



NOVEMBER 2024 EXAMINATION SESSION
THURSDAY 14th NOVEMBER 2024– AFTERNOON

SHIP OPERATIONS AND MANAGEMENT

Time allowed – three hours

Answer any **FIVE** questions – all questions carry equal marks

Please read the questions carefully before answering

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

You have been asked by a potential investor about the costs of ship owning.

- a) Explain the difference between fixed costs, operating or daily running costs and voyage costs. Discuss why costs are divided in this way.
- b) Describe the different cost items you would expect to see in each of these three categories.

2. Answer **ALL** parts of the question.

- a) Describe the characteristics (for example dimensions, tonnages, cargo gear, equipment) of **ONE** of the following types of vessels.
 - i. Supramax bulk carrier
 - ii. VLCC tanker
 - iii. Container Feeder 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.

3. Define and explain the risks covered under the P&I Clubs Insurance.

PLEASE TURN OVER.

4. Answer **ALL** parts of the question and show your workings for each. Do not round up days, work to two decimal places. Total Bunkers used and purchased should be rounded up to next whole number.

Using only the data provided below calculate:

- What quantity of cargo can be loaded? (Show your workings)
- Where you would organise bunkers and what quantity would you stem giving your reason for this.
- Calculate the daily net profit for the voyage. (Show your workings)

Your vessel will complete discharge at San Francisco in the USA and is fixed to load at Vancouver, Canada for discharge at Kobe in Japan.

Bunker ROB on completion San Francisco
290 MT VLSFO 0.5%S 380@\$510 pMT
150 MT LSGasoil 0.1%S @ \$600 pMT

Vessel must have a minimum of 5 days Fuel on board at all times to cover safety margin. Intention is to place vessel on spot market at KOBE after discharge with minimum 600 MT LSFO 0.5%S on board and 200 MT LSGasoil 0.1%S. All fuel used in North American ECA is LSGasoil 0.1%S

SDWT 61,589 MT on 13.2 M

Cubic Grain 77,110 M3

Constant including FW 550 MT

Loaded speed 13 KTS on 24 MT VLSFO 0.5%S or LSGasoil 0.1%S per day as appropriate

Ballast speed 14 KTS on 24 MT VLSFO 0.5%S or LSGasoil 0.1%S per day as appropriate

Port consumption 4 MT VLSFO 0.5%S or 4 MT LSGasoil 0.1%S per day as appropriate all purposes

Vessel Daily Running Cost \$10,000 per day

Cargo 50,000 MT Grain 10% MOLOO (SF 1.41) Vancouver-Kobe.

No draft restrictions on voyage.

13,000 MT SSHEX at Load/10,000 MT SSHINC at Discharge.

Freight \$21 FIOST per Metric Tonne

Commission 5%.

Distances

San Francisco-Vancouver 818 NM All steaming in NA ECA

Vancouver to limit of NA ECA Zone 330 NM All steaming in NA ECA

NA ECA Zone-Kobe 4502 NM All in Worldwide Emission restriction area.

Bunker Prices

San Francisco: VLSFO 0.5%S \$610 pMT, LSGasoil 0.1%S \$730 pMT (6hr delay and fuel, \$2500 barge cost)

Vancouver: VLSFO 0.5%S \$622 pMT, LSGasoil 0.1%S \$742 pMT (concurrent with loading)

Port charges

Vancouver \$91,000

Kobe \$79,000

5. Answer **ALL** parts of the questions.

Your Panamax vessel is due to load a cargo of Grain in New Orleans/South Louisiana Port in the USA in late October for discharge in Ulsan, South Korea. Your last cargo was steel coils. To ensure the safety of your vessel and the proper carriage of the cargo, describe:

- a) The information you must find out and what preparations would you take before loading.
- b) The precautions you would take during and at completion of loading.
- c) The actions you would take during the loaded voyage.
- d) The weather and climate conditions and any currents you would expect to encounter during the voyage.

Use the world map provided to support your answer showing at least the Load and Discharge ports, the Canal and the route naming seas and other significant landmarks.

6. The company you work for currently manages a fleet of 55 vessels, a mixture of tankers and bulk carriers for which you have commercial, technical and operational management. Draw an organisational chart for the company and identify the key roles within it. Describe the various departments that would be in the company and explain the key functions and responsibilities of each department.

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

- a) Define and explain the purpose of the IMSBC, giving details of what categories of hazards it covers, and what associated documentation must be on board the vessel to meet these.
- b) Identify the particular maritime problem addressed by the IBWMC, describing the equipment, certificates and manuals needed on board the vessel.

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

You have received a call from your managed vessel reporting that while alongside discharging grain, one of the ship's crane booms No 3 has collapsed into the cargo hold causing some structural damage to a hatch, the boom and some cargo and injured one of your crew and one of the stevedores.

- a) What immediate action would you expect to be taken on board the vessel to manage this situation?
- b) Describe the action that needs to be taken by the Managers to ensure all necessary parties are made aware of this incident and to assist the vessel and its crew with this problem.
- c) What insurances will the vessel have in place to cover the damage and injuries? How would you expect these to be apportioned by the insurers?
- d) Under what circumstances might you consider declaring General Average in an incident?