

FACULTY OF SCIENCE
B.Sc. (CBCS) III-Year (V-Semester) Regular Examinations, Dec-2022/Jan-2023
Statistics-V/B
(Analytical Statistics-I)

Time: 3 Hours

Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. What are the types of sampling discussed in Sample surveys?
2. What are the four main components of Time Series?
3. What are four 'M's in Statistical quality control?
4. Define Cochran's theorem?
5. Quota sampling Randomized.
6. Estimate the missing value of Ransomised Block Design.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

7. (a) Discuss the principal steps in sample survey and also discuss sampling errors.
(OR)
(b) Prove that sample mean square is an unbiased estimator of the population variance.
8. (a) Explain Modified Exponential Growth, Derive the method of 3 selected points.
(OR)
(b) Explain and derive Gopertz curve and derive the Gompertz curve $y = ab^x$.
9. (a) Explain the 3σ control limits for Mean and Range Chart.
(OR)
(b) Explain ' p ' and ' np ' chart for varying sample size.
10. (a) Explain the Statistical analysis of Completely Randomized design and prepare Anova table.
(OR)
(b) Estimate the missing value in Latin Square design.