

# **CILTHK Professional Qualifying Examination**

## **SAMPLE QUESTIONS & SUGGESTED SOLUTIONS**



Education and Training Committee

(Updated: Dec 2011)



The Chartered Institute of Logistics and Transport in Hong Kong

Professional Qualifying Examination

**Sample Examination Questions and Suggested Solutions**

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### **Sample Examination Questions and Suggested Solutions**

#### **OL1 Business Environment for Transport and Logistics (2005/Q1)**

##### **QUESTION**

Private sector highway projects tend to be carried out under 'Build-Operate-Transfer' (BOT) schemes. It is widely believed that BOT minimizes the burden of taxpayers. However, risk sharing between the government and a private company has to be clearly defined in a BOT project. Please: (i) define BOT, and (ii) explain the potential risks that have to be shared between the government and a private company in a BOT project. (25 marks)

##### **SUGGESTED SOLUTION**

(i) The government signs a contract known as a 'concession agreement' with a private company to build, operate, maintain and manage the highway, in exchange for which they are allowed to collect tolls fixed at a rate mutually agreed upon in the concession agreement for a period of time, after which time the highway will revert to public control. (5 marks)

(ii) Any five (4 marks each):

- Toll revenue shortfall risk – Traffic forecasts are usually inaccurate. Government officials have incentives to justify public projects by overestimating traffic levels. The contracted toll rates could be forced to be lowered under public pressure during an economic downturn. Changes in gas taxes or vehicle registration fees could affect traffic levels.
- Construction risk – construction may be delayed and costs will overrun. Normally construction risk is borne by the concession company.
- Foreign exchange risk – the value of the concession may be greatly reduced by a sudden devaluation of a foreign currency if the highway concession is a foreign owner. The government may provide guarantees against exchange risk in some concession agreements.
- Maintenance risk – there is a risk that the concession company does not properly maintain the road at the end of the concession contract. Maintenance costs may also rise due to inflation.
- Sovereign risk – there is a risk that the government will not honor its commitments. Government could change gas taxes, vehicle registration fees and other policies that could adversely affect the profitability of the concession.
- Moral hazard – As the government needs the road, it has an incentive to bail out the company in the case of financial distress.



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**Sample Examination Questions and Suggested Solutions**

**OL2 Financial Management and Reporting for Transport and Logistics (2005/Q2)**

**QUESTION**

Financial ratio analysis provides us with a useful tool to assess the performance of a logistics company.

Below is an extract of the financial statements of ABC Logistics Company for the years ended 31 Dec 2003 and 31 Dec 2004.

*(All figures in million HK dollars)*

**Profit and Loss Account for the year ended 31<sup>st</sup> December**

	2004	2003
Revenues	5,000,000	5,000,000
Less: Cost of goods sold	<u>(4,000,000)</u>	<u>(4,500,000)</u>
Gross Profit	1,000,000	500,000
Less: Interest expenses	(100,000)	(80,000)
Other operating expenses	<u>(400,000)</u>	<u>(370,000)</u>
Net Profit	<u>500,000</u>	<u>50,000</u>

**Balance Sheet as at 31<sup>st</sup> December**

	2004	2003
Fixed Assets	600,000	180,000
Current Assets		
Stock	500,000	600,000
Trade Debtors	900,000	564,500
Cash at bank	<u>10,500</u>	<u>9,000</u>
	1,410,500	1,173,500
Current liabilities		
Trade Creditors	200,000	182,000
Other accruals	<u>30,000</u>	<u>10,000</u>
	230,000	192,000
Long term liabilities		
10% Debentures	1,000,000	800,000
Total Net assets	<u>771,500</u>	<u>361,500</u>
Represented by:		
Ordinary Share Capital	100,000	100,000
Reserves	<u>671,500</u>	<u>261,500</u>
Total shareholders' funds	<u>771,500</u>	<u>361,500</u>

