



# EXAMINER'S REPORT NOVEMBER 2018

## SHIP OPERATIONS & MANAGEMENT

### General comments.

It is heartening to see that more candidates are taking a pen or ball point pen and a ruler, pencils and eraser into the exam and the result is a better standard of drawing. Candidates should understand that a question with a number of parts will normally have an almost equal number of marks for each part. While studying, ALL candidates should look at and attempt to answer questions from previous exam papers and read and study the previous examiners reports. Many of the mistakes made in the exams are clearly shown in the examiners reports but continue to be repeated. This exam will always require a reasonable knowledge of geography and a significant number of marks are available for maps which can be the difference between success and failure.

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. Do not provide superfluous information as this wastes your time. Several candidates gave comprehensive answers to questions that were not asked. Most candidates demonstrated a reasonable knowledge of the subject but not many showed evidence of any effort to find out about the wider world of shipping. 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.

### 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) A CAPESIZE bulk carrier.**
- ii) A SUEZMAX tanker.**
- iii) New PANAMAX container vessel.**

**b) Draw a side profile, and cross sectional of the vessel.**

**c) Clearly label the significant parts of the vessel.**

**d) Give details of ONE trade route the vessel might operate in, and where and how it will load and discharge its cargo. Use the world map provided to support your answer.**

Developing the ability to draw a vessel and understand why commercial craft are built this way and the similarities between them is of greater benefit.

Candidates should try to look at actual ships' general arrangement plans and not rely on reproducing what is a single sketch in a manual which is not intended to do more than show some naming of the parts of a vessel. That said the standard of drawing is slowly improving. Students were asked to show a side profile and cross section of the vessel. Several candidates also included a plan or birds eye view which was not asked and wasted precious time. You should also be familiar with the characteristics of the vessel and their dimensions which are often in quite a narrow range so a Suezmax tanker is generally about 150KMT DWT and a Capesize bulker is about 180KMT DWT, not 120-200 KMT. The same is true of their draughts about 17.5M and 18M, not 12-20M.

If you learn a route for a cargo such as Tubarao to Qingdao with Iron Ore on a Capesize and use it in the exam it would be advisable to be very certain you know where to put both ports on the map. Tubarao Port is close to Vitoria on the coast North of Rio de Janeiro.

## **2. 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.**

A straightforward question that asked first for the information needed about the vessel in order to create a budget. Armed with this information it is much easier to find out the typical costs that will arise in a budget for daily operating costs.

Your company manages a mixed fleet of vessels so there will be a lot of information about costs for different sizes, types, ages etc and the more you find out the easier it is to build a budget.

The second part asked for details of these costs and most candidates did this quite well but with varying degrees of detail so some explanation about them got extra marks.

Apart from "hotel" bunkers operational costs do not include fuel as this is generally looked as a voyage cost.

The third part on monitoring the costs was less well done but some candidates remembered some circumstances that might arise which could make a significant variation to the budget which was interesting and informative

## **3. Answer ALL parts of the question.**

**Using the following information calculate:**

- a) What quantity of cargo can be loaded? (Show your working)**
- b) Where you would organise bunkers and what quantity would you stem giving your reason for this.**
- c) What is the daily net profit for the voyage? (Show your workings)**

**Your vessel will complete discharge at Cartagena, Colombia and is fixed to load New Orleans, USA for discharge at Luanda in Angola.**

**Bunker ROB on completion Cartagena 400 MT IFO at \$390 PMT and 200 MT LSGO Max 0.1%S at \$570 PMT. 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 Luanda after discharge with 600 MT FO and with not less than 100 MT LSGO on board.**

**SDWT 53448 MT on 12.5 M No Draft restriction on voyage  
Cubic Grain 68,317 M3  
Constant incl FW 480 MT  
Loaded speed 13 KTS on 26 MT FO/LSGO per day  
Ballast speed 14 KTS on 24 MT FO/LSGO per day  
Port consumption 4 MT FO/LSGO per day all purposes  
Vessel Daily Running Cost \$8,200 per day**

**Cargo 50,000 MT grain 10% MOLOO (SF 1.34) New Orleans-Luanda  
16,000 MT SSHINC at Load/10,000 MT SSHEX at Discharge.  
Freight \$21 FIOST per Metric Tonne  
Commission 5%.**

#### **Distances**

**Cartagena- Position A 200 NM of US Coast 1230 NM (Position A is at start of N.A .ECA )  
Position A to New Orleans 260 NM  
New Orleans – Position A Outbound 260 NM  
Position A to Luanda 6266 NM**

#### **Bunker Prices**

**Cartagena HSFO \$420 PMT. No LSGO Available  
New Orleans HSFO \$380 PMT, LSGO \$560 PMT, concurrent with loading  
Luanda HSFO 440 pmt (after discharge) Barge cost \$2500. No LSGO available.**

#### **Port charges**

**New Orleans \$60,000  
Luanda \$53,000**

Several candidates who did this got the maximum marks and those who made a mistake in the different parts of the exam (a,b,&c) but showed their knowledge of the correct method were still able to get a pass. You must show your working as otherwise an examiner may find it difficult to award marks. The cargo was clearly limited by the cubic of the vessel with significant spare deadweight, over 2400MT so no issue with bunkers affecting the cargo loaded.

Only the fuel actually used for the voyage should be part of the voyage expenses which should be on a FIFO (First in First out) basis which meant that the ship would first use up all the ROB of 400 MT FO before starting to use some of the new fuel. In real life an operator would add on margins for bad weather, port delays etc but in an exam you should ONLY use the figures given to you. If there is a delay, we will tell you. You should be familiar with SHEX and SSHEX and what multiplier to use in each case. Candidates should practice doing calculations to be able to layout this out clearly and concisely. This will also make calculating the fuel used easier.

