

2020

STATISTICS — HONOURS

Paper : SEC-A-2

(Research Methodology)

Full Marks : 80

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer **any fifteen** questions : 2×15
- (a) What is the difference between Interval scale and Ratio scale?
 - (b) What is emperical research?
 - (c) Mention some important sample designs.
 - (d) What is double blind study?
 - (e) Differentiate between retrospective and prospective study designs.
 - (f) What is a research problem?
 - (g) Explain confounded relationship.
 - (h) What is the difference between cross-sectional data and time-series data?
 - (i) What do you mean by non-response error in connection to data collection?
 - (j) What is cohort study?
 - (k) Explain before and after study design.
 - (l) In what situation stratified random sampling design is used to collect data?
 - (m) Explain Control Research design.
 - (n) What is snow-ball sampling?
 - (o) What is the difference between informal experimental design and formal experimental design?
 - (p) In connection with sampling, explain the term 'Population'.
 - (q) What is Research Hypothesis?
 - (r) Write three principles of design of experiments.
2. Answer **any six** questions : 5×6
- (a) Discuss relative merits and demerits of summated rating scale vs cumulative scale.
 - (b) Give some criteria of a good research.

Please Turn Over

- (c) Discuss some problems that are usually faced by the researchers in India.
- (d) What is the difference between a questionnaire and a schedule?
- (e) Mention (with example) the different situations where probability sampling design and non-probability sampling design are used.
- (f) Give some characteristics of research hypothesis.
- (g) Briefly describe Thurstone scale.
- (h) Explain Internal and External validity in connection to research methodology.

3. Answer *any two* questions :

10×2

- (a)
 - (i) Briefly describe different methods of collecting data.
 - (ii) Write a short note on coverage error.
 - (b)
 - (i) Discuss various techniques for data analysis.
 - (ii) What is a research proposal? Give the contents of a research proposal.
 - (c) Distinguish between —
 - (i) Field Research and Laboratory Research
 - (ii) Sampling Error and Non-sampling error
 - (iii) Quota sampling and purposive sampling.
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