

R1179

Sub. Code

654201

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Second Semester

Logistics and Supply Chain Management

BUSINESS RESEARCH METHODOLOGY

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. What is the primary focus of applied research? (CO1, K2)
 - (a) Theoretical exploration
 - (b) Practical application
 - (c) Historical analysis
 - (d) Futuristic prediction

2. Which type of research emphasizes the detailed examination of a specific phenomenon? (CO1, K2)
 - (a) Analytical research
 - (b) Descriptive research
 - (c) Synthetic research
 - (d) Experimental research

3. What is the fundamental distinction between a census and sampling in research design? (CO2, K1)
- (a) Methodology of data analysis
 - (b) Scope of data collection
 - (c) Sampling technique
 - (d) Sample size determination
4. What is a crucial consideration for ensuring a good sample in research design? (CO2, K2)
- (a) Size of the sample
 - (b) Representativeness
 - (c) Sampling errors
 - (d) Data collection methods
5. What is the primary distinction between structured and unstructured interviews in data collection methods? (CO3, K2)
- (a) Question format
 - (b) Interviewer's experience
 - (c) Level of standardization
 - (d) Duration of the interview
6. In questionnaire construction, what is the purpose of pre-testing? (CO3, K3)
- (a) Final data analysis
 - (b) Ensuring respondent anonymity
 - (c) Identifying potential issues and refining the questionnaire
 - (d) Selecting the sample size

7. In data processing, what is the primary purpose of coding? (CO4, K3)
- (a) Statistical analysis
 - (b) Standardizing data for easier entry and analysis
 - (c) Data collection
 - (d) Ensuring data confidentiality
8. What measure of central value is resistant to extreme values or outliers in a dataset? (CO4, K3)
- (a) Median
 - (b) Mean
 - (c) Mode
 - (d) Standard Deviation
9. What section of the research report provides a concise overview of the entire study, including key findings and recommendations? (CO5, K5)
- (a) Table of Contents
 - (b) Acknowledgments
 - (c) Executive Summary
 - (d) References
10. In the context of an oral presentation, what is the role of visual aids? (CO5, K5)
- (a) Provide references
 - (b) Enhance audience understanding and retention
 - (c) List acknowledgments
 - (d) Summarize the executive summary

Part B

(5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Explain the significance of historical research in the field of business research methodology. (CO1, K1)

Or

- (b) How do researchers identify research gaps and what techniques can be employed to address these gaps effectively? (CO1, K1)

12. (a) How does the scope of data collection differ between a census and sampling in research design?(CO2, K1)

Or

- (b) How does non-sampling error impact the accuracy of data collected within a sample in research design? (CO2, K2)

13. (a) Explain the significance of primary and secondary sources of data, emphasizing their role in research. (CO3, K2)

Or

- (b) Compare and contrast face-to-face interviews and telephone interviews, discussing the advantages and limitations of each method. (CO3, K3)

14. (a) Explain the steps involved in editing, coding, classification, and tabulation during the data processing stage. (CO4, K3)

Or

- (b) Compare and contrast the measures of central value—mean, median, and mode— highlighting their applicability in different scenarios. (CO4, K4)
15. (a) Discuss the significance of the title page in a research report, highlighting key elements that should be included. (CO5, K4)

Or

- (b) Explain the purpose and content of the introductory section of a research report, emphasizing its role in setting the stage for the study. (CO5, K2)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Analyse the distinctions between qualitative and quantitative research methodologies, highlighting their respective strengths and limitations. (CO1, K4)

Or

- (b) Discuss the relevance and challenges associated with conducting case research in the context of business research methodology. (CO1, K4)

17. (a) Compare probability and non-probability sampling methods. (CO2, K2)

Or

- (b) Discuss factors influencing the size of a sample in research design and how researchers determine an appropriate sample size. (CO2, K3)
18. (a) Elaborate on the process of organizing questions in a questionnaire, discussing the role of structured and unstructured questionnaires in obtaining reliable data. (CO3, K3)

Or

- (b) Examine the role of pre-testing and pilot studies in ensuring the quality and effectiveness of research instruments, providing insights into their implementation and potential outcomes. (CO3, K3)
19. (a) Analyse the impact of outliers on measures of central value, and discuss strategies for handling extreme values during data analysis. (CO4, K4)

Or

- (b) Discuss the ideas and applications of non-parametric tests in business research, highlighting situations where these tests are preferred over parametric tests. (CO4, K4)

20. (a) Elaborate on the guidelines for preparing the body of a research report, providing insights into organizing and presenting detailed analysis and findings. (CO5, K4)

Or

- (b) Discuss the ethical considerations in acknowledging contributions in a research report, emphasizing the importance of giving credit to relevant sources and individuals. (CO5, K5)
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R1180

Sub. Code

654202

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Second Semester

Logistics and Supply Chain Management

SUPPLY CHAIN FINANCE OPERATIONS

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. In the context of supply chain and operations, what does the term “value proposition” refer to? (CO1, K2)
 - (a) Profit margin
 - (b) Benefits offered by the supply chain and operations
 - (c) Operational efficiency
 - (d) Cost reduction strategies

2. Why is understanding supply chain and operations considered important for CEOs? (CO1, K2)
 - (a) It solely impacts production efficiency
 - (b) It has a significant financial impact on the organization
 - (c) CEOs are not concerned with operational aspects
 - (d) It only affects product quality

3. What is the primary purpose of the income statement in financial statements? (CO2, K2)
- (a) Presenting a snapshot of an organizations financial position at a specific point in time
 - (b) Showing the flow of cash during a specific period
 - (c) Detailing revenue and expenses over time
 - (d) Providing insights into an organization's profitability during a specific period
4. Where can information about an organization's long-term assets and liabilities be found in financial statements? (CO2, K2)
- (a) Income statement
 - (b) Balance sheet
 - (c) Statement of cash flows
 - (d) Retained earnings statement
5. In the context of financial statements, what is the value of assets? (CO3, K1)
- (a) The total worth of an organization's resources and properties
 - (b) The total revenue generated during a specific period
 - (c) The cash reserves available at a particular point in time
 - (d) The net income after deducting expenses
6. Which of the following is an example of a non cash transaction in financial statements? (CO3, K2)
- (a) Depreciation of equipment
 - (b) Cash payment for services rendered
 - (c) Purchase of inventory using cash
 - (d) Receipt of cash from a customer

