



**BIJU PATNAIK INSTITUTE OF INFORMATION TECHNOLOGY
& MANAGEMENT STUDIES, BHUBANESWAR**

Semester : 4th Sem. MBA
Batch : 2023-25
Subject : Operations Research Applications
Subject Code : 18MBA403D

Date : 05.03.2025
Class Test – I
Duration : 1 Hr.
Full Marks : 30

Section- A

1. Answer any four out of following questions. [4 x 2 = 8]
- a) Write two applications of operations research. [CO1]
 - b) What is meant by a mathematical model of a real situation? [CO1]
 - c) What is travelling salesman problem? How is it different from assignment problem? [CO1]
 - d) What is the basic difference between LPP and IPP? [CO1]
 - e) What is unbalanced transportation problem? [CO1]

Section-B

2. Answer any two questions out of following [2 x 6 = 12]
- (a) Explain the different steps involved in Branch and Bound method. [CO1]
 - (b) Find the initial basic feasible solution of following TP using NWCR and find the minimum transportation cost. [CO2]

Plant (Origins)	Distribution centers(Destinations)				
	D1	D2	D3	D4	Supply
O1	2	3	11	7	6
O2	1	0	6	1	1
O3	5	8	15	9	10
Demand	7	5	3	2	

- (c) Solve the following TSP and find the minimum cost. [CO2]

From	TO				
	A	B	C	D	E
A	∞	4	7	3	4
B	4	∞	6	3	4
C	7	6	∞	7	5
D	3	3	7	∞	7
E	4	4	5	7	∞

Section-C

3. Answer any one out of following questions. [1 x 10 = 10]
- a) Define operations research? Describe various scopes of operation research. (CO-1)
 - b) Solve the following IPP using Branch & bound cutting method. (CO-2)
Max $Z = x + y$
Subject to constraints
 $3x + 2y \leq 5$
 $y \leq 2$
 $x, y \geq 0$.

All the Best



**BIJU PATNAIK INSTITUTE OF INFORMATION TECHNOLOGY
& MANAGEMENT STUDIES, BHUBANESWAR**

Semester : 4th Sem. MBA

Batch : 2023-25

Subject : Management of Manufacturing System

Subject Code : 18MBA401D

Date : 04.03.2025

Class Test – I

Duration : 1 Hr.

Full Marks : 30

Section- A

1. Answer any four out of following questions. [4 x 2 = 8]
- a) Write-down the Objective of Manufacturing Process Planning. [CO1]
 - b) What do you mean by Mass Production? [CO1]
 - c) Define Assembly Lines with suitable example. [CO1]
 - d) What are the Factors that affecting Facility Layout? [CO1]
 - e) Define Production Flow Analysis (PFA). [CO1]

Section-B

2. Answer any two questions out of following [2 x 6= 12]
- a) Briefly describe the Impact of Layout Planning in Manufacturing Environment. [CO1]
 - b) Briefly write down the function and objectives of Cellular Manufacturing Systems. [CO1]
 - c) How to measure Process Map and explain the role of Process Mapping in Work Environment. [CO2]

Section-C

3. Answer any one out of following questions. [1 x 10= 10]
- a. What do you mean by Scale Models? Define Process Mapping? Briefly explain Process definition charts with suitable example. [CO2]
 - b. Define Make-To-Assemble (MTA) manufacturing. Explain Manufacturing Process? Discuss Principles of manufacturing Process Planning with schematic diagram. [CO2]

All the Best



**BIJU PATNAIK INSTITUTE OF INFORMATION TECHNOLOGY
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Semester : 4th Sem. MBA
Batch : 2023-25
Subject : Sourcing Management
Subject Code : 18MBA402D

Date : 03.03.2025
Class Test – I
Duration : 1 Hr.
Full Marks : 30

Section- A

1. Answer any four out of following questions. [4 x 2 = 8]
- a) What are the different types of supplier sourcing? [CO1]
 - b) Differentiate between local and global sourcing? [CO1]
 - c) What are the reasons for outsourcing? [CO1]
 - d) Write 2 differences between sourcing & procurement. [CO1]
 - e) What are the barriers to negotiation? [CO2]

Section-B

2. Answer any two questions out of following [2 x 6= 12]
- a) What do you mean by multiple sourcing? Explain its advantages and disadvantages. [CO1]
 - b) Write advantages and disadvantage of global sourcing. [CO1]
 - c) Why must Organizations develop suppliers? Is supplier development a long-run trend or just a fad? Explain. [CO2]
 - d) Why is negotiation such an important part of purchasing process? [CO2]

Section-C

3. Answer any one out of following questions. [1 x 10= 10]
- a) Briefly explain major strategic issues of sourcing for the success of the firm? [CO2]
 - b) Define risks in sourcing management. Briefly describe the risk management tools and techniques to manage risks related to global sourcing. [CO2]

All the Best