



INSTITUTE OF
CHARTERED
SHIPBROKERS

MAY 2024 EXAMINATION SESSION
TUESDAY 21st MAY 2024 – MORNING

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 **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. KAMSARMAX Bulk Carrier.
 - ii. AFRAMAX tanker.
 - iii. ULTRA LARGE 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. Answer **BOTH** parts of the question.

- a) The ISPS code was not designed to protect ships from threats in ports; it was designed to protect ports from threats posed by ships. Discuss the validity of this statement.
- b) What benefit has the ISPS code been to shipping and what manpower requirements and documentation must be shown by a vessel and its management to show compliance with the code.

PLEASE TURN OVER

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

One of your vessels has been fixed to carry out the following voyage.
Using the data below calculate:

- a) What quantity of cargo can be loaded? (Show your workings)
- b) Where you would organise bunkers and how much you would order? Give your reasons for this choice.
- c) What daily net profit you anticipate earning for this voyage? (Show your workings)

The vessel is currently completing discharge at Cartagena, Colombia.

Bunker ROB on completion

440 MT. LSFO 0.5%S @ \$630 PMT

300 MT LSGO 0.1% @\$840 PMT

Intention is to place vessel on spot market on completion KOBE with
600 MT.LSFO 0.5%S and 400 MT LSGO 0.1% .

Vessel must have 200 MT Fuel safety margin on board at all times.

Currently expecting and allowing maximum of one day's delay waiting for Panama Canal.

SDWT 57,884 MT on 12.5M SW.

Grain Cubic 70,545 m³, 5 HO/HA

Constant including FW 650 MT

Loaded speed / cons 13 KTS on 27 MT LSFO / LS Gasoil PD

Ballast speed / cons 14 KTS on 27 MT LSFO/ LS Gasoil PD

Port consumption 4 MT LSFO/ LS Gasoil PD

Daily running cost USD \$ 9,200 / day

The Cargo: - 50,000 MT +/-10% MOLOO Bulk Soya Beans (SF 1.39). Galveston, USA - Kobe, JAPAN.

No draft restriction on voyage.

14,000 SSHEX load/ 11,000 SSHINC disc.

Freight US\$32 PMT Commission 5%.

Distances:

Cartagena - US ECA = 1384 NM

US ECA - Galveston = 210 NM

Galveston to US ECA = 210 NM

US ECA – Balboa Panama including Panama Canal transit= 1314 NM

Balboa to Kobe = 7981 NM

Bunker Prices

Cartagena - \$652PMT LSFO 0.5%S \$848 PMT LSGO 0.1%S

Galveston - \$616 PMT LSFO 0.5%S \$820 PMT LSGO 0.1%S

Balboa - \$615 PMT LSFO 0.5%S \$819 PMT LSGO 0.1%S (6 hours delay), (\$3,500 barge cost).

Port Costs:

Load port Galveston US\$ 48,000

Discharge port Kobe US\$ 65,000

Panama Canal Transit Fee US\$ 87,000

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

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

- a) Detail the main information you will need about the vessel and why each of these are important.
- b) Give details of the typical costs included in a budget estimate of the daily operating costs.
- c) Explain how you would monitor all these costs during the management of the vessel and what circumstances might arise that could make significant variations to the figures.

5. Answer **ALL** part of the question.

Your Supramax bulker is fixed to load a max cargo Soya Beans (SF 1.4) at Philadelphia USA in September for discharge at Fremantle, Western Australia. The vessel can be routed via the Panama Canal, or the Suez Canal or the Cape of Good Hope as they are all a similar distance.

- a) What factors would you take into account when deciding which route the vessel should take?
- b) What resources are available to assist you in this decision?
- c) Using the world map provided, mark all **THREE** possible routes and the main oceans, seas, gulfs and capes that are on each route.

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

- a) Explain the role of a Classification Society in shipping. What services do they offer?
- 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.

PLEASE TURN OVER

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

- a) Bunkers are a major cost item for a vessel and there are many providers available around the world. Explain as fully as possible how you can ensure that you choose the right location and supplier to get the best bunkers at the right price and what actions and checks can be made to ensure this.
- b) All vessels must comply with the current international regulations regarding sulphur emissions from the fuels they use around the world. There are currently two different levels of sulphur emissions permitted.

Give details of the four areas (SECAs and ECAs) where the most restricted sulphur emissions 0.1%S apply. In what additional area covered by the EU directive does this same restriction apply? Use the world map provided to support your answer showing relevant SECAs, ECAs and other restricted areas. You must clearly show the limits of these areas and name them accurately.

8. Define and explain **FIVE** of the following abbreviations.

- a) AWRP
- b) IEEC
- c) CII
- d) EEXI
- e) IOPP
- f) IMSBC Code
- g) WIBON
- h) NDFCA PMQS