



# INSTITUTE OF CHARTERED SHIPBROKERS

APRIL 2010 EXAMINATIONS

TUESDAY 20 APRIL – AFTERNOON

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## SHIP OPERATIONS & MANAGEMENT

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Time allowed – Three hours

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

1. Answer **BOTH** parts

(a) The ISM code requires 'the company to ensure that each ship is manned with qualified, certificated and medically fit seafarers'. How would you as a ship manager ensure that this requirement is met?

(b) What are the likely consequences of a Port State Control inspector or flag state discovering that a crew-member is not properly qualified?

2. Answer **BOTH** parts

(a) Why are cargo ships registered and classed? Discuss the roles and responsibilities of the flag-state and classification society in this process.

(b) What inspections and surveys, independent of flag state and class, are carried out on board ships?

3. Answer **BOTH** parts

The company you work for provides a full range of ship *operational and technical* management services and currently manages a fleet of 8 ships.

(a) List the various departments that would be in your company and explain the key functions and responsibilities of each department.

(b) Draw an organisation chart of the Technical department and indicate the number of personnel you would expect to be employed.

4. Answer **BOTH** parts

The International Safety Management code was made mandatory on some ships in 1998 and all other ships of more than 500 gross tons in 2002.

(a) Comment on the success, if any, this code has made in improving safety at sea

(b) What are the requirements a vessel must demonstrate in order to achieve compliance?

5. Answer **ALL** parts

One of your managed vessels has been fixed for a voyage from Long Beach to Qinhuangdao with petcoke. Using the information below demonstrate by calculations:

- (a) What cargo quantity can be loaded? (show calculations)
- (b) Where would you organise bunkers and how much would you stem? (include a safety margin)
- (c) What daily net profit do you estimate? (show calculations)

The vessel: mv *Aquarius*, Panama Flag currently discharging at Vancouver (Canada).  
Bunkers ROB on completion cargo at Vancouver 320MT IFO 380 CST at \$410pmt. Intention is to place the vessel on spot market on completion of discharge Qinhuangdao with same BROB Vancouver.

DWAT 45413 MT on 11.60M  
Cubic grain 61553 CuM, 5 HO/HA  
LOA 190m  
constants incl FW 700MT  
Loaded Speed / cons 14kts on 26MT IFO 380CST  
Ballast Speed / cons 14kts on 24MT IFO 380CST  
Port Cons 3MT IFO 380 CST pd  
Daily Running Costs \$ 10,000 / day

It should be assumed that the use of IFO 380 is permitted by local regulations and that no fuel switch will be required when sailing in USA waters.

**The Cargo:** - 40,000MT Pet Coke (SF 1.47) 10% MOLOO Long Beach, USA to Qinhuangdao, China  
No draft restrictions at load port  
Draft restriction of 11.60 M (salt water) at discharge port  
10000 SHEX load/ 8,000 SHINC discharge  
Freight \$23 FIOS Commission 5%

**Distances:**

Vancouver - Long Beach – 1161 nm  
Long Beach to Qinhuangdao – 5928 nm  
Qinhuangdao - Shanghai – 573 nm

**Bunkers prices:**

Vancouver – only IFO 180cst available  
Long Beach IFO 380cst – \$442 pmt (No calling costs)  
Qinhuangdao – No fuel available  
Shanghai Roads IFO 380cst – \$463 (Calling costs \$6,000)

**Port Charges: -**

Load port \$45,000  
Discharge port \$39,000

6. Answer **BOTH** parts

Describe the characteristics of **ONE** of the following types of cargo ships:

- (a) Multipurpose vessel
- (b) LNG carrier
- (c) RoRo

Illustrate your answer with longitudinal and cross sectional drawings of each vessel. Show dimensions, tonnages, cargo gear and any other relevant details.

**and**

On the world map provided, give details of a trade route for your chosen vessel and explain why that vessel is suitable for this trade.

7. Answer **BOTH** parts

- (a) Weather routing and voyage analysis services are widely used by charterers and ship managers. What are the advantages of subscribing to these services?
- (b) On the world map provided, depict the weather conditions one would encounter on a passage from New York to Rotterdam in January.

8. Answer **BOTH** parts

You have been asked to prepare a budget for a potential customer who owns a fleet of four product tankers.

Provide in detail the costs included in a proforma budget estimate of daily running costs. Explain how you as a ship manager would monitor these costs.

Under which headings would you allocate the following expenses?

- Off hire survey
- Port agent fees
- Supply of fresh water
- Tugs used for dry docking
- Canal dues
- Additional premiums to exceed International Navigating conditions
- Repair of Boiler

