TUESDAY 23rd APRIL 2013 – 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. Describe the characteristics (dimensions, tonnages, cargo gear) of one of the following types of vessels:

   (a) Handy size bulk carrier
   (b) Aframax tanker
   (c) Panamax container vessel

Illustrate your answer with a profile and cross-sectional drawings, clearly labelling the significant parts of the vessel. Give details of one trade the vessel operates in, illustrating your answer on the world map provided.

2. One of your managed vessels described below has been fixed for a voyage from Jorf Lasfar in Morocco to Santos in Brazil with phosphate rock. Vessel is assumed in Summer zone throughout. Using the information below calculate:

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

The vessel: India Venture, currently completing discharge at Barcelona (Spain).
Bunker ROB on completion 300 MT. IFO 380 at USD 600 pmt, and 50 MT LS Gasoil. Vessel will not use any further LS Gasoil after departure Barcelona. Intention is to place vessel on spot market on completion Santos with same quantity of bunkers as on completion Barcelona. Vessel must have 5 day safety margin on board at all times. At load or discharge port bunkering is concurrent with cargo operations.

SDWT 45,255 MT on 11.5 M SW
Grain Cubic 61,150 m³, 5 HO/HA
Constant including FW 650 MT
Loaded speed / cons 13 KTS on 26 MT IFO 380 PD
Ballast speed / cons 14 KTS on 25 MT IFO 380 PD
Port consumption 4 MT / day
Daily running cost USD 9600 / day

Please turn over
**The Cargo:** 40,000 MT Bulk Phosphate (SF 0.95) 10% MOLOO Jorf Lasfar-Santos.
Max draft load and disport 11.6 M SW
11,000 SHEX load/ 9,000 SHINC disch.
Freight USD 19.5 PMT FIOS Commission 5%

**Distances:**
Barcelona to Gibraltar = 523 nm
Barcelona to Jorf Lasfar = 769 nm
Gibraltar to Jorf Lasfar = 254 nm
Jorf Lasfar to Santos = 4,154 nm

**Bunker Prices:**
Barcelona - USD590 PMT IFO 380
Gibraltar - USD 575 PMT IFO 380 (Calling cost USD 500 and 6 hours to take bunkers)
Jorf Lasfar - USD 650 PMT IFO 180 only available
Santos - USD 600 PMT IFO 380

**Port Costs:**
Load port USD 27,000
Discharge port USD 35,000

3. The child of a colleague has expressed a keen interest in a career at sea as a deck officer and would like to know some of the advantages and disadvantages of this. Draw up a list of these with brief explanatory notes for guidance so that you are able to provide them with a balanced view of such a career path.

4. Your company is looking to take management of two vessels and the owner has some doubts about manning these using a mixed nationality crew. This is your normal policy for vessels under your management. Your CEO needs to reassure the owner at his next meeting. Write a report for him briefly explaining:

   (a) Why mixed nationality crews are employed.
   (b) What methods you use to minimise friction on board caused by racial, cultural and religious differences.
   (c) How you would ensure that the crews you recruit are appropriately experienced and trained.

5. An owner with a mixed fleet of vessels under your management is considering the purchase of a second-hand vessel and has asked you to prepare a budget for this.

   (a) Clearly explain the significance of the information you will need for this.
   (b) What costs will you take into account in preparing the budget to arrive at the approximate daily operating cost of the vessel and show how you will arrive at this?
6. You have been asked to advise the costs associated with ship ownership.

(a) Explain what costs would be incurred in acquiring a vessel.
(b) Explain the difference between voyage costs and daily operating costs providing as fully as possible a list of each of these.
(c) How would you allocate the following costs for a vessel under your management?

- Crew travel and repatriation
- Pilotage costs
- Light dues
- Repair of boiler
- War risk insurance
- Additional war risk premium
- Canal dues
- Tugs going into drydock
- Registration fees
- Supply of fresh vegetables

7. During discharge of cargo at a port, one of your managed vessels reports that a ship valve at the manifold has fractured and broken off from the pipework, damaging the shore loading arm. Prompt action by the deck watch has averted a major spill but some of the crude oil cargo has gone into the water and one of the crew has suffered minor injuries.

(a) What insurances will be in place to cover this incident?
(b) What immediate expert assistance will be available for the Master, the manager’s emergency response team and the owner?

8. Your vessel is entering the Red Sea heading for the Mediterranean and you are now directed to New York to discharge cargo.

(a) What specific bunkers will you need to have on board for this voyage and where will you plan to take these?
(b) Name three bunker locations en route. What factors have been important in the development of these three which make them successful as bunker ports?
(c) You are not familiar with bunker ports in this region. Provide six measures you could put in place to ensure you get the bunkers you require at a reasonable cost.