- (a) Using ratio analysis, comment on the performance of ABC Logistics company over the two-year period in terms of profitability, liquidity, working capital and long term solvency. (20 marks)
- (b) What are the limitations of ratio analysis? (5 marks)



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**OL2 Financial Management and Reporting for Transport and Logistics (2005/Q2)**

**SUGGESTED SOLUTION**

(a) Comment of the performance of ABC Logistics company:-

(i) Profitability ratios:

**Gross profit ratio: Gross profit ÷ sales x 100%**

Year 2004:  $\$(1,000,000/5,000,000) \times 100\% = 20\%$

Year 2003:  $\$(500,000/5,000,000) \times 100\% = 10\%$

**Net profit ratio: Net Profit ÷ sales x 100%**

Year 2004:  $\$(500,000/5,000,000) \times 100\% = 10\%$

Year 2003:  $\$(50,000/5,000,000) \times 100\% = 1\%$

**Return on owners' equity: Net Profit ÷ owners' equity x 100%**

Year 2004:  $\$(10,000/371,500) \times 100\% = 2.7\%$

Year 2003:  $\$(1,000/361,500) \times 100\% = 0.3\%$

***Comment:***

The gross profit margin in the Year 2004 increases. This may be caused by a decrease of CODS due to cheaper sources of supply; a better bargain price from an existing supplier; and an increase in the selling price.

The Net profit margin in the Year 2004 also increases. This may mean that the company has successfully controlled some of its operating expenses.

The return on owners' equity also increases from 0.3% to 2.7%, however we still need to compare with both the Economy and Industry ratio for a benchmark to see whether it is a reasonable return. (5 marks)

(ii) Liquidity ratios:

**Current ratio: Current assets ÷ current liabilities**

Year 2004:  $\$(1,401,500/230,000) = 6.1$

Year 2003:  $\$(1,173,500/192,000) = 6.1$

**Liquid ratio: (Current assets - inventories) ÷ current liabilities**

Year 2004:  $\$(901,500/230,000) = 3.9$

Year 2003:  $\$(573,500/192,000) = 3.0$

***Comment:***

Both the current ratio and quick ratio are well above 1, which indicates that the company does not have a liquidity problem. (5 marks)



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**OL2 Financial Management and Reporting for Transport and Logistics (2005/Q2)**

(iii) Working capital efficiency ratios:

**Debtors collection period: Trade debtors ÷ sales x 365 days**

Year 2004:  $\$(900,000/5,000,000) \times 365 \text{ days} = 66 \text{ days}$

Year 2003:  $\$(564,500/5,000,000) \times 365 \text{ days} = 41 \text{ days}$

**Comment:**

The Debtors collection period has worsened from 41 days in the Year 2003 to 66 days in the Year 2004. This may be due in part to the campaign to boost sales by easing the credit period to debtors. There is also a danger that debtors' balances may become non-collectible and become bad debts. (5 marks)

(iv) Long term solvency ratios:

**Gearing ratio: debentures ÷ (owners' equity + debentures) x 100%**

Year 2004:  $\$(1,000,000/1,371,500) \times 100\% = 73\%$

Year 2003:  $\$(800,000/1,161,500) \times 100\% = 69\%$

**Interest cover: Profit before interest ÷ interest payable**

Year 2004:  $\$(600,000/100,000) = 6 \text{ times}$

Year 2003:  $\$(130,000/80,000) = 1.6 \text{ times}$

**Comment:**

The gearing ratio increases from 69% in the Year 2003 to 73% in the Year 2004. The financial risk of the company was very high because of the high gearing level. This indicates that the company does not have the ability to meet its long-term liabilities as they become due. The company may need to reduce its gearing through the issuing of new ordinary shares or retaining profits. (5 marks)

(b) When we use financial ratio analysis to assess the performance of a company, we should be aware of its limitations as follows:

- i) Ratios are constructed from accounting data, which are subject to different interpretations and even to manipulation.
- ii) If companies use different fiscal years or accounting periods, and if seasonal factors are important, this can influence the comparative ratio.
- iii) We should be cautious in judging whether a particular ratio is good or bad. There is no absolute standard by which to judge whether the ratios are too high or too low.
- iv) It is difficult to define a set of benchmark figures because companies, even within the same industry, are often quite different.
- v) Therefore, ratio analysis may provide a rough guide that should not be relied upon exclusively for any judgment/decisions.

