NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
MBA
SEM: IV - THEORY EXAMINATION (2024 - 2025.)
Subject: Information Systems in Logistics and Supply Chain

Time: 3 Hours   **Max. Marks: 100**

General Instructions:

IMP: *Verify that you have received the question paper with the correct course, code, branch etc.*

*1. This Question paper comprises of **three Sections -A, B, & C.** It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.*

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A   20

1. Attempt all parts:-

1-a.   Role does big data play in the digitalization of supply chains.(co1,k1)   1

    (a)   Converting paper documents to digital formats

    (b)   Enhancing decision-making and predictive analytics

    (c)   Reducing the need for digital technologies

    (d)   Increasing the amount of paperwork

1-b.   Choose one distinguishes digitalizing from digitizing in supply chains.co1 k1   1

    (a)   Digitalizing involves creating digital copies; digitizing involves transforming processes

    (b)   Digitizing involves creating digital copies; digitalizing involves transforming processes

    (c)   Both terms mean the same thing

    (d)   Neither process involves the use of technology

1-c.   Select the primary benefit of using a service-oriented architecture (soa).co2 k1   1

    (a)   It simplifies the user interface

    (b)   It allows for reusability of services

    (c)   It reduces the need for data storage

    (d)   It enhances graphics performance

1-d.   Select one of the main benefits of integrating ai into supply chains co2 k2   1

    (a)   Increased human labor

(b) Higher costs

(c) Enhanced predictive analytics

(d) Decreased automation

1-e.   E-logistics means.co3 k2   1

(a)   A logistics system that relies on manual processes

(b)   A logistics system that uses electronic means to facilitate the movement and tracking of goods

(c)   A logistics system that only involves air transportation

(d)   A logistics system that excludes the use of the internet

1-f.   Does a geographic information system (gis) play in logistics co3 k5   1

(a)   It tracks the financial transactions of logistics companies

(b)   It provides data and tools for mapping and analyzing geographical data

(c)   It encrypts communication between logistics companies

(d)   It manages the scheduling of delivery trucks

1-g.   Select one which of the following is a driver of green purchasing co4 k4   1

(a)   Reducing production costs.

(b)   Complying with environmental regulations.

(c)   Increasing product variety.

(d)   Maximizing immediate profits.

1-h.   Role does efficiency play in sustainable production co4 k2   1

(a)   It focuses solely on minimizing costs.

(b)   It aims to use resources more effectively while reducing environmental impact.

(c)   It prioritizes speed over environmental considerations.

(d)   It ignores social aspects of production.

1-i.   Evaluate the impact of closed-loop supply chains on business profitability.co5 k4   1

(a)   Negative due to increased costs

(b)   Neutral as it does not affect profitability

(c)   Positive as it can reduce costs and create new revenue streams through recycling and reuse

(d)   Negative as it complicates supply chain processes

1-j.   Select one potential challenges in transitioning to a circular economy.co5 k2   1

(a)   Decreased product quality

(b)   Increased operational costs and need for consumer awareness

(c)   Reduced supply chain efficiency

(d)   Increased product lifecycle

2. Attempt all parts:-

2.a.   Define the on-demand service model in e-business.co1 k2   2

2.b.   State the primary purpose of web services in digital business infrastructure co2 k2   2

2.c.	Name two key drivers of e-procurement adoption.co3 k1	2
2.d.	Explain the concept of green purchasing strategies.co4 k4	2
2.e.	Evaluate the effectiveness of current end-of-life management practices in the pharmaceutical industry.co5 k4	2

SECTION-B 30

3. Answer any <u>five</u> of the following:-

3-a.	Discuss the main features of a smart factory in the context of industry 4.0.co1 k4	6
3-b.	Do industry 4.0 technologies enhance supply chain management? co1 k2	6
3-c.	Design a hybrid supply chain system that integrates both edi and ai technologies co2 k3	6
3-d.	Explain how edi facilitates business processes.co2 k2	6
3.e.	Compare and contrast active and passive tracking systems in logistics.co3 k4	6
3.f.	Define green purchasing strategies and explain their importance in sustainable supply chain management.co4 k6	6
3.g.	Apply the concept of green logistics to a case study of a logistics company transitioning from traditional to green logistics practices. What steps should the company take co5 k3	6

SECTION-C 50

4. Answer any <u>one</u> of the following:-

4-a.	Give an example of a retailer successfully implementing an omnichannel strategy and describe its key features.co1 k2	10
4-b.	Integrate the concepts of e-commerce transformation, omnichannel revolution, industry 4.0, digital transformation, and the escm framework to discuss how a traditional retailer can transform into a digital-first organization. co1 k2	10

5. Answer any <u>one</u> of the following:-

5-a.	Describe how web services facilitate communication between different software applications.co2 k2	10
5-b.	Explain the role of service-oriented architecture (soa) in enhancing the flexibility of business processes.co2 k2	10

6. Answer any <u>one</u> of the following:-

6-a.	Explain how satellite global positioning systems (gps) and geographic information systems (gis) work together to improve logistics management.co3 k2	10
6-b.	Explain how would you apply digital signature technology to secure the documentation process in your logistics operations? Describe the implementation process and how it would enhance the security and reliability of your documentation.co3 k2	10

7. Answer any <u>one</u> of the following:-

7-a.	Analyze the components of green purchasing and their impact on the overall sustainability of a business.co4 k4	10

7-b.	Provide examples of how different companies have successfully addressed the drivers of green purchasing to enhance their sustainability.co4 k4	10

8. Answer any <u>one</u> of the following:-

8-a.	Analyze the environmental impacts of transportation within a closed-loop supply chain compared to a traditional linear supply chain. What are the key differences co5 k4	10
8-b.	Assess the potential challenges and benefits for a company transitioning from traditional logistics to a model incorporating green logistics, reverse logistics, and renewable energy. Provide recommendations for overcoming the challenges.co5 k2	10