



MAY 2025 EXAMINATION SESSION
SHIP OPERATIONS AND MANAGEMENT

THURSDAY 15th MAY 2025 – AFTERNOON

Time allowed – three hours

Answer any FIVE questions – all questions carry equal marks

Please read the questions carefully before answering

1. Answer **ALL** parts of the question.
 - a) Describe the characteristics of **ONE** of the following types of vessels including dimensions, tonnages, cargo gear and equipment.
 - i. CAPESIZE Bulk Carrier
 - ii. MR Tanker
 - iii. NEW PANAMAX Container vessel.
 - b) Draw a side profile and cross sectional of the vessel (not a plan view).
 - c) Label the significant parts of the vessel.
 - d) Give details of **ONE** trade the vessel operates in, where and how it will load, carry and discharge its cargo.

Use the world map provided to support your answer.

2. Your Handymax bulk carrier is fixed on charter in late June to load a full cargo of Steel plate, pipes and coils at Hong Kong in Southern China for discharge at Belem and Itaquí on the North Coast of Brazil in July /August. The vessel could be routed via Cape of Good Hope, the Panama Canal, or the Suez Canal which are similar in distance. Identify the factors you would take into account when deciding which route to take and what resources are available to help you in decision making?
Using the world map provided show each of the three routes, together with the named ports, canals, capes, geographical features, seas and bunkering locations on each of the routes.

PLEASE TURN OVER.

3. Answer **ALL** parts of the question and show your workings for each.

Using only the data provided below and avoiding excessive rounding up, calculate:

- What quantity of cargo can be loaded?
- Where would you take bunkers and what quantity would you stem? Give your reason for this.
- Calculate the daily net profit for the voyage.

Your vessel will complete discharge at Recife in Brazil and is fixed to load Paranagua in Brazil for discharge at Douala in Cameroon.

DWT 52,498 MT on 12.5 M

Cubic Grain 68,431 M3

Constant incl FW 615 MT

Loaded speed 13 KTS on 24 MT LSFO/GO per day as appropriate

Ballast speed 14 KTS on 23 MT LSFO/GO per day as appropriate

Port consumption 4 MT LSFO/GO per day as appropriate all purposes

Vessel Daily Running Cost \$9,500 per day

Cargo 50,000 MT GRAIN +/-10% MOLOO (SF 1.39) pM3 Paranagua-Douala

No draft restrictions at load port or at other ports. Vessel in Summer/Tropical zone throughout voyage.

20,000 MT SSHEX at Load 10,000 MT SSHINC at Discharge.

Freight \$24 FIOST per Metric Tonne

Commission 5%.

Bunker ROB on completion of discharge at Recife is expected to be

390 MT LSGO/LSFO Max 0.5%S. Cost \$560 pMT

180 MT ULSGO Max 0.1%S. Cost \$680 pMT

Intention is to place vessel on spot market at Douala after discharge with the same quantity

550 MT LSGO/LSFO Max 0.5%S.

180 MT ULSGO Max 0.1%S

Vessel must always have sufficient bunkers for four days steaming on board.

Distances

Recife-Paranagua 1387 NM

Paranagua-Douala 3814 NM

Recife available during discharge current cargo

LSGO/LSFO Max 0.5%S. \$580 pMT ULSGO Max 0.1%S. \$763 pMT

Paranagua available during loading. Barge cost \$3000

LSGO/LSFO Max 0.5%S. \$577 pMT ULSGO Max 0.1%S. \$760 pMT

Port charges

Paranagua \$62,000

Douala \$48,000

4. Answer **BOTH** parts of the question.
- a) Explain the role and responsibilities of the DPA regarding the safe operation of each vessel and the proper implementation of the International Safety Management (ISM) code.
 - b) Explain what specific certificates and other documents a vessel carries to show compliance with the ISM code; what are their validity, which bodies issue these certificates and what do these certificates signify? What other documentation should the vessel have to support these certificates.
5. Define and explain **FIVE** of the following abbreviations:
- i. AWRP
 - ii. IEEC
 - iii. CII
 - iv. EEXI
 - v. IOPP
 - vi. IMSBC Code
 - vii. WIBON
 - viii. NDFCA PMQS
6. Explain how a company can ensure that it employs and retains the best crews for its ships and the possible consequences of failing to do this.
7. Answer **ALL** parts of the question.
- a) Explain the role of a Classification Society in shipping and the services they provide.
 - b) Explain the cycle of surveys required by the Classification Society during the life of a vessel to ensure that a vessel remains in class.
 - c) Under what circumstances might Class be called to inspect the vessel at some other time?
 - d) Give details of **FIVE** other certificates issued by Class including their validity, verification requirements and what they certify.

8. Answer **BOTH** parts of the question.

You are preparing an operating budget for a recently acquired second hand vessel by an owner with a mixed fleet of vessels under your company's management.

- a) Give details of the main information you will need about the vessel and why each of these are important. Which of these are the most likely to be affected by operational changes decided by the owner after purchase?
- b) Explain fully the typical costs included in a budget estimate of the daily operating costs, how you would monitor all these costs during the management of the vessel so that you are fully informed of possible variations to the budget.