(5 marks)



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### **Sample Examination Questions and Suggested Solutions**

#### **OL3 Marketing and Service Management (2005/Q2)**

##### **QUESTION**

Marketing planning involves deciding on marketing strategies that will help the company to achieve its overall strategic objectives.

Briefly identify the major steps in the formulation of an effective marketing plan. (25 marks)

##### **SUGGESTED SOLUTION**

The steps and a brief description of a marketing plan include:

- Executive summary - presents a brief summary of the main goals and recommendations of the plan for management review, helping management to find the plan's major points quickly. (4 marks)
- Current business environment - describes the target market and the company's position in it, including information about the market, product performance, competition, and distribution. (3 marks)
- Threats and opportunity analysis - assesses major threats and opportunities that the product might face, helping management to anticipate important positive or negative developments that might have an impact on the firm and its strategies. (3 marks)
- Objectives and issues - state the marketing objectives that the company would like to attain during the plan's terms, and discuss key issues that will affect their attainment. (3 marks)
- Marketing strategy - outlines the broad marketing logic by which the business unit hopes to achieve its marketing objectives and the details of market segmentation, targeting and positioning. (3 marks)
- Action programs - spells out how marketing strategies will be turned into specific action programs that answer the following questions: What will be done? When will it be done? Who is responsible for doing it? And how much will it cost? (3 marks)
- Budgets - detail a supporting marketing budget that is essentially a projected profit-and-loss statement. (3 marks)
- Controls - outlines the control measures that will be used to monitor progress and allow higher management to review implementation results and spot products that are not meeting their goals. (3 marks)



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**Sample Examination Questions and Suggested Solutions**

**OL4 Information Technology for Transport and Logistics (2004/Q1)**

**QUESTION**

- (a) You are the chief information officer (CIO) of a logistic company, briefly describe the concept of an information system to the chief executive officer (CEO). Include in this answer the three basic interacting components – input, processing and output of an information system. (13 marks)
- (b) Briefly define and give examples of an end user, knowledge worker, and an Information System specialist. (12 marks)

**SUGGESTED SOLUTION**

- (a) A system is a group of interrelated components working together toward a common goal by accepting inputs and producing outputs in an organized transformation process. Input, processing, and output are three information system functions. Input involves capturing and assembling elements that enter the system to be processed. Processing involves transformation processes that convert input into output. Output involves transferring elements that have been produced by a transformation process to their ultimate destination. (13 marks)
- (b) End users are people who use an information system or the information it produces. Examples of end users are accountants, salespersons, engineers, clerks, customers, or managers. Knowledge workers are people who spend most of their time communicating and collaborating in teams and workgroups and creating, using, and distributing information. Examples of knowledge workers include most users of information systems. IS specialists are people who develop and operate information systems. They include systems analysts, software developers, system operators, and other managerial, technical, and clerical IS personnel. (12 marks)



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**Sample Examination Questions and Suggested Solutions**

**AL1 Law of Business and Carriage (logistics & transport streams) (2007/Q1)**

**QUESTION**

- (a) Contrast the differences between a condition and a warranty. (13 marks)
- (b) Illustrate the circumstances in which a Court would uphold a contractual obligation in the absence of an express term in the underlying contract. (12 marks)

