

FIRST SEMESTER M.Com DEGREE EXAMINATION, NOVEMBER 2024
(Regular/Improvement/Supplementary)

COMMERCE

FMCM1C03- QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

Time: 3 Hours

Maximum Weightage: 30

Part A: Answer any *four* questions. Each carries *two* weightage.

1. What do you mean by inferential analysis?
2. Distinguish between a parameter and a statistic.
3. What is a scatter diagram?
4. Define quantitative techniques.
5. What are the assumptions of *t* test?
6. Elaborate on ANOVA.
7. What is interval estimation?

(4 × 2 = 8 weightage)

Part B: Answer any *four* questions. Each carries *three* weightage.

8. What are Type I and Type II errors?
9. One thousand articles from a factory were examined and found to be 3% defective. Among 1500 similar articles from a second factory, 2% are found to be defective. Can it be reasonably concluded that the product of the first factory is inferior to the second?
10. What are the properties of correlation coefficient?
11. Co-efficient of correlation between two variables X and Y is 0.3. The co-variance is 9. The variance of X is 25. Find the standard deviation of Y series.
12. A random sample of 200 tins of coconut oil gives an average weight of 4.95 kg with a SD of 0.21 kg. Do we accept the hypothesis of net weight of 5 kg per tin at 1% level?
13. The following table gives the number of units produced per day by two workers A and B for a number of days.

A: 40 30 38 41 38 35

B: 39 38 41 33 32 39 40 34

Should these results be accepted as evidence that the two workers are equally stable?
Use F test.

14. What are estimators and parameters?

(4 × 3 = 12 weightage)

(P.T.O.)

Part C: Answer any two questions. Each carries *five* weightage.

15. Discuss the scope and limitations of quantitative techniques.
16. i) Explain the procedure of testing the given population mean.

ii) What are tailed tests of hypothesis?
17. Explain the use of Excel and SPSS for quantitative analysis.
18. a) What are the assumptions and uses of large sample tests?

b) Below are given gain in weight (lbs) of cows fed with two diets X and Y.

X: 25 32 30 32 24 14 32

Y: 24 34 22 30 42 31 40 30 32 35

Test at 5% level whether the diets differ as regards their effect on mean increase in weight ($t = 1.753$).

(2 × 5 = 10 weightage)