Exam Date & Time: 05-May-2024 (02:30 PM - 05:30 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

IV SEMESTER B.TECH END SEMESTER EXAMINATIONS, APR 2024

SUPPLY AND LOGISTICS MANAGEMENT [MIE 2228]

Marks: 50 **Duration: 180 mins.**

A

Answer all the questions.

Instructions to Candidates: Answer ALL questions Missing data may be suitably assumed

1) With the flow chart describe the cycle view of supply chain management and highlight its subprocesses in any one cycle (5)

A)

B) Describe the revenue management process (3)

C) With example, distinguish push and pull strategy of supply chain management (2)

2) Obtain an initial feasible solution for the following transportation table using Least Cost Method

A)

Source	Destination			Supply
	A	B	C	
1	2	7	4	5
2	3	3	1	8
3	5	4	7	7
4	1	6	2	14
Demand	7	9	18	

(5)

B) Describe green supply chain management (3)

C) Interpret the activities of warehousing (2)

3) With flow chart, discus steps involved in the procurement cycle (5)

A)

B) With the graph, briefly explain the following terms (3)

a. Costs vs. number of facilities

b. Service vs. number of facilities

C) Summarize the factors affecting network design decisions (2)

4) Using the center of gravity method and the information below on the location of the potential markets, determine where the new facility should be located to minimize the total transportation cost and find the resulting LD score using the rectilinear distance method

A)

Market	Volume	X	Y
London	600	1	2
Toronto	400	3	4
Kingston	550	6	4
Barrie	800	2	6

(5)

$$D_{AB} = |X_A - X_B| + |Y_A - Y_B|$$

$$X^* = \frac{\sum(L_i * X_i)}{\sum L_i}$$

$$Y^* = \frac{\sum(L_i * Y_i)}{\sum L_i}$$

B) With flow chart, describe vendor management process (3)

C) Describe reverse logistics (2)

5) With a sketch, describe any three transportation distribution network designs (5)

A)

B) Describe the types of warehouse automation (3)

C) Distinguish between types of cross-docking (2)

-----End-----