7. In company valuation, what does the term “competitive advantage’ refer to? (CO4, K2)
- (a) The overall market share of the company
 - (b) Distinctive strengths that give a company an edge over competitors
 - (c) The total revenue generated during a specific period
 - (d) The cost of capital for the company
8. What is the purpose of reorganizing traditional financial statements in company valuation? (CO4, K2)
- (a) To manipulate financial data
 - (b) To comply with regulatory requirements
 - (c) To provide a clearer representation of a company’s financial position
 - (d) To conceal project success and failure
9. In supply chain network design, what factors does location selection primarily depend on? (CO5, K1)
- (a) Business strategy and competition
 - (b) Cost behaviour and supply chain metrics
 - (c) DuPont model and value metrics
 - (d) Network design analysis and supply chain modelling
10. What does the DuPont model focus on in the context of supply chain network design? (CO5, K2)
- (a) Location selection
 - (b) Supply and value metrics
 - (c) Business strategy and competition
 - (d) Cost behaviour and supply chain metrics

Part B

(5 × 5 = 25)

Answer **all** questions note more than 500 words each.

11. (a) How does the value proposition of supply chain and operations contribute to the financial success of an organization? (CO1, K3)

Or

- (b) Explain the financial impact of supply chain and operations on organizational value, emphasizing its unique role. (CO1, K2)

12. (a) How do financial statements contribute to organizational management? (CO2, K2)

Or

- (b) Explain the roles of individual elements in financial statements and their impact on presenting a company's financial position. (CO2, K2)

13. (a) Explain the essentials of a financial statement primer, highlighting the value of assets. (CO3, K2)

Or

- (b) Provide examples of noncash transactions in financial statements and discuss their impact. (CO3, K2)

14. (a) How do KPI trees enhance the evaluation of project success and failure in the context of company valuation? (CO4, K3)

Or

- (b) Discuss the role of competitive advantage in determining the overall value of a company during the valuation process. (CO4, K2)

15. (a) How does a well-defined business strategy contribute to a company's competitiveness in the context of supply chain network design? (CO5, K3)

Or

- (b) Explain the key considerations in designing an effective supply chain network and its role in enhancing operational efficiency. (CO5, K2)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Assess the financial challenges and opportunities linked to integrating supply chain and operations strategies in contemporary business. (CO1, K3)

Or

- (b) Elaborate on the CEO's perspective regarding the financial implications of supply chain and operations, considering specific advantages. (CO1, K3)

17. (a) Evaluate the practical uses of financial statements in decision-making within an organization. (CO2, K3)

Or

- (b) Explain the interconnected roles of the balance sheet, income statement, and statement of cash flows in providing comprehensive financial insights. (CO2, K3)

18. (a) Analyse the importance of ratio analysis in financial statements, emphasizing its role in evaluating liquidity, profitability, and valuation. (CO3, K3)

Or

- (b) Elaborate on the types of financial ratios, including liquidity ratios, profitability ratios, and asset management ratios, discussing their applications. (CO3, K3)

19. (a) Assess the role of technological advancements in shaping the landscape of company valuation strategies and methodologies. (CO4, K3)

Or

- (b) Examine the influence of environmental, social, and governance (ESG) factors on contemporary company valuation strategies. (CO4, K3)

20. (a) Evaluate the significance of supply chain network modelling in optimizing operations and supporting strategic decision-making. (CO5, K3)

Or

- (b) Assess the methodologies and tools involved in analysing the effectiveness of a supply chain network design, considering both internal and external factors. (CO5, K3)

R1181

Sub. Code

654203

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Second Semester

Logistics and Supply Chain management

PRODUCTION AND OPERATIONS MANAGEMENT

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective questions by choosing the correct option.

1. What is the key feature of a Continuous/Assembly Line manufacturing system? (CO1, K1)
 - (a) High customization
 - (b) Low volume production
 - (c) High volume production
 - (d) Varied production processes

2. What does Reverse Engineering involve in product development? (CO1, K1)
 - (a) Creating new designs
 - (b) Deconstructing and analyzing existing products
 - (c) Standardizing components
 - (d) Modularizing product features

3. What characterizes a good sampling method in Capacity Determination? (CO2, K1)
 - (a) Non-random selection
 - (b) Equal chance for each element
 - (c) Judgmental selection
 - (d) Convenient sampling
4. What is the primary factor affecting the size of a sample in Facility Planning? (CO2, K1)
 - (a) Research complexity
 - (b) Population size
 - (c) Sampling error
 - (d) Resource availability
5. What is a key factor in selecting a good layout in Production Planning? (CO3, K1)
 - (a) Resource availability
 - (b) Production volume
 - (c) Facility design
 - (d) Flow patterns
6. What is the main goal of Line of Balance in PPC? (CO3, K1)
 - (a) Balancing production lines
 - (b) Allocating resources effectively
 - (c) Planning project schedules
 - (d) Designing product features

7. In PPC, what is Aggregate Production Planning concerned with? (CO4, K1)
- (a) Detailed scheduling of tasks
 - (b) Long-term planning for production
 - (c) Short-term production control
 - (d) Resource allocation for projects
8. What is the purpose of Chi-square Test in statistical analysis? (CO4, K1)
- (a) Testing for means
 - (b) Testing for proportions
 - (c) correlation analysis
 - (d) Association of attributes
9. What is the primary focus of TQM in production management? (CO5, K1)
- (a) Reducing production costs
 - (b) Enhancing product quality
 - (c) Balancing workloads
 - (d) Facility location analysis
10. What does BPR stand for in lean manufacturing? (CO5, K1)
- (a) Business Process Reengineering
 - (b) Balanced Production Ratio
 - (c) Batch Production Replenishment
 - (d) Business Planning and Reporting

Part B

(5 × 5 = 25)

Answer **all** the questions not more than 500 words each.

