



UNIVERSITI KUALA LUMPUR
Malaysian Institute of Marine Engineering Technology

FINAL EXAMINATION
JULY 2025 SEMESTER SESSION (7-WEEK)

SUBJECT CODE : LOM11103

SUBJECT TITLE : MANAGERIAL AND INFORMATION TECHNOLOGY

PROGRAMME NAME : MASTER OF MARITIME OPERATIONS AND
(FOR MPU: PROGRAMME LEVEL) MANAGEMENT

TIME / DURATION : 9.00 AM - 12.00 PM
(3 HOURS)

DATE : 18 SEPTEMBER 2025

INSTRUCTIONS TO CANDIDATES

1. Please read **CAREFULLY** the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of **TWO (2)** sections; Section A and Section B.
4. Answer **ALL** question in Section A. For Section B, answer **THREE (3)** questions with at least **ONE (1)** question from question 4 or question 5.
5. Please write your answers on this answer booklet provided.
6. Answer **ALL** questions in English language **ONLY**.

THERE ARE 3 PAGES OF QUESTIONS, EXCLUDING THIS COVER PAGE.

SECTION A (Total: 40 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

In maritime logistics, information systems serve as the foundation for efficient cargo movement, enhanced supply chain visibility, and data-driven decision-making. At the same time, leveraging information technology for competitiveness emphasizes innovation and strategic alignment, ensuring sustained performance in global shipping and port operations.

- (a) Evaluate the contribution of various types of information systems in strengthening decision-making and operational efficiency within maritime logistics and port management.

(10 marks)

- (b) Analyze the strategic uses of information technology in developing competitive advantage for shipping companies in the international maritime industry.

(10 marks)

Question 2

Modern information technologies play a critical role in enabling efficient and secure maritime operations. They support ports, shipping lines, and logistics providers in enhancing productivity, connectivity, and decision-making across the supply chain.

- (a) Assess the significance of data resource management practices in improving decision-making and operational efficiency within international shipping and port operations.

(10 marks)

- (b) Evaluate the role of telecommunications and network technologies in strengthening the connectivity and resilience of global maritime logistics systems.

(10 marks)

SECTION B (Total: 60 marks)**INSTRUCTION: Answer only THREE (3) questions.****Please use the answer booklet provided.****Question 3**

Companies operating in the shipping and port sectors increasingly rely on integrated systems to sustain growth in a volatile global trade environment. Effective adoption of these applications ensures resilience, adaptability, and long-term operational success.

- (a) Recommend the application of enterprise business systems for resolving operational inefficiencies in a global port environment. (10 marks)
- (b) Recommend the use of electronic commerce systems (ECS) to expand service offerings and strengthen the competitiveness of international shipping companies. (10 marks)

Question 4

Global shipping and port operations face challenges in aligning business goals with technology adoption. Effective development processes integrate business strategies with IT initiatives to address operational bottlenecks and future growth needs in the dynamic maritime industry.

- (a) Explain FIVE (5) business and IT strategy used by major port authority to strengthen customer engagement and efficiency. (10 marks)
- (b) Recommend a set of business and IT solutions to resolve operational bottlenecks in container terminal management. (10 marks)

Question 5

Maritime digitalization exposes shipping companies and port operators to significant risks, ranging from cyberattacks on navigation systems to ethical dilemmas in data handling. Building trust requires the adoption of robust security frameworks and ethical practices to ensure compliance with international regulations.

- (a) Assess the effectiveness of security measures used to protect digital systems in international port operations. (10 marks)
- (b) Recommend ethical practices for handling maritime logistics data that can enhance trust and compliance. (10 marks)

Question 6

Maritime operations and activities depend on effective enterprise-wide information technology (IT) management that aligns digital initiatives with corporate strategy. Organizations that coordinate technology across global offices achieve cost savings, efficiency, and competitive advantage. Effective IT governance also reduces risks and enables agility in responding to disruptions in maritime supply chains.

- (a) Explain enterprise-wide IT governance strategies to support global port and shipping operations. (10 marks)
- (b) Evaluate the effectiveness of digital solutions for managing IT resources in maritime supply chains. (10 marks)

END OF EXAMINATION PAPER

