Semester: 4th Sem. MBA/ MBA(BA)
Batch : 2022-24
Subject: Operations Research Applications
Subject Code: 18MBA403D

Date: 21/03/2024
Class Test: I
Duration: 1 Hour
Full Marks: 30

Section-A

A. **Answer all from the following questions.** (2X4= 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

B. **Answer any two from the following questions.** (6x2 =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

C. Answer any one from the following.   (10x1= 10)

a) Define operations research? Describe various scopes of operation research.   CO1)

b) Solve the following IPP using Branch & bound cutting method. CO2

$$\text{Max } Z = x+y$$

Subject to constraints

$$3x+2y \le 5$$
$$y \le 2$$
$$x, y \ge 0.$$

-: Best of Luck:-

Semester: 4th Sem. MBA/ MBA(BA)
Batch : 2022-24
Subject: Management of Manufacturing System
Subject Code: 18MBA401D

Date: 19/03/2024
Class Test: I
Duration: 1 Hour
Full Marks: 30

Section-A

A. Answer any four from the following questions. (2X4= 8)

a) What do you mean by Mass Production? CO1
b) What do you mean by Assembly Lines? CO1
c) What are the Factors that affecting Facility Layout? CO1
d) Define Embossing Process. CO1
e) Define Production Flow Analysis (PFA). CO1

Section-B

B. Answer any two from the following questions. (6x2 =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

C. Answer any one from the following. (10x1= 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

-: Best of Luck:-

BIJU PATNAIK INSTITUTE OF INFORMATION TECHNOLOGY & MANAGEMENT STUDIES, BHUBANEWAR

Semester: 4th Sem. MBA/ MBA(BA)
Batch : 2022-24
Subject: Sourcing Management
Subject Code: 18MBA402D

Date: 20/03/2024
Class Test: I
Duration: 1 Hour
Full Marks: 30

Section-A

A. Answer all from the following questions.   (2X4= 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) Explain systematic risk in the context of sourcing. CO2

   e) What is Request for Proposal in negotiation strategy? CO3

Section-B

B. Answer any two from the following questions.   (6x2 =12)

   a) What do you mean by sole sourcing? Explain its advantages and disadvantages. CO1

   b) Write advantages and disadvantage of global sourcing. CO1

   c) Write a note on various criteria for evaluation of vendor's performance. CO2

Section-C

C. Answer any one from the following.   (10x1= 10)

   What are the methods involved in supplier evaluation and selection? CO3

   Define risks in sourcing management. Briefly describe the risk management tools and techniques to manage risks related to global sourcing. CO2

-: Best of Luck:-