



TUESDAY 24TH APRIL 2012 – 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 (e.g. dimensions, tonnages, cargo gear) of **one** of the following types of cargo ship:
 - a) Product tanker
 - b) Cellular Container ship
 - c) Cape size bulk carrier

Illustrate your answer with profile, plan and cross-sectional drawings of the vessel. Show dimensions, tonnages etc.

Give details of **one** trade route or operating area on which the chosen vessel could be employed using the supplied world map to illustrate your answer.

2. How would you as a ship manager ensure that your managed ships are manned with qualified, certificated and medically fit seafarers?

What are the possible consequences of a port state control inspector or flag state discovering that one of your officer's certificates of competence has expired?

3. Draw an organisation chart of a company entrusted with the management of your vessel. From your chart, select **three** departments and explain the services provided by each.

Explain the role of the Designated Person Ashore with reference to the ISM Code.

PLEASE TURN OVER

4. One of your managed vessels has reported heavy contact damage with the berth while coming alongside to discharge cargo. The Master has reported damage both to the vessel and the cargo, and one of the crew has sustained an injury.
 - a) Identify the insurances an owner/ manager should have in place to cover this incident.
 - b) What immediate expert assistance will be available to the Master, technical manager's emergency response team and owners?

5. One of your managed Panamax bulk carriers has been fixed to execute the following voyage at economical speed. Using the factors below:
 - a) What cargo quantity can be loaded? (show calculations)
 - b) Where would you organise bunkers considering you have to redeliver the vessel with the same amount of bunkers as on delivery.
 - c) What daily net profit do you estimate? (show calculations)

The vessel: M.V. *Olympic Medal*, Panama Flag discharging at East London (South Africa). Bunkers ROB on completion cargo at East London: 1010MT IFO 380cst at US\$630pmt.

Summer Dwt Summer DWAT 75,300MT on 14.14M

Winter DWAT 72,007MT on 13.73M

Cubic grain 90,989 CuM, 7 HO/HA

LOA 225m

constants incl FW 800MT

Loaded Speed / cons 14kts on 33MT IFO 380CST

Ballast Speed / cons 14kts on 29MT IFO 380CST

Economical Speed /cons 12kts on 26MT IFO 380 CST

Port Cons 3MT IFO 380 CSD pd

Daily Running Costs US\$14,000 / day

The Cargo: 60,000MT Coal (SF 1.47) 10% MOLOO Richards Bay, South Africa to Rotterdam, The Netherlands.

No draft restrictions at discharge/ bunkering ports

20,000 SHINC load/ 20,000 SHEX discharge

Freight US\$21pmt comm 5% FIOS

Distances:

East London to Richards Bay - 343 nm

Richards Bay to Cape Town - 884 nm

Richards Bay to Rotterdam - 7028 nm

(Disregard the North Sea and EU Low Sulphur regulations)

Bunkers prices:

Richards Bay IFO 180cst - US\$637pmt (IFO 380 unavailable)

Cape Town IFO 380 cst - US\$670pmt (Calling costs US\$6000) –Minimum 12 hours to bunker

Rotterdam IFO 380 cst - US\$620pmt

Port Charges:

Load port US\$55,000

Discharge port US\$72,000

6. Classification societies have evolved over the years. What roles do they have in modern day shipping?
7. Bunkers are one of the major cost components for a voyage.
 - a) What procedures can you, as a manager, put in place to ensure that the fuel delivered meets the specifications required by the vessel?
 - b) The vessel is going to trade in the North Sea and Baltic Sea areas. How does this affect the ordering of bunkers?
 - c) Identify and show on the map provided 5 main Bunkering ports in the world. Select **three** of these ports and briefly explain why they have become major bunker ports and what factors have contributed to their growth.
8. A potential investor has approached you for advice on the costs associated with owning a second-hand vessel. Explain the owner's **fixed** costs associated with:
 - a) Purchasing and ownership of the vessel
 - b) Operating the vessel.