

Examiners' Report

May 2017

Ship Operations & Management

General Comments

Candidates are reminded that they are taking an exam and should come equipped to do this. Answers should be in ink or ball point pen and drawings require a ruler, pencils and eraser for a well presented paper. In addition they should bring a **basic non-programmable calculator** as mobile phones are not allowed. Candidates should attempt FIVE questions and budget time for this, answering only four will seriously reduce your chance of passing. While studying, ALL candidates should look at and attempt to answer questions from previous exam papers and read and study the previous examiners reports. A good knowledge of geography is important in half of all the ICS exams and especially in the Ship Operations and Management exam where a significant number of marks are available which can be the difference between success and failure. Maritime geography while aided by a Maritime Atlas can also be found on the Internet, and has been there for the last 20 years.

Overall comments

Most candidates made a reasonable attempt at the paper and demonstrated a fair knowledge of the subject but with some notable exceptions not many showed evidence of any effort to find out about the wider world of shipping. It is not sufficient to rely solely on study notes or indeed the Manual which while valuable is only an aid to education. Shipping is an international business so a good knowledge of Geography is required. **It is important to read the question carefully** to determine what the examiner requires in an answer and to answer it as fully as possible. You need to demonstrate your familiarity with the subject so an answer of only a page or less is unlikely to be enough. The examiners do not penalise students for lapses in grammar or spelling but they must be able to read your answer so clear and legible handwriting will help us give you marks. The graph paper in the booklet is for use with a calculation, drawing or a graph; it should not be used for an essay.

Question 1

Answer ALL parts of the question.

- a) Describe the characteristics including dimensions, tonnages, cargo gear of **ONE** of the following types of vessels:
 - i. Capesize bulk carrier
 - ii. VLCC tanker
 - iii. Feeder container vessel.
- b) Draw a profile and cross section of the vessel.
- c) Label the significant parts of the vessel.
- d) Give details of **ONE** trade the vessel operates in, where it will load carry and discharge its cargo. Use the world map provided to support your answer.

This was the most popular question which may be explained by the sketches now shown in the SOM manual but reproducing these is not adequate. Candidates should familiarise themselves with proper ship

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plans and drawings to enable them to draw a reasonable representation of their chosen vessel and understand the General Arrangement and name the important parts of the vessel. They should also be familiar with the characteristics of the vessels; many were far too imprecise in their answers possibly hoping that the right number would be within the wide range they gave. Candidates should know these as most of the standard size vessels MR, Handymax, VLCC etc are deliberately built within a small range to match the cargoes on offer, the port draft restrictions and others such as beam and LOA. The majority of Cape size vessels tend to be around 180,000 DWT. Trade routes were done quite well but if you are learning a route for each type of vessel be able to show the location of **named ports** and the route taken on a map and name the ports and other important features. If asked for one trade route do **only one but do it properly**.

Question 2

What are the risks covered under the P&I Clubs Insurance? Give details of these and what is included in each category.

This was a straightforward question that specifically asked for details of the risks covered under P&I Clubs Insurance. These were some very good answers particularly by those who wrote about the risks and what was included under each category of risk. Those who listed the risks and gave details of these gained good marks, those who wrote about the history of P&I Clubs and their world wide network did less well as this was not asked.

Question 3

You work in the operations department of a shipping company and your Handysize bulkcarrier has been fixed on a time charter basis to load a full cargo of bulk harmless fertilisers from Ashdod Israel in the Eastern Mediterranean to discharge in Paranagua Brazil. Two days before arrival at the load port, the vessel sends an email to the head office in London reporting a major engine failure and declaring the vessel not under command. The vessel is drifting towards the coast of Crete with the likelihood of grounding and will send an SOS in 30 hours time unless action is taken. What are the actions you will take to deal with this situation?

This was about a breakdown at sea, such incidents are quite common. The examiner is looking to find out about the support available in the management office. It specifically stated that the Master would send an SOS in 30 hours, so there is a whole day to deal with the incident but those who suggested that the Master might be prudent to do this much sooner made a good point. Is the ship in danger, not yet. Is anyone hurt, no. Can the ship fix the problem, maybe but they will likely have tried. So it is up to the management in the office to offer support and send help. What is needed is an agreement with a tug company for a towage contract and this needs to be negotiated promptly but with the assistance of the H&M insurers and ultimately the P&I. If this cannot be negotiated then consider calling for Salvage, or ask

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for a tow from passing vessels. A Port of Refuge will likely be needed and this should be sought. In addition the management needs to seek help from the Engine manufacturers and their own experienced staff. Once a tug has been engaged the vessel needs to be towed to a suitable port for repairs where the management team can assist. Most vessels have only one engine, they do not have an auxiliary engine. They have auxiliary machinery which is used to produce electric power, steam etc. Not Under Command is a specific nautical term to tell other ships that the Ship showing the signal is not able to move or manoeuvre to keep out of the way. It does not mean anarchy has broken out on board, but candidates who interpreted it as this were not penalised.

