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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF MANAGEMENT

TEST 1

Winter Semester: 2021 - 22

Course Code: MGI 244

Course Name: Supply Chain Modelling and Design

Program & Sem: BBA E-Commerce & Supply Chain

Date: 26th April 2022

Time: 03:00PM to 04:00PM

Max Marks: 30

Weightage: 15%

Instructions:

(i) Read the all questions carefully and answer accordingly.

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries ONE marks.

(10Qx 1M= 10M)

1. It is the use of software to automate a supply chain process. [1M](CO1, Knowledge)
a. Supply Chain Networking b. Supply Chain Routing
c. Supply Chain Modelling d. Supply Chain Planning.
2. Which of the following is 'NOT' the function of supply chain modelling. [1M](CO1, Knowledge)
a. Process automation b. Demand Forecasting c. Inventory Planning d. Increasing Cost
3. A _____ is a computerized program used to support determinations, judgments, and courses of action in an organization or a business. [1M](CO1, Knowledge)
a. LMS b. DBS c. DSS d. KPI
4. The decision made by a buyer to buy the same product or recommend the product to others is applicable during _____ behavior [1M](CO1, Knowledge)
a. Pre-Purchase b. Post-Purchase c. Niche-Purchase d. Spatial-Purchase
5. Which among the following factors 'Don't' affect customer reviews on perception about a product [1M](CO1, Knowledge)
a. Personal Experience b. Social Media c. Customer reviews d. Binders
6. Which among the following is 'NOT' the benefits of cloud computing over supply chain [1M](CO2, Application)
a. Interconnected b. Intelligent c. Costlier d. Innovative.

Say True or False:

7. Supply Chain Software are costlier to implement (T/F) [1M](CO2, Application)
8. ERP integrates all individual modules and Software in an organization [1M] (CO2, Application)
9. Agile Systems are more complex than Lean System (T/F) [1M] (CO2, Application)
10. Which is concerned with managing dependencies between various supply chain members and the joint efforts of all supply chain members to achieve mutually defined goals. [1M] (CO1, Knowledge)
- a. Information Coordination b. Logistics Coordination
- c. Supply chain coordination d. ERP

Part B [Thought Provoking Questions]

Answer both the Questions. Each question carries FIVE marks. (2Qx5M=10M)

11. How adopting a right supply chain model system helps a firm to achieve its accurate demand Forecasting for its products and services in the future? Explain in context of OLA cabs model. [5M] (CO1, Knowledge)
12. How product recovery system can improve the ecosystem and builds profitability for an organization? Explain with context of a toy manufacturing company? [5M] (CO1, Knowledge)

Part C [Problem Solving Questions]

Answer the Question. The question carries TEN marks. (1Qx10M=10M)

13. The Order demand for the GYM cycle at Best Buy is 1000 units per month. Best Buy incurs a fixed order placement, transportation, and receiving cost of Rs. 4,000 each time an order is placed. Each cycle costs Rs. 1000 and the retailer has a holding cost of 20 percent. Suggest the best strategy to minimize the supply chain cost and maximize the profit. [10M] (CO1, Knowledge)



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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF MANAGEMENT

TEST 2

Winter Semester: 2021 - 22

Course Code: MGI 244

Course Name: Supply Chain Modelling and Design

Program & Sem: BBA E-Commerce and Supply Chain & IV

Date: 1st June 2022

Time: 03:00PM -04:00PM

Max Marks: 30

Weightage: 15%

Instructions:

- (i) *Read the all questions carefully and answer accordingly.*
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Part A [Memory Recall Questions]

Answer all the Questions. Each question carries TEN marks.

(10Qx 1M= 10M)

1. It is the process of automating the supply chain with the help of software. (CO2, Application)
 - a. Supply Chain Modeling
 - b. Supply Chain Design
 - c. Supply Chain Architecture
 - d. Supply Chain Network.
2. Which process in Supply chain is regarded as taking away the defective products back from the customers and replacing them with the right product (CO2, Application)
 - a. Reverse Logistics
 - b. Re-logistics
 - c. Materials Management
 - d. Resource pulling
3. What is Push-Pull System? (CO3 Comprehension)
4. Write any two Supply Chain Software that use cloud technology? [1M] (CO2, Application)
5. What are Cycle time? [1M] (CO4, Comprehension)
6. Which among the following software is mostly preferred by many of the companies. [1M] (CO2, Application)
 - a. SAP
 - b. Oracle SCM
 - c. Logility
 - d. Automax
7. Transshipments/redistribution could reduce system-wide _____ costs significantly (CO2, Application)
 - a. Inventory
 - b. Logistics
 - c. IT Costs
 - d. Transportation Costs

Say True or False:

8. Supply Chain Modelling is difficult to adopt for an organization (T/F) [1M] (CO2, Application)
9. Supply Chain Software will not perform demand forecasting. (T/F) [1M] (CO2, Application)
10. Supply Chain Modelling systems utilizes AI applications, advanced statistical and mathematical algorithms for accurate data processing and enable decision making. (T/F) (CO2, Application)

Part B [Thought Provoking Questions]

Answer both the Questions. Each question carries FIVE marks. (2Qx5M=10M)

11. How Q R Codes helps to keep track of effective inventory. Explain with example the application of QR Code. [5M] (CO4, Comprehension)
12. “Dell assembles its computers to order and therefore, all processes except for those involved in the procurement cycle are ‘pull’”. List out the advantages of Pull based strategy? [5M] (CO3, Comprehension)

Part C [Problem Solving Questions]

Answer the Question. The question carries TEN marks. (1Qx10M=10M)

13. One of the world’s largest manufacturers of computer chips, Intel needs little introduction. However, the company needed to reduce supply chain expenditure significantly after bringing its low-cost “Atom” chip to market. Supply chain costs of around \$5.50 per chip were bearable for units selling for \$100, but the price of the new chip was a fraction of that, at about \$20. Somehow, Intel had to reduce the supply chain costs for the Atom chip, but had only one area of leverage—inventory. The chip had to work, so Intel could make no service trade-offs. With each Atom product being a single component, there was also no way to reduce duty payments. Intel had already whittled packaging down to a minimum, and with a high value-to-weight ratio, the chips’ distribution costs could not be pared down any further.