11. (a) Explain the key characteristics of a Job Shop manufacturing system. (CO1, K2)

Or

- (b) Differentiate between standardization and modularization in product design. (CO1, K2)

12. (a) Determine the capacity planning strategy suitable for a new service industry, considering its unique requirements. (CO2, K3)

Or

- (b) Apply locational break-even analysis to recommend the optimal location for a new manufacturing facility. (CO2, K3)

13. (a) Apply process planning techniques to design an efficient production process for a custom product. (CO3, K3)

Or

- (b) Propose improvements to a specific manufacturing process using Work-study principles. (CO3, K3)

14. (a) Analyse the advantages and disadvantages of adopting a Product Layout in a manufacturing setting. (CO4, K4)

Or

- (b) Evaluate the impact of layout types (Product, Process, Cellular) on workflow and efficiency. (CO4, K4)

15. (a) Evaluate the significance of using Gantt charts and PERT/GERT in project management. (CO5, K5)

Or

- (b) Assess the impact of JIT on reducing production costs and enhancing overall quality. (CO5, K5)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Explain the key characteristics of a Process manufacturing system. Provide examples to illustrate the application of this system in real-world industries. (CO1, K2)

Or

- (b) Develop a product design strategy for a company considering standardization, modularization, and reverse engineering principles. Justify your choices based on their impact on efficiency and cost-effectiveness. (CO1, K2)

17. (a) Apply capacity planning strategies to determine the optimal production capacity for a new manufacturing plant. Consider factors such as market demand, future growth, and competition. (CO2, K3)

Or

- (b) Develop a comprehensive facility planning strategy for a company entering a new market. Consider location, facility design and locational flexibility. Justify your choices. (CO2, K3)

18. (a) Apply work-study techniques to a specific manufacturing process, identifying areas for improvement and proposing solutions. Discuss the potential impact on efficiency. (CO3, K3)

Or

- (b) Develop a process planning strategy for introducing a new product in a manufacturing setting. Consider the product life cycle and potential challenges in the production process. (CO3, K3)
19. (a) Analyse the advantages and disadvantages of adopting a Product Layout in a manufacturing setting. Discuss the specific industries where this layout is most effective. (CO4, K4)

Or

- (b) Evaluate the impact of different layout types (e.g., Process, Group Technology/Cellular Layout) on production efficiency, focusing on a specific industry. Discuss potential challenges. (CO4, K4)
20. (a) Evaluate the strengths and weaknesses of Gantt charts and PERT/GERT in project management. Discuss scenarios where one tool might be more suitable than the other. (CO5, K5)

Or

- (b) Assess the long-term impact of JIT on reducing production costs and improving overall quality. Discuss potential challenges and recommendations for successful JIT implementation. (CO5, K5)

R1182

Sub. Code

654204

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Second Semester

Logistics and Supply Chain Management

EXPORT AND IMPORT MANAGEMENT

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following questions by choosing
the correct option.

1. What is the role of the Export Compliance Department in international trade? (CO1, K1)
 - (a) Managing sales transactions
 - (b) Ensuring compliance with export regulations
 - (c) Handling import documentation
 - (d) Negotiating sales agreements

2. What does the Federal, State, International, and foreign Law encompass in the context of export and import operation? (CO1, K1)
 - (a) Only domestic laws
 - (b) Legal aspect specific to international trade
 - (c) State and federal laws only
 - (d) Local laws of foreign countries

3. What is the focus of the Foreign Corrupt Practices Act (FCPA) in the context of international sales transactions?
(CO2, K1)
- (a) Preventing bribery and corruption
 - (b) Tax compliance
 - (c) Environmental regulations
 - (d) Labor laws
4. In export operations, what does “Isolated sales transactions” refer to?
(CO2, K1)
- (a) Regular, ongoing sales
 - (b) One-time sales occurrences
 - (c) Sales in a specific region
 - (d) Sales through intermediaries only
5. Differentiate between isolated purchase transactions and ongoing purchase transactions in the context of importing
(CO3, K1)
- (a) Duration of transactions
 - (b) Frequency of transactions
 - (c) Complexity of documentation
 - (d) Involvement of distributors
6. How do Import Distributor and Sales Agent Agreements contribute to the efficiency of importing operations?
(CO3, K1)
- (a) Simplifying documentation
 - (b) Streamlining customs considerations
 - (c) Facilitating ongoing purchases
 - (d) Reducing duty rates

7. Analyse the importance of determining the proper classification of a product in global customs considerations. (CO4, K3)
 - (a) Impact on duty rates
 - (b) Influence on country of origin
 - (c) Effect on sales agreements
 - (d) Relationship with FCPA compliance
8. How do the general rules of interpretation contribute to the proper classification of products in international trade? (CO4, K4)
 - (a) Simplifying documentation
 - (b) Clarifying ambiguous tariff schedules
 - (c) Reducing transaction value
 - (d) Facilitating global customs processes
9. Evaluate the drawbacks of unused drawback in international trade. Discuss scenarios where this drawback method might not be advantageous for a company. (CO5, K4)
 - (a) Reducing tariffs
 - (b) Enhancing documentation accuracy
 - (c) Improving country of origin determination
 - (d) Avoiding customs considerations
10. Assess the advantages and disadvantages of foreign processing and assembly operations in the context of international trade. Discuss their impact on overall efficiency. (CO5, K4)
 - (a) Simplifying documentation
 - (b) Streamlining customs considerations
 - (c) Facilitating ongoing purchases
 - (d) Reducing duty rates

Part B

(5 × 5 = 25)

Answer **all** the questions not more than 500 words each.

