

2023

STATISTICS — GENERAL

Paper : GE/CC-4

(Applications of Statistics)

Full Marks : 50

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 five** questions : 2×5
- (a) How many sample of size 2 can be drawn from a population of size 4 under SRSWR and SRSWOR?
 - (b) What is finite population correction?
 - (c) Define seasonal variation of a time series.
 - (d) If Laspeyres index is 121 and Paasche's index is 144, what will be the value of Fisher's ideal index?
 - (e) Define Crude Birth Rate.
 - (f) What do you mean by base year in construction of index number?
 - (g) In what sense can 'NRR' be regarded as a measure of population growth?
 - (h) State two disadvantages of moving average method.
2. Answer **any two** of the following : 5×2
- (a) Distinguish between stratified sampling and systematic sampling.
 - (b) Discuss the various problems in the construction of index numbers.
 - (c) Define Crude Death Rate and Specific Death Rate, and discuss their merits and demerits.
3. Answer **any three** of the following :
- (a) Explain the different methods of construction of index numbers. 10
 - (b) What is secular trend in time series? Discuss the method of mathematical curve fitting in measuring secular trend. What are the merits of this method? 2+6+2
 - (c) Distinguish between 'SRSWR' and 'SRSWOR'. Derive the standard error of sample proportion in case of 'SRSWR'. 4+6

Please Turn Over

- (d) What is cost of living index number? How will you construct a cost of living index number for labourers in the industrial areas in West Bengal? 2+8
- (e) Write short notes on : 5×2
- (i) General Fertility Rate
 - (ii) Total Fertility Rate.
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