**SUGGESTED SOLUTION**

- (a) Candidates are expected to explain why terms in a contract are divided into condition and warranty. (2 marks) Candidates should discuss the consequences of a breach of a condition and a warranty. (5 marks) Candidates are also expected to demonstrate their understanding as regards what an innominate term is (3 marks) and what the remedy is when there is a breach of such term (3 marks).
- (b) Candidates are expected to set out that when a contract is reduced into writing, the general proposition is that the Court will not adduce extrinsic evidence to interpret the effect of any terms. (3 marks) Candidates are then expected to set out that in what circumstances the Court will imply a term in the contract in the absence of express provisions. For instance, an obligation which is well-known as a custom in a particular trade. (3 marks) Secondly, such term is necessary for the performance of the contract and in the absence of which, the contract could not have been properly performed or generally known as “business efficacy” rule. (3 marks) Thirdly, Candidates are expected to discuss the scope of a number of legislation that imply a number of duties on contracting parties including the Sale of Goods Act and also the Supply of Goods and Services Act (if the course is subject to Hong Kong law, Sale of Goods Ordinance and Supply of Goods and Services Ordinance accordingly). (3 marks)



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### **Sample Examination Questions and Suggested Solutions**

#### **AL2 Management and Decision Making (logistics & transport streams) (2007/Q1)**

##### **QUESTION**

Define decision-making. Explain the ways in which decision-making effectiveness can be enhanced. (7 marks)

Describe how rational perspectives influence managers of transport or logistics firms in decision-making and list the steps that guide rational decision making. (9 marks) Compare this with behavioral aspects of decision-making. (9 marks)

##### **SUGGESTED SOLUTION**

Decision-making is the act of choosing one alternative from among a set of alternatives. The decision-making process includes recognising and defining the nature of a decision situation, identifying alternatives, choosing the “best” alternative, and putting it into practice. To help enhance decision making effectiveness, managers often use interacting, Delphi, or nominal groups or teams. Group and team decision making in general has several advantages as well as disadvantages relative to individual decision making. Managers can adopt a number of strategies to help groups and teams make better decisions. (7 marks)

Describe how rational perspectives influence the way in which transport or logistics managers (with examples) make decisions. Rational perspectives on decision making rest on the classical model. This model assumes that managers have complete information and that they will behave rationally. The primary steps in rational decision-making are: (9 marks)

1. Recognising and defining the situation,
2. Identifying alternatives,
3. Evaluating alternatives,
4. Selecting the best alternative,
5. Implementing the chosen alternative, and
6. Following up and evaluating the effectiveness of the alternative after it is implemented.

Behavioral aspects of decision-making rely on the administrative model. This model recognizes that managers will have incomplete information and that they will not always behave rationally. The administrative model also recognizes the concepts of bounded rationality and satisfying. Political activities by coalitions, managerial intuition, and the tendency to become increasingly committed to a chosen course of action are all important. Risk propensity is also an important behavioral perspective on decision making. Finally, ethics also affect how managers make decisions. (9 marks)



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### **Sample Examination Questions and Suggested Solutions**

#### **AL3 Transport Systems and Management (transport stream) (2003/Q2)**

##### **QUESTION**

Discuss the objectives of public transport priority measures for the traffic management. Suggest criteria for evaluating the use of bus-only lanes. (25 marks)

##### **SUGGESTED SOLUTION**

- Objectives for public transport priority measures (12 marks)
  - To improve the conditions and reliability of bus operators through the introduction of appropriate bus priority measures;
  - To alter the traffic balance in favor of buses at those locations where this can be properly justified;
  - To improve conditions for bus passengers at stops and interchanges
  - To improve road safety in particular for pedestrians, cyclists and people with disabilities;
  - To review hours of operation of waiting and loading restrictions;
  - To establish and implement the coordinated and coherent application of waiting, parking and loading enforcement regimes on bus route corridors
  - To improve conditions for all road users and frontages on bus route corridors
  
- Evaluation of bus priority measure: (13 marks)
  - Bus and other vehicle occupancies
  - Bus journey time
  - Bus headways
  - Junction queue lengths and delays
  - Classified traffic counts
  - Parking occupancy and duration
  - Junction designs and evaluation of time saving are based on the use of simulation programs. This evaluation identifies benefits such as: time cost savings for bus passengers and crew; bus operation cost saving
  - Improved bus service regularity and reliability, due to less variation in travel time as the variable delays due to congestion are avoided;
  - Generated bus patronage due to reduced travel time and improved mobility of bus passengers;
  - Time savings, enabling the bus operate to keep the same frequency of serving using fewer vehicles or to improve the frequency of service with the same number of vehicles;
  - De-congestion where a shift to bus usage results in less car traffic and so reduce delays for all traffic.