11. (a) What is the significance of combined export and import departments in streamlining processes?
(CO1, K2)

Or

- (b) Why is record-keeping compliance crucial in international trade, and which department typically manages it?
(CO1, K2)
12. (a) In ongoing sales transactions, explain the essential documentation needed for maintaining compliance.
(CO2, K2)

Or

- (b) How do Export Distributor and Sales Agent Agreements contribute to the efficiency of exporting operations?
(CO2, K2)
13. (a) If a company is engaged in ongoing purchase transactions, propose documentation strategies to maintain compliance.
(CO3, K3)

Or

- (b) How does compliance with Import Sales Agent Agreements contribute to successful importing operations?
(CO3, K3)
14. (a) Evaluate the significance of duty rates in global customs considerations, considering their impact on the overall cost of international trade. (CO4, K4)

Or

- (b) Assess the impact of the proper value declaration on customs considerations and the determination of the country of origin.
(CO4, K4)

15. (a) Propose a scenario where barter and counter trade transactions would be the most suitable methods in international trade. Discuss potential benefits and challenges. (CO5, K5)

Or

- (b) Develop a plan for implementing Manufacturing Drawback in a company involved in international trade. Discuss steps involved and potential impact. (CO5, K5)

Part C (5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Explain the key responsibilities of the Export Compliance Department and its role in ensuring regulatory adherence in international trade. (CO1, K2)

Or

- (b) Evaluate the impact of Federal, State, International, and Foreign Law on the day-to-day operations of export and import departments within an organization. (CO1, K2)

17. (a) Discuss the implications of the Foreign Corrupt Practices Act (FCPA) on exporting operations, emphasizing its role in maintaining ethical standards. (CO2, K2)

Or

- (b) Evaluate the distinctions between isolated sales transactions and ongoing sales transactions, providing examples and their respective documentation requirements. (CO2, K2)

18. (a) Propose a strategy for managing isolated purchase transactions, emphasizing the necessary documentation and compliance measures. (CO3, K3)

Or

- (b) Develop a guide for importers engaged in ongoing purchase transactions, detailing the documentation required at various stages and the compliance procedures. (CO3, K3)
19. (a) Examine the challenges organizations face in determining the proper classification of products in international trade, considering the complexity of global customs regulations. (CO4, K4)

Or

- (b) Critically analyze the general rules of interpretation and their role in determine the proper classification of products, highlighting their strengths and limitations. (CO4, K4)
20. (a) Assess the effectiveness of unused drawback in international trade, considering scenarios where it may not be the most advantageous option for organizations. (CO5, K5)

Or

- (b) Evaluate the viability of foreign processing and assembly operations as a strategic approach in international trade. Discuss potential benefits and challenges. (CO5, K5)
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R1183

Sub. Code

654205

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Second Semester

Logistics and Supply Chain Management

**LOGISTICS LEGAL FRAMEWORK AND MARITIME
DOCUMENTATION**

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective type questions by
choosing the correct option.

1. What is an essential element of a contract under the Indian Contract Act, 1872? (CO1, K2)
(a) Profitability (b) Consent
(c) Uncertainty (d) Ambiguity
2. In a contract, what refers to the voluntary transfer of a right from one party to another? (CO1, K2)
(a) Consideration (b) Assignment
(c) Novation (d) Quasi-contract
3. Which legislation governs bills of lading and carriage of goods by sea, tracing its historical roots? (CO2, K2)
(a) Carriage of Goods Act, 1903
(b) Bills of Lading Act, 1855
(c) Carriage of Goods by Sea Act, 1992
(d) Trade Practices Act, 1974

4. In non-contractual actions related to the carriage of goods, what legal principles are commonly applied?
(CO2, K4)
- (a) Contractual liability only
 - (b) Common law and equity
 - (c) Strict liability
 - (d) Statutory exclusions
5. Which legislation has governed the duties, rights, and liabilities of common carriers in India since 1865?
(CO3, K2)
- (a) Railways Act, 1989
 - (b) Carriage by Road Act, 2007
 - (c) Carriage by Air Act, 1972
 - (d) Carriers Act, 1865
6. Under the Railways Act, 1989, what is the primary focus concerning the duties of common carriers? (CO3, K2)
- (a) Air transportation regulations
 - (b) Road safety protocols
 - (c) Railway operations and liabilities
 - (d) Consumer protection provisions
7. What is the primary objective of Maritime Logistics?
(CO4, K2)
- (a) Profit maximization
 - (b) Efficient sea transportation in supply chains
 - (c) Global marketing strategy
 - (d) Regional trade facilitation

8. Among the listed ship types, which is primarily designed for transporting liquid cargo? (CO4, K2)
- (a) Container vessel
 - (b) Roll-on/roll-off (ro-ro) vessel
 - (c) General cargo ship
 - (d) Tanker
9. What type of charter involves leasing a vessel for a specific journey or route? (CO5, K3)
- (a) Time charter
 - (b) Bare Boat charter
 - (c) Voyage charter
 - (d) Conference charter
10. In maritime trade, what system involves shipping companies collaborating to fix freight rates and regulate services? (CO5, K2)
- (a) Competitive System
 - (b) Rate Dynamics
 - (c) Conference System
 - (d) Multi-modal System

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Explain the concept of “Bailment” and outline the rights and duties of the Bailor and Bailee. (CO1, K3)

Or

- (b) Discuss the elements for creating an agency under the Indian Contract Act, 1872, highlighting the rights and duties of the agent and principal. (CO1, K3)

12. (a) Explain the significance of the Bills of Lading Act, 1855, and the Carriage of Goods by Sea Act, 1992, in governing the transportation of goods. (CO2, K2)

Or

- (b) Discuss the functions of a bill of lading in contracts of carriage, highlighting its roles as a receipt, document of title, and a contract. (CO2, K3)
13. (a) Explain the objectives of the Indian Consumer Protection Act, 1986, and highlight the rights it provides to consumers. (CO3, K4)

Or

- (b) Discuss the procedure for filing a consumer complaint under the Indian Consumer Protection Act, 1986. (CO3, K3)
14. (a) Explain the significance of Coastal and Ocean transportation in Maritime Logistics. (CO4, K4)

