



MERCHANT SHIPPING SECRETARIAT
GOVERNMENT OF SRI LANKA
CERTIFICATE OF COMPETENCY EXAMINATION



GRADE : MASTER ON SHIPS OF 500 GT OR MORE (UNLIMITED)
 SUBJECT : GENERAL SHIP KNOWLEDGE
 DATE : 11.07.2023

Time allowed THREE hours	Total marks : 180
ANSWER ALL QUESTIONS	Pass marks : 50%

Formulae and all intermediate steps taken in reaching your answer should be clearly shown. You may draw sketches wherever required. Electronic devices capable of storing and retrieving are **not** allowed.

- 1) Your vessel is voyage chartered to carry 33 numbers of windmill parts from Pohang, South Korea to Anchorage (this is the name of the port), Alaska, USA. Vessel is a 5 cargo hold general cargo vessel and vessel's static and dynamic data relating to voyage as follows:

LOA : 225m	Breadth : 32m
Max summer draft : 12.04m	Summer DWT: 58000 t
Loaded draft Fwd : 6.28m	Aft : 6.52m
GM _f : 3.04m	Rolling period : 09seconds
Propeller immersion : 66%,	
Total DWT aboard : 20572 t including full ballast	

Total distance from Pohang to Anchorage according to pre-voyage plan is 3665 Nm and average speed: 12Kts.

Vessel departed Port of Pohang on 30th December 2017 at around 1430 Hrs local time. On 03rd Jan 2018 1100hrs following weather charts received and vessel's current position is 46° 42'N, 148° 48'E. With reference to below routeing and weather report, answer following questions:

- a) Explain in detail your voyage precautions and actions pertaining to current position of the vessel and weather in North Pacific as per the given weather reports. (25 marks)
- b) Briefly explain your main considerations when evaluating and selecting optimum route. (10 marks)
- c) On 06th Jan. 2018 at around 1430hrs local time, 2nd Officer reported Auto Pilot unable to maintain set course and continuous alarming as steering error, then manual steering instated but when rudder is taken to mid ship (0° at Rudder angle indicator) vessel tends to turn to Starboard Side. Explain in detail what are your actions pertaining to above situation. (25 marks)

(25 marks)

2)

- a) A technician visited your vessel for performing annual servicing of radar is reported to have been found fallen on the compass deck (monkey bridge). He's unconscious lying without visible injuries appearing with signs of a seizure. Explain your actions as master. (10 marks)
- b) List down the factors to be considered by a prudent master when selecting a safe position to anchor. (10 marks)
- c) List the items that a ship's master is required to consider, when attempting to refloat a vessel which had been beached or stranded. (10 marks)

- 3) You have just replaced the command of vessel in which a master was taken off due to improper maintenance leading to the vessel being badly neglected.

In order to plan your restoring program to put vessel back to better conditions, explain with the aid of an appropriate graphical and informative sketch the technique you would use to carry out a read behavior assessment of any crew member holding a key position. (30 marks)

- 4) With regard to deviation of a magnetic compass:
a) Define any 1 (one) of following coefficients.

A, B, C, D, E, J.

- b) How would you effect corrections to what you have defined from above? (10 marks)
- c) Explain what is Lambda and its use. (05 marks)
- d) Explain briefly the methods available to adjust a magnetic compass. (05 marks)
- e) You are on board the vessel at Yokohama where H was recorded to be 19 A/m and Z = 5 A/m whilst the value of Coefficient Permanent C was (-) 5° and that due to Induced C was (+)8°.

Determine the total deviation due to Coefficient C on a heading of 300° off Melbourne;

Where H = 8 A/m and Z = (-) 14 A/m.

(06 marks)

- f) Identify the major components in a simple sketch of any 1 (one) of the following:
- i) Construction of a compass bowl
 - ii) H/E correcting system

(04 marks)

5)

- a) You are Master of a handy bulk carrier. Vessel is navigation through an area of restricted visibility due to dense fog associated with heavy weather in a coastal area. Briefly describe your precautions and responsibilities as master of the vessel.