Question 4

Answer ALL parts of the question.

Using the below data provided below, calculate

- What quantity of cargo can be loaded? (Show your working)**
- Where would you 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 SILVER DREAM will complete discharge at Seattle in the USA and is fixed to load Portland USA for discharge at Nagoya in Japan.

Bunker ROB on completion Seattle 400MT IFO 380@\$280pMT & 190MT LSGasoil 0.1%\$450pMT

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 Nagoya after discharge with minimum 400 MT FO on board and 200 MT LSGasoil.

All fuel used in SECA is LSGasoil 0.1%S

SILVER DREAM

SDWT 51,246 MT on 12.3 M

Cubic Grain 66,392 M3

Constant incl. FW 520 MT

Loaded speed 13 KTS on 24 MT FO or LSGasoil per day as appropriate

Ballast speed 14 KTS on 23 MT FO or LSGasoil per day as appropriate

Port consumption 4 MT FO or LSGasoil per day as appropriate all purposes

Vessel Daily Running Cost \$8,800 per day

Cargo 50,000 MT Soyabean 10% MOLOO (SF 1.39) Oregon-Nagoya

Max Draft at load port 12.4 M SW no draft restrictions at other ports

18,000 MT SSHEX at Load/12,000 MT SSHINC at Discharge

Freight \$15 FIOST per Metric Tonne

Commission 5%

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Distances

Seattle-Portland: 392 NM (All steaming in US SECA)

Portland to limit of US SECA Zone: 275 NM

Portland-Nagoya: 4455 NM

All fuel used in SECA to be LSGasoil.

Bunker Prices

Seattle: IFO \$250 pMT, LSGasoil \$440pMT + (\$2000 Barge charge) (6 hours for taking bunkers after completion)

Portland: IFO \$270 pMT, LSGasoil \$460 pMT (concurrent with loading)

Nagoya: IFO \$280 pMT, LSGasoil \$470 pMT (during discharge)

Port charges

Portland \$67,000

Nagoya \$72,000

This was one of the more popular questions attempted by over half the candidates and one where higher marks predominated when students read the question and were confident with the layout of the answer. It was also a comparatively simple calculation with the vessel cubing out well before reaching its summer deadweight, and a straightforward cargo calculation. Those who laid this out clearly and in a logical format were able to deal with the two fuels used on the voyage and the different prices of these. Remember the safety margin is a bunker requirement and would always be on board if the vessel bunkered to meet the next voyage. Do not add your own safety margins either in time or bunkers in an exam. It is necessary to use FIFO and to understand that the bunkers you **take** on the voyage should not be included in the voyage costs, only those **used** on the voyage.

Question 5

Answer ALL parts of the question.

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

a) Clearly explain the difference between fixed costs, operating or daily running costs and voyage costs

b) You have received a list of costs for a vessel under your management. How would you apportion these costs to the above and which would be for the owners directly under fixed costs.

- **Port Dues**
- **Supply of Lubricants**
- **Supplementary P&I call**
- **War Risk Insurance Premium**
- **Additional War Risk Premium**
- **Pilotage Cost**

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- **Annual Class survey of ISM system**
 - **Bunker Survey**
 - **Registration Costs**
 - **Agency fees**
 - **New Gyro System for the vessel.**
- c) What different cost items would you see in each of the three cost categories?**

The most popular question which was generally attempted with some success by most students, particularly those that read and understood the question.

In Part a) you were asked to explain the difference between fixed, operating and voyage costs. Three types of cost. You were told the three types so explain the difference.

In Part b) you were then given a list of costs and asked to apportion these to the three cost categories already given to you. You were not asked to apportion these to the owner or the charterer.

In part c) you were asked to show the different cost items you would expect to see in each category. Several students decided to combine part a) and c) together which lost them marks. You were specifically asked to answer separately all three parts of the question.

Question 6

Answer ALL parts of the question.