Or

- (b) Discuss the characteristics distinguishing Container vessels from Roll-on/roll-off vessels. (CO4, K2)
15. (a) Explain the key principles and practices involved in Chartering, emphasizing their significance in maritime trade. (CO5, K3)

Or

- (b) Differentiate between Voyage, Time, and Bare Boat charters, outlining their distinctive features and applications. (CO5, K3)

Part C

(5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Analyse the legal aspects of capacity to contract and its impact on contract validity. (CO1, K4)

Or

- (b) Examine the concept of “Consent” in contract law, detailing factors and its influence on enforceability. (CO1, K3)

17. (a) Analyse the impact of non-contractual actions in the carriage of goods, considering the application of common law and equity. (CO2, K4)

Or

- (b) Examine statutory transfers related to the carriage of goods, discussing their significance and effects on contractual relationships. (CO2, K3)

18. (a) Explore key provisions of the Carriage by Road Act, 2007, impacting goods transportation on Indian roads. (CO3, K4)

Or

- (b) Assess Railways Act, 1989, influence on duties, rights, and liabilities of common carriers in railway operations. (CO3, K4)

19. (a) Analyse the role of Container ships in revolutionizing global supply chains and their impact on logistics efficiency and trade dynamics. (CO4, K4)

Or

- (b) Examine the economic and strategic importance of the busiest sea routes, particularly in intra-regional trade, and discuss the challenges associated with these routes. (CO4, K4)

20. (a) Evaluate the Freight Structure and Practice in maritime transportation, considering its impact on shipping economics and global trade. (CO5, K4)

Or

- (b) Compare and contrast the dynamics of rates in the maritime industry, exploring the factors influencing rate fluctuations. (CO5, K4)
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R1184

Sub. Code

654401

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Fourth Semester

Logistics and Supply Chain Management

WAREHOUSE AND DISTRIBUTION MANAGEMENT

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective questions by choosing the correct option.

1. A key factor to consider when choosing a warehouse location is: (CO1, K1)
 - (a) Proximity to suppliers
 - (b) Availability of cheap labor
 - (c) Easy access to public transportation
 - (d) All of the above

2. The growth of online shopping has resulted in a shift towards: (CO1, K1)
 - (a) Fewer, larger warehouses
 - (b) More, smaller warehouses
 - (c) Increased reliance on third-party logistics (3PLs)
 - (d) All of the above

3. Which technology provides real-time location and tracking of inventory within a warehouse? (CO2, K1)
- (a) Radio Frequency Identification (RFID)
 - (b) Barcode scanning
 - (c) Pick-to-light system
 - (d) Order Management System (OMS)
4. An indirect activity in a warehouse that consumes time but does not directly contribute to order fulfillment is: (CO2, K1)
- (a) Picking
 - (b) Packing
 - (c) Security
 - (d) Inventory counting
5. A vertical movement solution for heavy pallets in a warehouse is: (CO3, K3)
- (a) Conveyor belt
 - (b) Forklift
 - (c) Pallet jack
 - (d) Automated guided vehicle (AGV)
6. AS/RS systems are most suitable for: (CO3, K3)
- (a) High-volume, low-variety products
 - (b) Low-volume, high-variety products
 - (c) Fragile or perishable goods
 - (d) Items with specific environmental requirements
7. Marketing forces that impact physical distribution decisions include: (CO4, K2)
- (a) Product lifecycle stage
 - (b) Target market demographics
 - (c) Competitor strategies
 - (d) All of the above

8. Effective physical distribution can lead to: (CO4, K2)
- (a) Reduced transportation costs
 - (b) Improved customer satisfaction
 - (c) Increased inventory turnover
 - (d) All of the above
9. Building strong relationships with channel intermediaries helps to: (CO5, K2)
- (a) Increase channel conflict
 - (b) Improve information flow
 - (c) Reduce operating costs
 - (d) All of the above
10. Key performance indicators (KPIs) for evaluating distribution channels include: (CO5, K2)
- (a) Order fulfillment accuracy
 - (b) Inventory turnover rate
 - (c) Customer satisfaction levels
 - (d) All of the above

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) What are the key differences between storage and distribution warehouses? Give an example for each. (CO1, K1)

Or

- (b) Explain the impact of e-fulfillment on modern warehouse design and operations. (CO1, K1)

12. (a) Explain the advantages and disadvantages of paper pick lists compared to technology-based picking methods. (CO2, K2)

Or

- (b) Discuss the role of a warehouse management system (WMS) in optimizing warehouse operations. (CO2, K2)

13. (a) Identify two types of vertical movement solutions used in warehouses. Explain their specific applications. (CO3, K3)

Or

- (b) Briefly describe the concept of an Automated Storage and Retrieval System (AS/RS) and its potential benefits for a high-volume warehouse. (CO3, K3)

14. (a) Discuss how marketing forces, such as customer expectations and product characteristics, influence physical distribution decisions. (CO4, K3)

Or

- (b) Develop a justification for investing in technology improvements within a warehouse, considering the potential cost savings and operational benefits. (CO4, K3)

15. (a) Discuss the challenges and opportunities associated with managing relationships with channel intermediaries. How can collaboration lead to mutual success? (CO5, K3)

Or

- (b) Explain the methods used to evaluate the performance of different distribution channels. How can this information be used to improve channel effectiveness over time? (CO5, K3)

Part C

(5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Compare and contrast the advantages and disadvantages of centralized versus decentralized warehouse locations. In which scenarios would each option be more suitable? (CO1, K1)

Or

- (b) Analyze the impact of the rise of e-commerce on warehouse design and operations. Provide examples of specific design features or operational changes driven by e-fulfillment needs. (CO1, K1)

17. (a) Compare and contrast the advantages and limitations of barcode scanning, RFID technology, and pick-to-light systems for order picking accuracy and efficiency. (CO2, K2)

Or

- (b) Describe the key functionalities of a warehouse management system (WMS) and explain how it can contribute to improved inventory control, labor productivity, and overall warehouse performance. (CO2, K2)

