M.Com. DEGREE EXAMINATION, DECEMBER 2019

(CUCSS)

M.Com.

MC 1C 2—QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

(2015 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A*Answer all questions.**Each question carries 1 weightage.*

1. What are distribution free test ?
2. What is probable error ?
3. State the hypothesis of χ^2 .
4. State the limitations in correlation analysis.
5. What is P Chart ?
6. What is estimator ?

(6 × 1 = 6 weightage)

Part B*Answer any six questions.**Each question carries 3 weightage.*

7. Explain regression analysis in SPSS.
8. Check Chi-square as test of homogeneity.
9. What are the techniques of statistical quality control ?
10. In an experiment on pea breeding, method obtained the following frequencies of seeds : 315 round and yellow, 101 wrinkled and yellow, 108 round and green, 32 wrinkled and green. According to the theory of heredity the numbers should be in proposition 9:3:3:1. Is there any evidence to doubt the theory $\alpha = 0.05$ level of significance.
11. Life Insurance Corporation found that mean age of death of 64 workers in a factory is 64 years with standard deviation 8 years. What are the 99% confidence and 95% confidence limits for mean age of workers in that factory for insuring them ?

Turn over

12. A sample of 300 screws has a mean length of 3.4 cm with standard deviation of 2.61 cm. Can it be regarded as a sample from a population with mean length of 3.25 cm, at $\alpha = 0.01$?
13. The values in one sample are 53, 38, 69, 57, 46, 39, 73, 48, 73, 74, 60 and 78. In other sample they are 44, 40, 61, 52, 32, 44, 70, 41, 67, 72, 53 and 72. Test at 10% level the hypothesis that they are from population with same mean. Apply U test.
14. Given following data relating to social status and state of intelligence. Test whether intelligence is related so social status :

	Dull	Intelligent	Brilliant	Total
Lower	22	35	23	80
Middle	38	70	32	140
Upper	60	20	20	100
Total	120	125	75	320

(6 × 3 = 18 weightage)

Part C

Answer any two questions.

Each question carries 6 weightage.

15. The following figures give the number of defective in 20 samples, one sample containing 2000 items :

425 430 216 341 225 322 280 306 337 305
 356 402 216 264 126 409 193 326 280 389

Calculate the values for central line and control limits for p -chart. Draw the p chart and comment if the process can be regard as under control or not ?

16. Following were the ranks given by three judges in a beauty context. Determine which pair of judges has the nearest approach to Common tastes in beauty :

Judge 1 : 1 6 5 10 3 2 4 9 7 8
 Judge 1 : 3 5 8 4 7 10 2 1 6 9
 Judge 1 : 6 4 9 8 1 2 3 10 5 7

17. Discuss the significance of any three parametric test in social science research.

(2 × 6 = 12 weightage)