For the exam it is not necessary to calculate the costs of each parcel of fuel used at each stage of the voyage. Calculate the total usage correctly and then calculate the cost which will be the ROB first at its price followed by the amount of new fuel used at its. Keep it simple and don't forget port fuel usage.

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

**a) Explain the role of a classification society in shipping. What services do they offer?**

**b) What surveys are required by Class during the life of a vessel?. Under what circumstances might Class be called to inspect the vessel at some other time?**

**c) Give details of five certificates issued by Class.**

There is still some uncertainty of the role of Class. Candidates should be aware that Class do not enforce the rules for Flag or other authorities. Class are independent but it is their standards that have to be met and the Certificate of Class is a sign of this.

Legislators and governments may bring out legislation but to enforce it they need Class in the first instance to advise on what is needed, how ships can meet this requirement and proper scrutiny to see it is done.

Candidates should be familiar with the survey cycle for ships which generally follow a five-year pattern of special surveys with annual and intermediate surveys depending on the importance of the subject.

They should also be aware why Class might or will be called in at other times as required and their role issueing certificates under the authority of Flag. When asked for details of five of the Certificates it is not sufficient just to list these only with their approximate titles. Be accurate with the name, validity and what it certifies.

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**5. Your vessels are engaged on worldwide trading calling at ports in North America, Northern Europe, the Mediterranean, Arabian Gulf and China, Japan and Korea. They are not fitted with scrubber systems and burn conventional oil fuels. In order to meet all current Sulphur emission requirements what specific fuels will need to be on board the vessels.**

**Give details of these and where they will need to be used. Use the world map provided to support your answer.**

The question asked what specific fuels were required on board to meet all current sulphur restrictions for a vessel trading between in North American, European and Chinese ports.

Candidates should by now be **fully** familiar with the SECAs in Northern European waters that have been in place since 2007 and with the North American ECA which came into force in 2015, together with their geographical limits and fuel requirements. They should also know about the EU directive which covers all EU ports and has the same requirements and has been in force since 2010.

The recent Chinese ports low sulphur requirements should also be known.

Given that further restrictions are planned it is essential that everyone working in shipping knows about these and be able to show these limits on a map of the world.

Future exams are likely to reflect this.

The regulations are also reflected in the voyage calculation question.

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

**a) Explain what certificates and documentation a vessel carries to show compliance with the International Safety Management (ISM) code; which bodies issue these certificates and what do these certificates signify?**

**b) Explain the role and responsibilities of the DPA with regard to the safe operation of each vessel and the proper implementation of the Safety Management System.**

This was a very specific question about certificates and documentation to show compliance with the ISM Code. It did not ask for the history of maritime safety legislation and candidates should be aware of the precise certificates needed for showing compliance and the other backup documentation. Those issued under SOLAS such as the Safety Construction/ Equipment/Radio Certificates do not show compliance with ISM, they are essential for the vessel in any event as will be many others and all will be checked as part of ISM. You must be familiar with ISM, its aims, and its implementation and documentation. You should know about the DOC and SMC and what they signify and their validity. You should also know about the other specific documents such as the CSR and more general records. Part b was about the role of the DPA and those who clearly showed the vital importance of this role in the proper operation of the ISM got good marks.

**7. You work in the operations department of a company which has the commercial management of a small fleet of panamax vessels. One of your vessels has been chartered for a voyage from Port Kamsar in West Africa to San Ciprian in Northern Spain. The cargo is bauxite 65,000 MT +/-10% basis safe draft load and discharge ports. The vessel is currently discharging grain at Rotterdam. Using the world map to support your answer.**

**a) What information do you need to find out to ensure that the vessel is fully prepared for the upcoming voyage?**

**b) Using the above information, draft preliminary voyage instructions/orders to send to the vessel so that the Master has all the information required.**

**c) Show the route of the voyage including ballast and laden legs.**

The question required candidates to think in detail about what information might be needed about a fixture so that all parties were given enough information to carry out a successful voyage.

There were some who obviously had some operational experience and provided very comprehensive answers but others were rather light on details and missed several major matters such as the quantity of cargo and the draft of the vessel and the importance of the CP and its terms, ETAs and notices.

The orders sent to the vessel showed some imagination and clear thinking about cleaning, bunkering and other relevant matters.

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

**During loading of cargo at a port one of your managed tankers reports that a valve at the vessel's manifold has fractured spraying crude oil over the vessel, the shore loading rack and into the sea. A shore worker and your crew member have been sprayed about the face with cargo causing some**

**possible breathing and eye injuries. Prompt action by the ship and shore watch in stopping the load has averted a major spill.**

**a) What immediate expert assistance will be available for the Master, the manager's emergency response team and the owner?**

**b) What actions should the management company now undertake?**

**c) In this incident what are the risks covered under the P&I Clubs Insurance? Give details of these and what is included in each category.**

The first part of this asked what immediate expert assistance was available for the Master and the managers and owner and these will be the local agents, port authorities and other local services such as Oil Pollution Control resources.

After the entire vessel is loading at a port that has a facility to load Crude oil so all of these should be immediately available. Local medical facilities should also be available and possibly P&I representation.

Many candidates misread the question and wasted time by writing about assisting with the injured, which was not asked.

Following this the management company should be concerned with making all parties aware of the situation and providing assistance to the vessel with personnel, equipment, and other requirements and this should show the resources that should be at hand in a management office.

Part C depended on what candidates knew about the risks that had arisen or might arise from the incident that would be covered by the P & I, damage, delay, pollution, fines, cargo loss, injury etc.