UNIVERSITY EXAMINATIONS

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LOGISTICS SYSTEMS (TRANSPORT ECONOMICS 308)

Duration 2 Hours

70 Marks

EXAMINERS

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This paper consists of 17 pages

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INSTRUCTIONS:

THIS IS A FILL IN EXAMINATION - WRITE YOUR ANSWERS IN THIS BOOKLET AND HAND IT IN TO THE INVIGILATOR WHEN YOU ARE DONE.

THIS EXAMINATION PAPER CONSISTS OF:

SECTION A: COMPULSORY MULTIPLE CHOICE QUESTIONS (20 MARKS)

SECTION B: COMPLETE ANY TWO (2) OF THE THREE (3) LONG QUESTIONS (50 MARKS)

TOTAL OF 70 MARKS

SECTION A

ANSWER ALL THE QUESTIONS IN THIS SECTION
TOTAL OF 20 MARKS

SECTION A:

1.1 The process of planning, implementing and controlling the efficient, cost effective flow and storage of materials , in process inventory, finished goods and related information from the point of origin through the point of consumption and finally to the point of disposition for the purpose of conforming to customer requirements is the definition of logistics

[A] from an inventory perspective
[B] from a societal perspective
[C] offered by the Society of Logistics Engineering and Logisticians (SLEL)
[D] provided by the Council of Logistics Management (CLM)

1.2 What is true about the customer order cycle?

[A] order preparation and transmittal initiates the process
[B] order processing follows warehouse picking
[C] warehouse picking preceded order transportation
[D] only A and C are correct

1.3 Which one of the following is characterized by formalized rules, procedures, standardized communications and a large volume of orders?

[A] strategic planning
[B] decision analysis
[C] management control
[D] transaction system

1.4 Which one of the following focuses on performance dimensions which include cost, customer service, productivity, quality and asset management?

[A] strategic management
[B] division analysis
[C] management control
[D] transactional system

1.5 The level of information functionality that compares different supply chain designs, inventory management systems, resource allocation tools, transportation routing systems and segmental profitability is known as?

[A] strategic planning
[B] decision analysis
[C] management control
[D] transaction system

1.6 The level of information functionality that evaluates the desirability of alliances, development and refinement of manufacturing capabilities and opportunities related to customer responsiveness is known as

[A] strategic planning
[B] division analysis
[C] management control
[D] transaction system

1.7 _____ is NOT a major system module for the comprehensive supply chain information system?

[A] Enterprise resource planning
[B] Communication systems
[C] Execution systems
[D] Electronic data interchange systems

1.8 _____ maintains current and historical data and processes to initiate and monitor performance and track critical activities?

[A] Enterprise resource planning
[B] Communication systems
[C] Execution systems
[D] Electronic data interchange systems

1.9 Which one of the following are application-oriented modules for the supply chain information system (SCIS)?

[A] communication systems
[B] execution systems
[C] planning systems
[D] all the above

1.10 Which one of the following is the file of the central database that facilitates packaging, customization and kitting in distribution centre operations?

[A] order file
[B] bill of materials file
[C] purchase order file
[D] inventory file

1.11 Which one of the following is a component of information sharing technology?

[A] global data synchronization
[B] advanced planning and scheduling
[C] capacity requirements planning
[D] manufacturing resource planning

1.12 Which one of the following could be used for identifying a container or its contents as it moves through facilities or between transport modes?

[A] internet
[B] electronic product code
[C] image processing
[D] radio frequency exchange

1.13 _____ can be defined as direct computer-to-computer exchange of business documents in standard formats to facilitate high-volume transactions?

[A] enterprise resource planning
[B] electronic data interchange
[C] electronic product code
[D] value added networks

1.14 Which one of the following is a common interface between sending and receiving systems, where transaction messages and information are collected from the manufacturer and then translated into appropriate industry-specific communication standards?

[A] electronic product code [EPC]
[B] value-added networks [VANs]
[C] global data synchronization [GDS]
[D] radio frequency exchange [RFE]

1.15 Which of the following is NOT an enterprise resource planning [ERP] module?

[A] financial and operation reporting module
[B] supply chain information module
[C] planning and monitoring module
[D] integration and administration

1.16 _____ incorporate processes to guide physical activities, including product receipt, material movement and storage and order selection

[A] warehouse management system

[B] customer relationship management system
[C] transport management system
[D] yard management system

1.17 Which one of the following systems explodes the *bill of materials* of the scheduled products to the required raw materials and communicates the requirements to the appropriate suppliers?

[A] manufacturing resource planning
[B] capacity requirement planning
[C] master production scheduling
[D] manufacturing order scheduling

1.18 Which one of the following production strategies is a primary determinant in warehouse establishment?

[A] just in time
[B] rapid replenishment
[C] assemble to order
[D] closed loop

1.19 Which one of the following is not a phase in formulating the logistical strategy?

[A] determining the least total cost network
[B] measuring service availability
[C] determining materials flow
[D] conducting sensitivity analysis

1.20 _____ is the overall level of customer service associated with the least total cost service design

[A] maximum service level
[B] average service level
[C] lowest service level
[D] threshold service level

ROUGH WORK

SECTION B

ANSWER ANY TWO (2) OF THE THREE (3) QUESTIONS IN THIS SECTION

TOTAL OF 50 MARKS

PLEASE NOTE: ONLY THE FIRST TWO (2) QUESTIONS WILL BE MARKED IF YOU ANSWERED ALL THREE (3) QUESTIONS IN THIS SECTION

QUESTION 2

You have recently joined a large company that manufactures and distributes beverages and foods and soon realised that the competitiveness of the company can be improved through proper information systems Compile a report to the managing director motivating why an Enterprise Resource Planning (ERP) system

should be implemented and what such a system should look like Clearly explain the modules and files that should be included in the ERP system to initiate and coordinate business activities **[25]**

QUESTION 3

Identify and explain the typical data required to be applied in the planning and design of a logistics network under the following headings

(i) Data requirements for location decisions (10)

(ii) Data requirements(inputs) for inventory decisions (10)

(iii) Data requirements for transport analysis (5)

[25]

QUESTION 4

Just as no ideal logistical system is suitable for all enterprises, the method for identifying and evaluating alternative logistic strategies can vary extensively However, there are a general process applicable to most logistics design and analysis situations"

(i) Illustrate this logistics system design process with a diagram (5)

(ii) Discuss the first two (2) steps of this process, namely

(a) Feasibility assessment (10)

(b) Project planning (10)

[25]