



CB – 178

55

VI Semester B.Sc. Examination, August/September 2023
(CBCS) (F+R) (2019 – 20 and Onwards)
STATISTICS – VII
Applied Statistics

Time : 3 Hours

Max. Marks : 70

- Instructions** : 1) Answer **any five** questions from Section – A and **any five** questions from Section – B.
2) Scientific calculators are **permitted**.

SECTION – A (25 marks)

I. Answer **any five** questions.

(5×5=25)

- 1) What is a time series ? Explain its components.
- 2) Explain the method of finding trend by fitting straight line equation.
- 3) Define index number. Write uses and limitations of index numbers.
- 4) Explain the steps involved in the construction of cost of living index number.
- 5) What is the meaning of vital statistics ? Write its uses.
- 6) What is a life table ? Explain its construction.
- 7) Explain statistical system of post independence India.
- 8) Explain the function of N.S.S.O.



SECTION – B (45 marks)

II. Answer **any five** questions.

(5×9=45)

- 9) Explain :
- i) Semi average method in time series.
 - ii) Construction of seasonal indices by ratio to moving average method. 9
- 10) What are time reversal test and factor reversal test ? Show that Fisher index number satisfies both time reversal test and factor reversal test. 9

P.T.O.



- 11) a) Define :
- CDR (Crude Death Rate)
 - ASDR (Age Specific Death Rate)
 - IMR (Infant Mortality Rate)
 - MMR (Maternal Mortality Rate).
- b) Explain Gross Reproduction Rate and Net Reproduction Rate. (4+5)
- 12) a) Explain census method and registration method of collecting vital statistics.
- b) Write a short note on :
- i) Central mortality rate.
 - ii) Force of mortality. (4+5)
- 13) Explain the following.
- i) Randomized control studies.
 - ii) Cross sectional studies.
 - iii) Observational studies.
 - iv) Case control studies. 9
- 14) a) What is meant by odds ratio ? Interpret it and write 95% confidence interval for odds ratio.
- b) Distinguish between prospective and retrospective studies. (5+4)
- 15) a) Define the term GDP, NNP.
- b) What is National Income ? Mention the methods of estimating National Income. (4+5)