18. (a) Analyze the different types of automated guided vehicles (AGVs) used in warehouse operations. Choose two specific AGV applications and explain how they improve efficiency and safety compared to traditional forklift usage. (CO3, K3)

Or

- (b) Evaluate the feasibility of implementing an Automated Storage and Retrieval System (AS/RS) in a warehouse storing a wide variety of small parts with high picking frequency. Consider cost, return on investment, and potential operational benefits. (CO3, K3)

19. (a) Discuss the impact of globalization on physical distribution networks. Identify the challenges and opportunities associated with managing international warehouses and transportation routes. (CO4, K3)

Or

- (b) Propose a strategy for integrating physical distribution planning with marketing and sales activities to achieve a cohesive customer experience. Provide specific examples of how information sharing and coordination can benefit all stakeholders. (CO4, K3)
20. (a) Discuss the potential risks and challenges associated with relying heavily on online marketplaces for distribution. Propose strategies for mitigating these risks and building brand loyalty in a marketplace environment. (CO5, K3)

Or

- (b) Design a performance scorecard for evaluating the effectiveness of different distribution channels for a specific product. Choose three key metrics and explain how they can provide valuable insights for improving channel management. (CO5, K3)
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R1185

Sub. Code

654402

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Fourth Semester

Logistics and Supply Chain Management

ENTREPRENEURSHIP AND INNOVATION

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following.

objective questions by choosing the correct option.

1. In technology transfer, what is a key metric for evaluating success factors? (CO1, K3)
 - (a) Financial returns
 - (b) Intellectual property acquisition
 - (c) Market share growth
 - (d) Environmental sustainability

2. What is a challenge in executing the growth process according to the model? (CO1, K1)
 - (a) Societal impact assessment
 - (b) Lack of organizational resources
 - (c) Inability to innovate
 - (d) Entrepreneurial fatigue

3. When evaluating results in social entrepreneurship, what metric is often challenging to quantify? (CO2, K2)
 - (a) Financial returns
 - (b) Societal impact
 - (c) Market share growth
 - (d) Environmental sustainability

4. What distinguishes a successful strategic alliance in technology transfer? (CO2, K1)
 - (a) Mutual exclusivity
 - (b) Collaborative competition
 - (c) Societal impact
 - (d) Learning strategy effectiveness

5. What is a critical consideration in forming an organization in social entrepreneurship? (CO3, K1)
 - (a) Cultural alignment
 - (b) Market research
 - (c) Societal impact assessment
 - (d) Entrepreneurial motivation

6. In evaluating an opportunity, what does the term “entrepreneur” primarily refer to? (CO3, K2)
 - (a) Business analyst
 - (b) Venture capitalist
 - (c) Opportunity seeker
 - (d) Risk manager

7. What is a significant challenge in cooperative research and development agreements (CRADA)? (CO4, K1)
- (a) Lack of governmental support
 - (b) Overemphasis on innovation
 - (c) Intellectual property concerns
 - (d) Societal impact assessment
8. What role do cultural factors play in the critical factors for starting a new enterprise? (CO4, K1)
- (a) Minimal influence
 - (b) No impact
 - (c) Significant influence
 - (d) Negative impact
9. In the context of technological entrepreneurship, what is a challenge of sustaining mixed entrepreneurship? (CO5, K2)
- (a) Innovation fatigue
 - (b) Collaborative competition
 - (c) Environmental context
 - (d) Societal impact
10. According to the learning life cycle model, what is the primary driver of the learning strategy phase? (CO5, K2)
- (a) Market research
 - (b) Competitive analysis
 - (c) Business intelligence
 - (d) Incubator services

Part B

(5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) List three personal attributes essential for a successful entrepreneur. (CO1, K1)

Or

- (b) Briefly explain two environmental factors that can impact a new business venture. (CO1, K1)

12. (a) Differentiate between mixed and pure technological entrepreneurship models. (CO2, K2)

Or

- (b) Explain the concept of the “learning life cycle” and its relevance to entrepreneurs. (CO2, K2)

13. (a) Identify two mechanisms for technology transfer between organizations. (CO3, K3)

Or

- (b) Analyze the “vicious circle of underdevelopment” and its impact on technology transfer. (CO3, K3)

14. (a) Analyze the factors that influence an entrepreneur’s decision to grow a business. (CO4, K4)

Or

- (b) Explain the concept of “opportunity domain” in the context of entrepreneurial growth. (CO4, K4)

15. (a) Differentiate between an imitative nonprofit and an innovative nonprofit organization. (CO5, K3)

Or

- (b) Describe the key steps involved in identifying an opportunity for social entrepreneurship. (CO5, K3)

Part C

(5 × 8 = 40)

Answer **all** the questions not more than 1,000 words each.

16. (a) Explain the four key factors to consider when evaluating the customer segment for a new business opportunity. Provide specific examples for each factor. (CO1, K1)

Or

- (b) Discuss two sociological factors that can significantly impact the success of a new business venture in a specific cultural context. Use real-world examples to illustrate your points. (CO1, K1)

17. (a) Analyze the different types of entrepreneurial ecosystems (e.g., university-based, tech hubs) and discuss their role in fostering and supporting technological entrepreneurship. Provide examples of successful ventures incubated in these ecosystems. (CO2, K2)

Or

- (b) Explain the model of the learning life cycle in the context of technological entrepreneurship. Discuss the importance of continuous learning and development for entrepreneurs in this field. (CO2, K2)

18. (a) Develop a strategic plan for the technology transfer of a specific innovation from a research institution to a commercial market. Identify the potential challenges and propose mitigation strategies. (CO3, K3)

Or

- (b) Analyze the “vicious circle of underdevelopment” and explain how technology transfer can play a role in breaking this cycle. Use a specific country or region as an example to illustrate your points.

