Total no of Pages: 1

Register Number: 5431

Name of the Candidate:

B.Sc. DEGREE EXAMINATION, 2011

(DOUBLE DEGREE)

(STATISTICS)

(PART-III: PAPER-V)

750. SAMPLING THEORY

Dec.) (Time: 3 Hours

Maximum: 100 Marks

SECTION-A (8×5=40)

Answer any EIGHT questions

All questions carry equal marks

1. Distinguish between SRSWR and SRSWOR
2. State the advantages and disadvantages of systematic sampling.
3. Explain the Raj ordered estimator.
4. Describe PPS sampling without replacement
5. What is cluster sampling? When is it applicable?
6. Explain two-stage sampling with an example.
7. What is double sampling? What is its importance?
8. Explain the optimum allocation in double sampling.
9. What are non-response errors? What are its sources?
10. Explain inter-penetrating sub samples.

SECTION-B (3×20=60)

Answer any FIVE questions

All questions carry equal marks

11. a) Explain the procedure of linear and circular systematic sampling.
    b) In the usual notations prove that
    V_{opt} £V_{prop} £V_{ran}

12. a) Obtain the Hurwitz –Thompson estimator.
    b) Describe Murthy's unordered estimator

13. a) Compare and contrast between cluster sampling and stratified sampling.
    b) Derive an expression for the estimation of it's population total and find its variance.

14. a) Explain double sampling for stratification.
    b) Discuss the ratio estimator under double sampling.

15. a) Distinguish between sampling and non-sampling errors. How are they controlled in field surveys?

b) Describe the model for measurement of observational errors.

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