The only option was to try to reduce levels of inventory, which, up to that point, had been kept very high to support a nine-week order cycle. The only way Intel could find to make supply chain cost reductions was to bring this cycle time down and therefore reduce inventory. Suggest some measures how the company can reduce the inventory cost. [10M] (CO4, Comprehension)



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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF MANAGEMENT

END TERM EXAMINATION

Winter Semester: 2021 - 22

Course Code: MGI 244

Course Name: Supply Chain Modelling and Design

Program & Sem: BBA E-Commerce and Supply Chain & IV Sem

Date: 30th June 2022

Time: 01:00 PM to 04:00 PM

Max Marks: 100

Weightage: 50%

Instructions:

- (i) *Read the all questions carefully and answer accordingly.*

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries THREE marks.

(10Qx 3M= 30M)

1. What is JIT? (CO1, Knowledge)
2. Say True or False: (CO2, Application)
 - a. Agile systems are 'NOT' compatible with Supply Chain Systems (T/F) (CO2, Application)
 - b. Supply Chain Software will not perform demand forecasting. (T/F) (CO2, Application)
 - c. Supply Chain Modelling systems utilizes AI applications, advanced statistical and mathematical algorithms for accurate data processing and enable decision making. (T/F)
3. Identify the importance of Supplier Management for a pharmaceutical company. How a supply chain software is modelled to perform effective supplier management for the company. (CO4, Comprehension)
4. Match the Following: (CO3, Comprehension)
 - a. Replenishment Cycle X 1. Supplier
 - b. Procurement Cycle X 2. Retailer.
 - c. Distribution Cycle X 3. Logistics.
5. Which of the following statements are 'TRUE' about supply chain software?
 - i. Forecasting uncertainties in delivery cycle
 - ii. Poor Demand Forecast.
 - iii. Demand uncertainties can be measured.
 - iv. Increased customer satisfaction.

a. i, ii, iv b. iii & iv c. i, iii, iv d. only iv (CO2, Application)

6. Say True or False: (CO5, Application)
- a) Agile system are more complex than of Lean systems. (T/F)
 - b) Agile system foster customer to manufacturer and supplier relationship. (T/F)
 - c) Migration to Agile system from existing supply chain software is costlier. (T/F)
7. What are Pull System? Explain with an example. (CO3, Comprehension)
8. . Match the Following: (CO4, Application)
- a. JIT X Reducing Wastages [1 Mark]
 - b. Lean X Assembles and Sub-Assembles [1 Mark]
 - c. BOM X Right product to Right Customer at Right Time. [1 Mark]
9. What is Reverse Logistics? (CO1, Knowledge)
10. Explain the process of E-Procurement in Supplier management. (CO5, Application)

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries EIGHT marks. (5Qx8M=40M)

11. Kia wants to automate its supplier management process. Right at sourcing from perfect supplier and reaching out to the prospective customer. So, explain briefly about the benefits of supply chain modelling in automating the supplier management? (CO5, Application)
12. Mr. Ram runs a bakery, near a college finds an increase in number of customer visits day by day. So, he wishes to increase its productivity by deploying more man-power and making extra investment by purchasing furniture and procuring additional raw materials than usual production. In the light of this context, explain how Bull-Whip effect can happen to his business. (CO3, Comprehension)
13. a. A leading garments manufacturing company is exporting 100 FCL Containers worth of 100 tones of cargo to Spain every month on a count of 10 shipments. Now the company realizes that it is having good move of its company's fabrics in that country. In this regard the company plans to start a production plant in that country. a. Suggest What measures and aspects that company have to think about? b. Write notes on the following? a) Facility Location Planning
b) Transportation Model. (CO4, Application)
14. Bank of Mexico wish to automate its banking system on par with the rising customers' needs for automating the credit formalities and also to avoid manual intervention of credit managers, So in this regard, Explain, how by adopting cloud computing in banking system can benefit the bank and customers? (CO2, Application)
15. "The implementation of an Advanced Planning and Scheduling (APS) Software will take your manufacturing operations to the next level" – Substantiate with sample industrial implementation of your choice. (CO1, Knowledge)

Part C [Problem Solving Questions]

Answer both the Questions. Each question carries FIFTEEN marks.

(2Qx15M=30M)

16. The Production and demand capability of three units in different locations are given below:

Production/Factory	Production Capability (in units)	Average Production per day (in units)	Demand (in units)	Raw Materials Supply per day (in units)
Factory A	1200	1150	1300	1250
Factory B	800	680	950	900
Factory C	1300	1100	1200	1350

1) Calculate the EOQ for the three factories and

2) Calculate and suggest Supply Chain Optimization with regard to demand and supply in different locations. (CO3, Comprehension)

17. Nowadays managing inventory is becoming an increasingly crucial issue for most manufacturing companies. A&F is a foreign direct investment (FDI) company engaged in producing electronic components. As the prices of raw materials and operation costs fluctuates, A&F faces challenge in maintaining a smoother relationship with suppliers, thereby delay in product delivery results in decreased customer satisfaction and production efficiency.

At present A & F is facing an cut throat competition with other Chinese firms in terms of pricing and distribution. In this regard

1) Suggest How by adopting a Supply chain modelling system will benefit the company?

2) List out the advantages of Supply Chain Software?

(CO2, Application)