(CO3, K3)

19. (a) Analyze the driving forces behind the growth of a specific successful company. Identify the key decisions and strategies that contributed to their expansion and long-term success. (CO4, K4)

Or

- (b) Evaluate the different options available for a growing business in terms of scaling their operations. Discuss the advantages and disadvantages of organic growth versus mergers and acquisitions. (CO4, K4)

20. (a) Develop a business model for a hypothetical social enterprise aimed at addressing a specific social or environmental issue. Include details about the target beneficiaries, revenue generation strategies, and impact measurement methods. (CO5, K3)

Or

- (b) Analyze the potential funding sources and financing challenges faced by social enterprises. Explain the role of social impact investors and crowd funding in supporting these ventures. (CO5, K3)

R1186

Sub. Code

6544E1

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Fourth Semester

Logistics and Supply Chain Management

Elective – PORT MANAGEMENT

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. Which state has the maximum number of Sea Ports? (CO1, K1)
(a) Maharashtra (b) Gujarat
(c) Tamil Nadu (d) Karnataka
2. Which port is known as Tidal port? (CO1, K1)
(a) Kandla Port (b) Chennai Port
(c) Marmagao Port (d) Ennore Port
3. Which one among the following is/are correct? (CO2, K2)
(i) Kolkata port is the only major riverine port in India.
(ii) Damodar port was constructed to relieve pressure on Kolkata port.
(a) Both of them (b) None of them
(c) Only 1 (d) Only 2
4. Name the busiest port in India. (CO2, K2)
(a) Mumbai Port (b) Kandla Port
(c) Chennai Port (d) Marmagao Port

5. Which port in India has the largest hinterland? (CO3, K3)
- (a) Kolkata Port
 - (b) Jawaharlal Nehru Port (JNPT)
 - (c) Chennai Port
 - (d) Mumbai Port
6. _____ refers to allowing private players to serve on behalf of the port authority at the port. (CO3, K3)
- (a) Stevedoring (b) Outsourcing
 - (c) PPP (d) BOT
7. Which of the following is not an example of operating port performance indicator? (CO4, K3)
- (a) Berth occupancy
 - (b) Operating ratio
 - (c) Crane productivity
 - (d) Output per berth
8. Under which of the following ownership models, there will be no government involvement in the management, operations, maintenance and ownership of a port (CO4, K3)
- (a) Service Port (b) Tool Port
 - (c) Landlord port (d) Major port
9. Charter party is used: (CO5, K3)
- (a) In export trade
 - (b) In import trade
 - (c) In international trade
 - (d) None of the above
10. Bill of lading is issued by (CO5, K3)
- (a) Shipping company
 - (b) Agent of the importer
 - (c) Captain of the ship
 - (d) Custom officer

Part B

(5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) What are the major activities of ship ports?
(CO1, K1)

Or

- (b) Describe the four types of port management models.
(CO1, K1)

12. (a) Write short note on supply chain competitions.
(CO2, K2)

Or

- (b) Briefly discuss the market accessibility of emerging seaports in India.
(CO2, K2)

13. (a) Give brief note on determinants of port competitiveness.
(CO3, K3)

Or

- (b) Summarise the role of the ports in economic development of the country.
(CO3, K3)

14. (a) Explain the role of offshore support agents in port operations.
(CO4, K3)

Or

- (b) Discuss the role terminal operators in port management services.
(CO4, K3)

15. (a) Write a short note on international safety management activities of port authorities of India.
(CO5, K3)

Or

- (b) What do you mean by Ballast water management? Why it is important?
(CO5, K3)

Part C

(5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Discuss the various steps in implementing an effective empowerment program pertaining to ports workforce. (CO1, K1)

Or

- (b) Explain the organizational structure of ports authorities of India. (CO1, K1)

17. (a) Briefly discuss the port logistics integration and its challenges. (CO2, K2)

Or

- (b) Enumerate the emerging supply chain opportunities and threats. (CO2, K2)

18. (a) Elucidate the risk management systems followed by the major Indian ports. (CO3, K3)

Or

- (b) Describe the various factors that are affecting the port growth and development. (CO3, K3)

19. (a) Discuss the importance of port operations and its function in logistic management. (CO4, K3)

Or

- (b) Elaborate discuss the port-related claims and its legal liabilities. (CO4, K3)

20. (a) Explain the incident investigation and root cause analysis activities of port authorities. (CO5, K3)

Or

- (b) Illustrate the global and national regulatory compliance of ships. (CO5, K3)

R1187

Sub. Code

6544E3

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Fourth Semester

Logistics and Supply Chain Management

Elective – PROJECT PLANNING MANAGEMENT

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct options.

1. Which one of the following is NOT an internal environmental factor that needs to be taken into account while planning and executing a project? (CO1, K2)
 - (a) Competitors of the organization
 - (b) The financial situation of the organization
 - (c) IR infrastructure of the organization
 - (d) Organizational structure

2. The business case and the justification for the project is determined during the _____ Phase (CO1, K2)
 - (a) Initiation
 - (b) Planning
 - (c) Execution
 - (d) Closure

3. If the technology required to convert the idea of the product offering is available, it is known as _____ feasibility analysis. (CO2, K2)
 - (a) Economic
 - (b) Commercial
 - (c) Financial
 - (d) Technical

4. Which of the following is not considered as a risk in project planning management? (CO2, K2)
- (a) Specification delay
 - (b) Product competition
 - (c) Testing
 - (d) Staff turnover
5. The process each manager follows during the life of a project is known as _____. (CO3, K3)
- (a) Project management
 - (b) Manager life cycle
 - (c) Project management life cycle
 - (d) All of the mentioned
6. Quality planning is the process of developing a quality plan for _____. (CO3, K3)
- (a) Team
 - (b) Project
 - (c) Customers
 - (d) Project manager
7. The project lifecycle consist of _____. (CO4, K3)
- (a) Understanding the scope of the project
 - (b) Objectives of the project
 - (c) Formulation and planning various activities
 - (d) All of the above
8. The statistical tools that depicts a projects' tasks and relationship between those tasks is known as _____. (CO4, K3)
- (a) Mile stone
 - (b) Goal
 - (c) Gantt chart
 - (d) PERT
9. Which one of the following statements do you think has greatest validity? (CO5, K3)
- (a) Purchasing has a broader meaning than procurement
 - (b) Procurement is broadly equivalent to purchasing
 - (c) Procurement has a broader meaning than purchasing
 - (d) None of the above