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**Sample Examination Questions and Suggested Solutions**

**AL4 Sustainable Transportation (transport stream) (2007/Q1)**

**QUESTION**

- (a) What are the functions of Environmental Impact Assessment (EIA)? (12 marks)
- (b) If the government decides to build a new mass transit railway connecting two districts with reclamation projects, what are the possible environmental aspects that would be included in the EIA of such project? (13 marks)

**SUGGESTED SOLUTION**

(a) What is EIA (3 marks)

- The procedure for evaluating the potential environmental consequences of major projects. The EIA procedure seeks to prevent pollution problems, to minimize environmental damage and to avoid expensive remedial measures

Functions of EIA (9 marks, any 3 of below)

- EIA as a tool in the eco-political decision making process - for example, the PADS. This EIA involves a series of interlinked projects called the Airport Core Program (ACP) projects.
- EIA as a comprehensive description of an environmentally important mishap, mistake or malfunction .
- EIA as necessary step in the structure and shape of a proposed development.
- EIA as tool for sustainable development

(b) Possible impacts (10 marks; any 10 aspects with elaborations)

- gaseous emissions
- dust
- odor
- noisy operation
- night time operations
- traffic generation
- liquid effluents, discharges, or contaminated runoff
- generation of waste or by-products
- storage, handling, transport or disposal of hazardous materials or wastes
- risk of accidents which would result in pollution or hazard
- disposal of spoil material, including potentially contaminated material
- soil contamination
- unsightly visual appearance
- other relevant aspects

Others (3 marks)

- Organization
- Logical presentation
- Originality



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**Sample Examination Questions and Suggested Solutions**

**AL5 Transport Policy and Planning (transport stream) (2003/Q2)**

**QUESTION**

Prioritize the following infrastructure development projects:

- a. A bridge connecting Hong Kong, Zhuhai and Macau.
- b. The fourth cross-border crossing connecting Hong Kong and Shenzhen.
- c. A freight rail connecting Shenzhen, Guangzhou and the Central China.
- d. A high-speed train connecting Hong Kong and Guangzhou.

State and explain the criteria that you have used to rank the above projects. (25 marks)

**SUGGESTED SOLUTION**

- Students can make any ranking among the four, provided that the content of the arguments are consistent with the ranking. (12 marks)
- Criteria for assessing the ranking (8 marks)
  - Economic returns – Social and economic benefits of the project, enhancement in regional development, increase the GDP of the regions.
  - Financial returns – whether it is profitable if it is a stand-alone project.
  - Budgetary constraint – need to consider private-public partnership or BOT
  - Environmental Impacts –
  - Operational/Engineering viability
  - Political acceptability
  - Social Impacts
  - Timing – construction and effective date; enough demand for the infrastructure, coordination with other developments.
  - Other criteria
- Content/arguments are consistent with the criteria stated (2 marks)
- Organization, logicity, originality, relevancy to Hong Kong (3 marks)



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### **Sample Examination Questions and Suggested Solutions**

#### **AL6 Global Supply Chain Management (logistics stream) (Jan 2003/Q2)**

##### **QUESTION**

- (a) One of the core elements of supply chain management is to have total visibility of cargo flow in the pipeline so that quick response can be achieved. What are the common technologies used in providing full transparency of consignment status? (15 marks)
- (b) More and more advanced technologies are developed and available for commercial use. State the key factors that organizations have to consider before adopting these new technologies. (10 marks)

##### **SUGGESTED SOLUTION**

(a)

