



UG – 177

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VI Semester B.Sc. Examination, September/October 2022
(CBCS) (F + R) (2019 – 20 and Onwards)

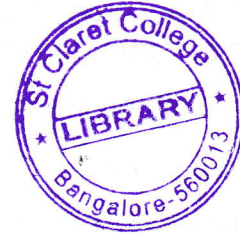
STATISTICS – VII
Applied Statistics

Time : 3 Hours

Max. Marks : 70

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

SECTION – A (25 Marks)



I. Answer **any five** questions :

(5×5=25)

- 1) Define time series. Explain irregular variation.
- 2) Explain semi average method.
- 3) Define index number. Why Fisher's index number is called an ideal index number ?
- 4) Explain the steps involved in the construction of index number.
- 5) Explain census method and registration method of collecting vital statistics.
- 6) Define the terms cohort, radix, longevity, expectation of life and force of mortality.
- 7) Explain statistical system of post-independence India.
- 8) Write uses of National Income Statistics.

SECTION – B (45 Marks)

II. Answer **any five** questions :

(5×9=45)

- 9) a) Explain method of fitting quadratic trend equation.
b) Explain construction of seasonal indices by ratio to moving average method. (5+4)
- 10) a) Show that Marshall-Edgeworth price index number satisfies only TRT but not FRT.
b) If $P_{01}^P < P_{01}^L$ then prove that $P_{01}^P < P_{01}^F < P_{01}^L$. (5+4)

P.T.O.



- 11) a) Write a short note on measurement of population.
b) Define the terms :
- 1) Age specific fertility rate
 - 2) Female age specific fertility rate
 - 3) Total fertility rate
 - 4) Gross reproduction rate
 - 5) Net reproduction rate. (4+5)
- 12) a) Given age (x) and number of individuals at age x(l_x), how do you find the other components of life table ?
b) Distinguish between stable population and stationary population. (6+3)
- 13) Explain the following :
- 1) Randomized control studies
 - 2) Cross sectional studies
 - 3) Observational studies
 - 4) Case control studies. 9
- 14) a) Define relative risk. Obtain $(1 - \alpha)$ 100% confidence interval for relative risk.
b) Write down uses of ROC curve. (5+4)
- 15) a) Write a short note on NSSO.
b) Define the terms NNP and NDP. (5+4)
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