10. Purchase Orders include all of the following organization data except. (CO5, K3)
- (a) Company Code
 - (b) Purchasing Group
 - (c) Purchasing Organization
 - (d) General Data

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Distinguish the time-bound project with cost-bound project. (CO1, K2)
- Or
- (b) What do you mean by Project Manager's charter? Why it is important for project execution? (CO1, K2)
12. (a) Briefly discuss the Project management plan. (CO2, K2)
- Or
- (b) What is project viability? How do you measure the project viability? (CO2, K2)
13. (a) What is risk awareness? Why it is import in project planning management? (CO3, K3)
- Or
- (b) Write brief note on positive risk or opportunity in project management. (CO3, K3)
14. (a) Brief the quality management technique of project planning management. (CO4, K3)
- Or
- (b) List out the objectives of quality management system audit. (CO4, K3)

15. (a) Give the brief note on various subcontract documents. (CO5, K3)

Or

(b) Describe the main points to be consider while making purchase order. (CO5, K3)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Discuss the significance of project management in different business. (CO1, K2)

Or

(b) Environmental sustainability is important for success of any project. Are you agree or disagree? Explain. (CO1, K2)

17. (a) Explain the various criteria to be consider for success of a project. (CO2, K2)

Or

(b) Illustrate the project life cycles with example. (CO2, K2)

18. (a) Enumerate the different risk evaluation method in project planning management. (CO3, K3)

Or

(b) Elaborately discuss the various risk identification techniques in project planning management. (CO3, K3)

19. (a) Elucidate the Total Quality Management system of Project planning management. (CO4, K3)

Or

(b) Describe the 4 P's of Total Quality Management in project planning management. (CO4, K3)

20. (a) Explain the different procurement strategy elaborately. (CO5, K3)

Or

(b) Discuss the different types of procurement contracts. (CO5, K3)

R1188

Sub. Code

6544E5

M.B.A. DEGREE EXAMINATION, APRIL – 2024

Fourth Semester

Logistics and Supply Chain Management

**Elective – SUSTAINABLE SUPPLY CHAIN
MANAGEMENT**

(CBCS – 2022 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the following objective type questions by
choosing the correct options.

1. Which of the following is not an area to responsibilities
for a logistic manager? (CO1, K2)
(a) Inventory (b) Marketing
(c) Warehousing (d) Purchasing

2. Supply Chain Management control or link the production
to _____. (CO1, K2)
(a) Directing
(b) Distribution
(c) Finance
(d) Human Resource Management

3. What is the leading source of energy used in the India today? (CO2, K1)
- (a) Coal (b) Oil resources
(c) Natural Gas (d) Nuclear Power
4. Special feature of urbanization in India has been (CO2, K1)
- (a) Localized in nature
(b) Balanced
(c) Both (a) and (b)
(d) None of the above
5. Functions of the Ware House includes (CO3, K3)
- (a) Storage and picking technology
(b) Facilities as well as the corresponding info'
(c) Communication and distribution systems
(d) All of the above
6. The transport cost can is minimal in (CO3, K3)
- (a) Road Freight Transport
(b) Air freight
(c) By Sea freight
(d) By anymode depending on volume, time etc

7. _____ refers to the raw materials, components parts and supplies bought from outside organisation to support a company's operations. (CO4, K3)
- (a) Procurement
 - (b) Materials management
 - (c) Supply management
 - (d) None of the above
8. In which packing Time-Temperature indicators (TTI's), ripeness indicators, biosensors and radio frequency identification are included (CO4, K3)
- (a) Edible packing
 - (b) Active packing
 - (c) Modified atmosphere packing
 - (d) Intelligent or smart packing
9. Reverse logistics is required because (CO5, K3)
- (a) Goods are defective
 - (b) Goods are unsold
 - (c) The customers simply change their minds
 - (d) All of the above
10. _____ refers to supply chain practices that strive to reduce energy and environment footprints in terms of freight distribution (CO5, K3)
- (a) Labour logistic (b) Green logistic
 - (c) Outbound logistic (d) Supply chain management

Part B

(5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Briefly discuss the nature of logistic and supply chain management. (CO1, K2)

Or

- (b) What is supply chain management? Why it is important for international business? (CO1, K2)

12. (a) Write short note on concept of sustainability. (CO2, K1)

Or

- (b) Give a brief account on three pillars of sustainability. (CO2, K1)

13. (a) Lists out the environmental impact of warehousing. (CO3, K3)

Or

- (b) Describe the risk and vulnerability in warehousing. (CO3, K3)

14. (a) What is green procurement? List out the advantages of green procurement. (CO4, K3)

Or

- (b) What do you mean by product recovery options? Why it is essential for sustainable packing and procurement? (CO4, K3)

15. (a) Give the brief note on ethical responsibility in sustainable supply chain management. (CO5, K3)

Or

- (b) Briefly discuss the key components of corporate strategy. (CO5, K3)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Explain the key decision areas in supply chain management. (CO1, K2)

Or

- (b) Enumerate the challenges in Logistic and supply chain management. (CO1, K2)

17. (a) How one can achieve the sustainability using of species and ecosystems? Elaborate. (CO2, K1)

Or

- (b) Elucidate the impact of population and urban growth on sustainability. (CO2, K1)

18. (a) Discuss the impact of freight transport on sustainability. (CO3, K3)

Or

- (b) Elaborate the strategies to reduce the environment impact of freight transport. (CO3, K3)

19. (a) What is cleaner production? Explain the benefits of cleaner production. (CO4, K3)

Or

- (b) What is sustainable product design? Why are corporations moving to sustainable product design? (CO4, K3)

20. (a) Describe the risks in logistics and supply chain on sustainability. (CO5, K3)

Or

- (b) Explain the environmental responsibility of sustainable supply chain management. (CO5, K3)
