

# School of Finance and Commerce

Department of Finance and Commerce

Mid Term Examination

Exam Date: 30 Sep 2023

Time : 90 Minutes

Marks : 50

## Sem III - MBAF0904 - Quantitative Techniques for Managers

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

- 1) Infer the mathematical formula of transportation problem. K2 (2)
- 2) Outline the conditions for the application of optimality test in case of transportation problem? Briefly explain as to why these conditions should be satisfied. K1 (3)
- 3) Extend the features of assignment problem K2 (4)
- 4) Explain the infeasible solution in linear Programming, and how does it occur? How is this condition recognized in the graphical method? K2 (6)
- 5) Demonstrate the conditions in the LPP having more than one optimal solution? K3 (6)
- 6) Construct the unbound solution, and how does it occur in graphical method? K3 (9)
- 7) "It is an improved version of the Minimum Cell Cost Method and the Northwest Corner Method", Point out the method stated in this statement. K4 (8)
- 8) Simplify the situation of optimally in assignment problem. K4 (12)

**OR**

A company produces two types of items P and Q that require gold and silver. Each unit of type P requires 4g silver and 1g gold while that of type Q requires 1g silver and 3g gold. The company can produce 8g silver and 9g gold. If each unit of type P brings a profit of `44 and that of type Q `55, Illustrate the number of units of each type that the company should produce to maximise the profit. What is the maximum profit? K4 (12)