Your container vessel is loading at Bremerhaven, Rotterdam and Gioia Tauro in Italy for a voyage to Singapore and Hong Kong via the Suez Canal.

- a) What specific bunker fuels will you need to have on board to meet all the regulatory requirements concerning sulphur emissions?**
- b) You intend to bunker during the voyage. Name THREE bunker locations on this route. What factors have been important in the development of these THREE which make them successful as bunker ports?**
- c) What measures would you expect your company to have in place to ensure you get good quality bunkers at a reasonable cost?**

Use the world map provided to show this voyage indicating the ports and significant features to support your answer.

The question was looking for a candidate to show awareness of the different emission areas the ship would be in on a voyage from Europe to China. There were four, a) the North Sea Marpol SECA, b) the EU directive 2005/33/EC for ALL EU ports, c) the China regulations and d) the current Worldwide Sulphur cap area.

It might be helpful to lay out the different legs of the voyage and note the Fuel requirements for each. Bremerhavn (a&b), passage to Rotterdam (a), at Rotterdam (a&b) passage to edge of SECA (a), rest of passage to Gioia Touro (d) at Gioia Tauro (b), passage to HongKong (d), at HongKong (c).

Most of these have been in force for several YEARS and should be familiar to candidates. Those who had

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looked at the previous exam paper Nov 2016 and the examiners report would have found this part of the question simple. It is necessary to be specific about the Sulphur limits in each area. Part b) was done quite well with a variety of bunker locations being suggested although at least three major bunker ports were named in the question. The reason for their success was done quite well. Their positions on the map should be known. Candidates are becoming more familiar with the different ways that a company can ensure it gets the right fuel at the right price and this is encouraging.

Question 7

Answer ALL parts of the question.

Weather routing services for ships are widely available.

- a) **What use is made of these by commercial shipping?**
- b) **What are the benefits of using a weather routing service?**
- c) **Your Handysize vessel will complete loading a full cargo in Tanzania, East Africa in July and is bound for New Orleans USA. What weather would you expect to encounter en route, what choices would you make regarding the route to take and what might be the benefits of weather routing. Use the world map provided to support your answer.**

This was a three part question and should have been answered accordingly. Part a) was looking for what use is made by commercial shipping of weather routing services, part b) the benefits of this, and part c) a specific voyage routing. Generally part a) was quite well answered particularly by those who mentioned longer voyages or with specialised cargoes like tows and project cargoes. The ability of charterers to check up on chartered vessels was noted by many. Some candidates answered part b) well, going into detail about the general safety benefits and savings in time, money and fuel. Part C of the question was about the factors to take into account when deciding a route, it did not ask for a decision, just for candidates to show they were aware of all the factors and base any conclusion on this. Two routes were the most likely, via the Cape of Good Hope or via Suez and the commercial considerations would generally apply. After that, weather, additional canal charges, delays, piracy etc would all be factors. July-August is generally the main period for Hurricanes but this would apply to both choices. It is the middle of winter at the Cape of Good Hope with generally poor weather and adverse sea and swell and the danger of damage from occasional giant waves. The question tested candidate's knowledge of shipping Geography and Maritime weather, with some interesting results. For those uncertain about these two subjects further study and the internet would be helpful.

Question 8

Answer ALL parts of the question.

Your Suezmax vessel has been voyage chartered out to an oil major to load a full cargo of crude oil two grades at two offshore loading facilities in Angola West Africa in January for

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discharge in Fos Lavera in France. Your last cargo was a full cargo Bonny Light Crude Oil. To ensure the safety of your vessel and the proper load, carriage and discharge of the cargo meeting International and charterers requirements;

- a) What information must you find out and what preparations would you take before loading?**
- b) What precautions would you take during and at completion of loading and on the loaded passage?**
- c) What action would you take at the discharge port?**

Use the world map to show detail of the voyage.

The least popular question but one that showed that some students had detailed knowledge about loading oil cargoes. However few seemed to take into account that before the cargo, the safety of the ship and its crew is paramount and that some consideration should be given to finding out about the ports, the berths, the draft, and all the other matters that must be dealt with before starting to load. What about your voyage orders, what type of crude, what is the API or Density, how much can I load, will that meet the draft etc? The part on completion of load was done better but many made no mention of shore figures and documentation. Most handled the checks during the voyage quite well but cargo cooling may be a factor in the changing climate. On a voyage from Angola to Fos/Lavera in January most showed some knowledge of the weather and route and the differing fuel requirements.