



K17U 0569

Reg. No.: .....

Name: .....

**IV Semester B.A. Degree (CBCSS – Reg./Supple./Imp.)  
Examination, May 2017  
(2014 Admn. Onwards)**

**Complementary Course in Economics  
4C04 ECO : MATHEMATICAL ECONOMICS – II**

Time : 3 Hours

Max. Marks : 40

**PART – A**

Answer **all** questions. **Each** carries 1 mark.

1. A feasible solution of LPP is said to be \_\_\_\_\_ if it optimizes the objective function,  $z$ , of the problem.
2. \_\_\_\_\_ are mirror image problems of primal problems.
3. The assumption of LPP, the solution need not be in whole numbers is \_\_\_\_\_.
4. \_\_\_\_\_ method is an iterative procedure in which we proceed in systematic steps from an initial basic feasible solution to other basic feasible solution. (4×1=4)

**PART – B**

Answer **any 7** questions. **Each** carries 2 marks.

5. What are the requirements for employing LPP technique ?
6. What are the main features of input output analysis ?
7. Explain closed model of LPP.
8. What is saddle point ?
9. What are the pure strategy and mixed strategy ?
10. Explain duality in LPP.
11. What is general LPP ?

K17U 0569



12. Distinguish between feasible solution and optimal solution.
13. What are the applications of LPP in industry and management ?
14. What is two person zero sum game ?

(7×2=14)

PART - C

Answer any 4 questions. Each carries 3 marks.

15. Find the dual of following primal

$$\text{Min. } Z = 4x_1 + 2x_2 + x_3$$

$$\text{Subject to } x_1 + x_2 \leq 10$$

$$3x_1 + x_2 + x_3 \geq 23$$

$$7x_1 - x_3 = 6, x_1, x_2, x_3 \geq 0.$$

16. Explain the maximum and minimum strategy of game theory.
17. Explain economic interpretation of the dual.
18. Explain simplex Tableau.
19. What is technological matrix ?
20. State Hawkin-Simon condition for viability of an input-output system.
21. Explain how a game problem is solved by graphic method.

(4×3=12)

PART - D

Answer any 2 questions. Each carries 5 marks.

22. Explain the methods for solving LPP.
23. Solve using simplex
- $$\text{Maximize } Z = 5x_1 + 3x_2$$
- $$\text{Subject to } x_1 + x_2 \leq 2$$
- $$5x_1 + 2x_2 \leq 10$$
- $$3x_1 + 8x_2 \leq 12, x_1, x_2 \geq 0.$$
24. Explain the advantages and limitations of LPP.

(2×5=10)