- Bar coding (2.5 marks)  
It represents the most commonly used automatic identification technology. Considering that there are numerous bar-code symbologies, or standards, in use today, consistency of technologies is essential for moving products effectively and efficiently through supply chains.
- Electronic data interchange (2.5 marks)  
It is the organization-to-organization, computer-to-computer exchange of business data in a structured, machine-processable format. The purpose of EDI is to eliminate duplicate data entry and to improve the speed and accuracy of information flow by linking computer applications between companies.
- XML (2.5 marks)  
Short form for extensible markup language, XML is a method of packing information for movement on the Internet. This is a highly efficient way to package information, such that it can be readily accessible to any person or company having Internet or Web-based capabilities. The potential of XML is that over time it will prove to be a preferred substitute to the use of electronic data interchange.
- RF technology (2.5 marks)  
This is particularly useful in the warehouse or distribution center. RF allows users to relay information via electromagnetic energy waves from a terminal to a base station, which is linked in turn to a host computer. When combined with a bar-code inventory system for identifying inventory items, an RF system can update inventory records in "real time". This results in significant improvement to the quality of order-picking and shipping accuracy.
- Satellite tracking (2.5 marks)  
Driver has access to computerized capabilities, such as global positioning that provides a real-time knowledge of the truck's current location and directions to intended destinations.
- Others (2.5 marks)



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**Sample Examination Questions and Suggested Solutions**

**AL6 Global Supply Chain Management (logistics stream) (Jan 2003/Q2)**

- (b) The following considerations are relevant to the process of adapting to new information technologies:
- It is important to have a scientific as well as an intuitive understanding of customer and supplier information requirements, as well as those of all supply chain participants. It is necessary for information technologies to be flexible and adaptable, depending on the specific set of needs being served. (1.5 marks)
  - It is necessary to recognize that implementation delays can result from a lack of coordination and integration among key logistics and supply chain processes. Inconsistencies and lengthy order cycles can result from the failure to synchronize logistics operational versus coordination activities. (1.5 marks)
  - It is important to see that the logistics organizational strategies move from a functional to a process orientation. (1.5 marks)
  - Inevitably, early implementation efforts may suffer due to poor data or the non-availability or non-sharing of future data pertaining to future orders, forecasts and target production schedules. (1.5 marks)
  - It is important that the organization has the financial resources needed to assure a smooth, full implementation. A willingness among employees to accept and make use of new technologies is also critical to this process. It should formulate strategy to make employees more enthusiastic and less resistant to change. (1.5 marks)
  - It is necessary for firms to create opportunities for interaction and team efforts among logistics managers and those others most knowledgeable about information technologies. (1.5 marks)
  - Others (1 mark)



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### **Sample Examination Questions and Suggested Solutions**

#### **AL7 Logistics Management (logistics stream) (Jan 2003/Q1)**

##### **QUESTION**

There are various components in logistics management. However we would always consider “total logistics cost” when dealing with logistics problems. Explain the concept of “total logistics cost”. (14 marks) Identify the three main components in the logistics process and explain their importance. (9 marks) Do you agree that the concept of “total logistics cost” is critical in determining logistics solutions? (2 marks)

##### **SUGGESTED SOLUTION**

The elaboration of at least seven components of the TLC in logistics management: (2 points for each component and maximum of 14 points),

The idea of the total logistics costs (TLC) is shown below:

$$\text{TLC} = \text{TC} + \text{WC} + \text{CC} + \text{IC} + \text{MC} + \text{PC} + \text{MA}$$

where TLC = total logistics costs

TC = transportation costs (fleet and operational management)

WC = warehouse costs (rent or mortgage)

CC = communication costs (order processing and distribution channel)

IC = inventory costs (holding and order cost of the stock)

MC = material handling costs (equipment)

PC = packaging costs (material and design fee)

MA = management costs (value-added integrated process management)



