

TB165155E

Reg. No.:

Name :

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2018
(2016 Admission Regular & 2015 Admission Supplementary)
SEMESTER V- CORE COURSE (COMPUTER APPLICATIONS)
CAS5B05TB - SAMPLE SURVEY AND DESIGN OF EXPERIMENTS

Time: Three Hours

Maximum Marks: 80

PART A

I. Answer all questions . Each question carries 1 mark.

1. Define non probability sampling.
2. What is the distribution of error term in a Stochastic Linear Model?
3. Define a stratum in stratified sampling.
4. Define population.
5. Explain local control.
6. Give the linear model for analyzing a one way classified data.

(6 × 1 = 6)

PART B

II. Answer any seven questions. Each question carries 2 marks.

7. Compare SRSWOR and SRSWR
8. What is circular systematic sampling?
9. State the assumptions used in ANOVA.
10. Suppose N units of a population are labeled serially from 1 to N. Write down the possible Systematic samples when (i)N = 11 ,n = 4 ;(ii)N = 20,n = 4
11. Obtain the expression for variance in the case of Proportional allocation.
12. Give a necessary and sufficient condition for the estimability of a parametric function.
13. What are the advantages of LSD?
14. What is the use of Missing plot techniques?
15. Define design of experiment.
16. Discuss the efficiency of RBD over CRD.

(7 × 2 = 14)

PART C

III. Answer any five questions. Each question carries 6 marks.

17. Show that sample mean square is an unbiased estimator for population mean square in the case of SRSWOR?
18. Describe the random number table method of selection of a simple random sample?
19. Explain systematic sampling.
20. Obtain the expression for sample size of hth stratum in Neymann allocation.

21. Describe the following fundamental principles :
 - (a). Randomization
 - (b). Replication
22. Explain the concept of analysis of variance.
23. In a Latin square design, one observation is missing. Explain how will you estimate it.
24. Find the relative efficiency of LSD over CRD.

(5 x 6 =30)

PART D

III. Answer any two questions. Each question carries 15 marks.

25. What are the important steps in the sample survey? Explain each.
26. Explain different allocation techniques of sample sizes to the different strata in stratified sampling?
27. Explain how do you estimate a missing observation in RBD. Develop the ANOVA.
28. Develop the analysis of a two way classified data .

(2 x 15=30)