



NP – 240

33

VI Semester B.Sc. Examination, July/August 2024

(NEP Scheme)

STATISTICS – VIII

Applied Statistics

Time : 2½ Hours

Max. Marks : 60

**Instructions :** 1) **Scientific** calculators are **permitted**.

2) **Statistical tables** and **graph sheets** are **provided on request**.

PART – A

Answer **any four** questions. (2 marks **each**)

(4×2=8)

1. Define Linear Programming Problem (LPP).
2. Define basic feasible solution.
3. What do you mean by complete enumeration method of assignment problem ?
4. What do you mean by index number ?
5. Define time series.
6. Define force of mortality.

PART – B

Answer **any four** questions. (5 marks **each**)

(4×5=20)

7. Define operation research and explain the scope and importance of OR.
8. Explain the North-West corner method.
9. Explain the dominance principle of solving a game problem.
10. a) What are time reversal and factor reversal tests of index numbers ?  
b) Why is Fisher's index number known as ideal index number ?
11. What do you understand by seasonal variation ? What are the methods used to determine them ?
12. Define vital statistics. Explain the uses and sources of it.

P.T.O.





## PART – C

Answer **any four** questions. (8 marks each)

(4×8=32)

13. Explain simplex method of solving a LPP. 8
14. Explain the Vogel's approximation method to solve a transportation problem. 8
15. What do you mean by game theory ? Explain the following terms : 8
- i) Two-person zero sum game
  - ii) Strategy
  - iii) Pay-off.
16. a) Explain the problem of the construction of index numbers with special reference to
- i) Selection of base period
  - ii) Price quotations
  - iii) Selection of appropriate weights.
- b) What is consumer price index number ? What are its uses ? (5+3)
17. a) What is a secular trend ? Describe the method of measuring trend by fitting a curve of the type  $y = ab^x$ .
- b) Explain business cycle. (5+3)
18. a) What are clinical trials ? State its phases.
- b) Distinguish between prospective and retrospective studies. (4+4)