



UNIVERSITI KUALA LUMPUR
Malaysian Institute of Marine Engineering Technology

FINAL EXAMINATION
OCTOBER 2025 SEMESTER SESSION

SUBJECT CODE	: LOB21203 / LOB31303
SUBJECT TITLE	: SEAPORT AND TERMINAL OPERATIONS
PROGRAMME NAME (FOR MPU: PROGRAMME LEVEL)	: BACHELOR IN MARITIME OPERATIONS (HONOURS)
TIME / DURATION	: 2.00 PM - 5.00 PM (3 HOURS)
DATE	: 26 JANUARY 2026

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 **FIVE (5)** questions.
4. Candidates are required to answer **FOUR (4)** questions **ONLY**.
5. Please write your answers on this answer booklet provided.
6. Answer **ALL** questions in English language **ONLY**.

THERE ARE 5 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

INSTRUCTION: ANSWER FOUR (4) QUESTIONS ONLY.**Question 1**

A government is considering developing **Port C** into a specialised container gateway and **Port D** into a bulk-dominated industrial port. Both ports are currently small multi-purpose ports serving coastal shipping.

- a) Explain **FIVE (5)** major differences between gateway ports and transshipment hubs in terms of traffic pattern and role in international trade.

(5 marks)

- b) Analyse **FIVE (5)** ways in which the growth of seaborne trade and maritime connectivity can influence national economic development, using Ports C and D as illustrations.

(5 marks)

- c) Explain **FIVE (5)** key operational activities in a modern container port.

(5 marks)

- d) From the perspective of shippers and carriers, evaluate **FIVE (5)** strategic reasons for the government to maintain both ports rather than concentrate all investment in only one location.

(5 marks)

- e) Provide a justified recommendation on whether both ports should be sustained as complementary assets in the national port system.

(5 marks)

Question 2

Port E operates a busy Ro-Ro ferry terminal plus a small cruise berth. Seasonal monsoon weather causes frequent delays and cancellations, creating dissatisfaction among passengers and tourism stakeholders.

- a) Explain **FIVE (5)** key differences between ferry passenger demand and cruise passenger demand at Port E.
(5 marks)
- b) Analyse **FIVE (5)** ways in which monsoon conditions disrupt Port E's terminal operations.
(5 marks)
- c) Propose **FIVE (5)** operational or managerial strategies to reduce the impact of monsoon-related disruptions.
(5 marks)
- d) Explain the improvement contributed by each strategy proposed in (c) to safety, service reliability, or overall terminal performance.
(5 marks)
- e) Suggest **FIVE (5)** performance improvements that Port E could realistically achieve if the recommended strategies are implemented effectively.
(5 marks)

Question 3

A large manufacturer complains that containers from its factory to Port F experience highly variable transit times due to both port-side and inland issues. You are asked to review the end-to-end chain based on:

- a) Port-hinterland transport chain:
- i. Explain **FOUR (5)** key elements of the port–hinterland transport chain between a factory and a seaport.
(5 marks)
 - ii. Hence, briefly explain each element identified in (i).
(5 marks)
- b) Using the concepts of port cargo-service chains and hinterland transport chains, discuss **FIVE (5)** ways in which inland bottlenecks and yard congestion at Port F can reduce the overall efficiency and effectiveness of the port.
(5 marks)
- c) Suggest **FIVE (5)** integrated measures (covering both port operations and hinterland links) that Port F and its partners could implement to improve the chain's overall efficiency and effectiveness.
(5 marks)
- d) Provide a justified explanation of the contribution of each measure in (c) toward improving overall performance.
(5 marks)

QUESTION 4

Port G is currently a landlord port with multiple private terminal operators. The national regulator is pressing all ports to adopt stronger safety, security and environmental standards due to recent accidents and pollution incidents.

- a) Explain the roles of port authorities, terminal operators, and government agencies in supporting port safety, port security, and environmental protection.
(5 marks)

- b) Evaluate **FIVE (5)** major challenges Port G may face in implementing a “Green Port & Safe Port” master plan.
(5 marks)

- c) Recommend **ONE (1)** realistic mitigation measure for each challenge identified in (b).
(5 marks)

- d) Explain the expected outcomes of the recommended mitigation measures.
(5 marks)

- e) Provide a holistic conclusion on whether the landlord model supports long-term safety and environmental targets for Port G.
(5 marks)

QUESTION 5

A regional development authority aims to develop a new inland dry port linked to Port H to strengthen the region's logistics position and to support green supply chains.

- a) Explain **FIVE (5)** strategic functions of a dry port within the broader port and hinterland system.

(5 marks)

- b) Discuss **FIVE (5)** ways in which a well-designed dry port can improve both the operational performance and environmental performance of Port H.

(5 marks)

- c) Evaluate **FIVE (5)** risks or limitations associated with dry-port development.

(5 marks)

- d) Recommend **ONE (1)** practical mitigation for each risk identified in (c)

(5 marks)

- e) Explain how the recommended mitigations support long-term green-supply-chain goals.

(5 marks)

END OF FINAL EXAMINATION PAPER