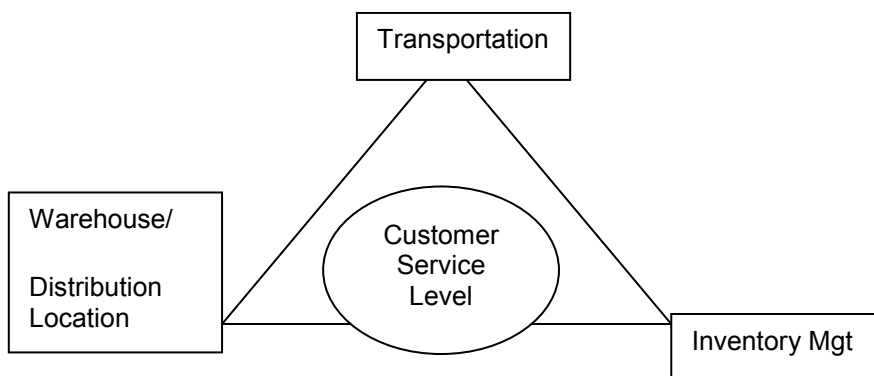
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### Sample Examination Questions and Suggested Solutions

#### AL7 Logistics Management (logistics stream) (Jan 2003/Q1)

- The most important 3 components and the customer service level are 3 points each answer:



- The inventory cost is about 60% of the total logistics costs so it is the most important activity to be looked after. The stock level affects the frequency of delivery and the size of warehouse/number of warehouses.
- The second important cost element is transportation which counts for 18% of the total logistics costs. The size of vehicle fleet, its routing and scheduling will affect the number of warehouse/distribution centres in the distribution network.

Additional 2 points for students able to demonstrate the relationship between TLC and logistics solutions

- Warehousing is the third single cost element to be dealt with. The catchment of the warehouse will affect the transportation need and inventory level.
- Customer service level is not directly related to TLC but it determines the total budget of the logistics operation.

*[Students can provide different components with sufficient justification. However, it should be the three components as discussed above]*



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### **Sample Examination Questions and Suggested Solutions**

#### **AL8 Warehousing and Materials Handling (logistics stream) (2007/Q1)**

##### **QUESTION**

- (a) To maintain competitiveness, the amount of inventory of an organization needs to be controlled, if not eliminated at all, in order to reduce inventory cost. With this objective, explain in detail the reasons for a need of keeping inventory. (5 marks)
- (b) List and describe the functions of a warehouse and the value added activities carried out in a warehouse to justify its existence. (8 marks)
- (c) The use of mechanical handling equipment is almost indispensable in a modern warehouse. Identify any **four** types of mechanical handling equipments commonly used in warehouse operations and explain how these equipments enhance storage space utilization and operation efficiency. Illustrate your answer with the aid of diagrams where necessary. (12 marks)

##### **SUGGESTED SOLUTION**

- (a) 5 marks for explaining why inventory is still necessary hence the need of a warehouse
- To achieve transportation economies
  - To achieve production economies
  - To take advantages of quantity purchase discounts and forward buys
  - To support the firm's customer service policies
  - To meet changing market conditions (e.g. seasonality, demand fluctuations, competition)
  - To overcome the time and space differentials that exist between producers and consumers
  - To support just in time programs of suppliers and customers
- (b) 8 marks for giving correct details on the functions of warehouse, and the value-added activities they can handle

##### **Functions**

- Storage
- Product distribution
- Smoothing out logistics flow
- Increased customer satisfaction
- Logistics data collect

##### **Value-added activities**

- Product mixing (pick and pack)
- Product consolidation
- Product distribution
- Product repackaging, labeling to support sales activities
- Handling of rejected goods



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**Sample Examination Questions and Suggested Solutions**

**AL8 Warehousing and Materials Handling (logistics stream) (2007/Q1)**

- (c) 3 marks each for elaborating details (usage, specific nature, constrains, etc.) of any four of the following material handling equipment:
- Electric stacker
  - Forklift truck
  - Narrow aisle high rise truck
  - Overhead crane
  - Pallet
  - Hoist
  - Conveyor belt