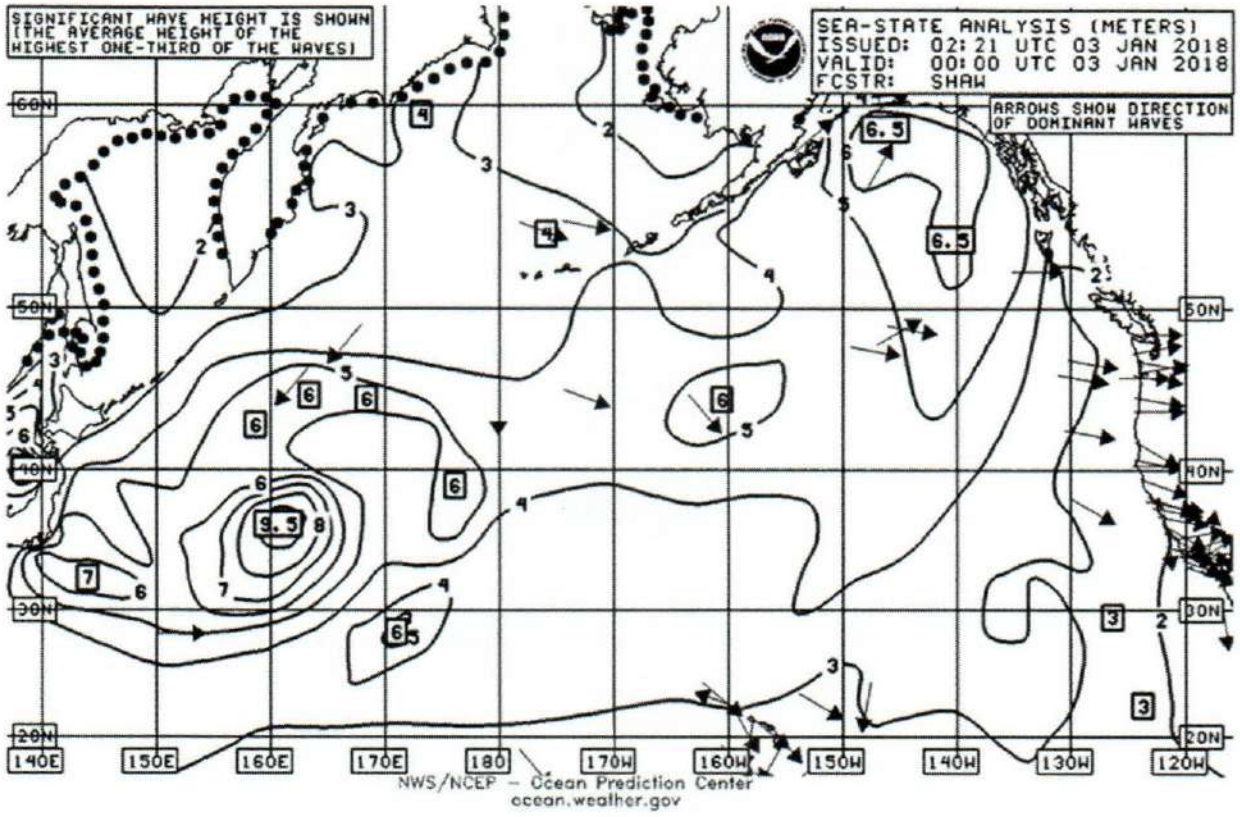
(10 marks)

- b) Your vessel has to pass through a narrow coral passage. Describe the precautions/preparations that you take as Master.

(10 marks)

- c) After an incident or accident ship owner will face huge liabilities depending on the severity and nature of the incident or accident. Describe what action would you take to protect ship owner if you were the Master.

(10 marks)

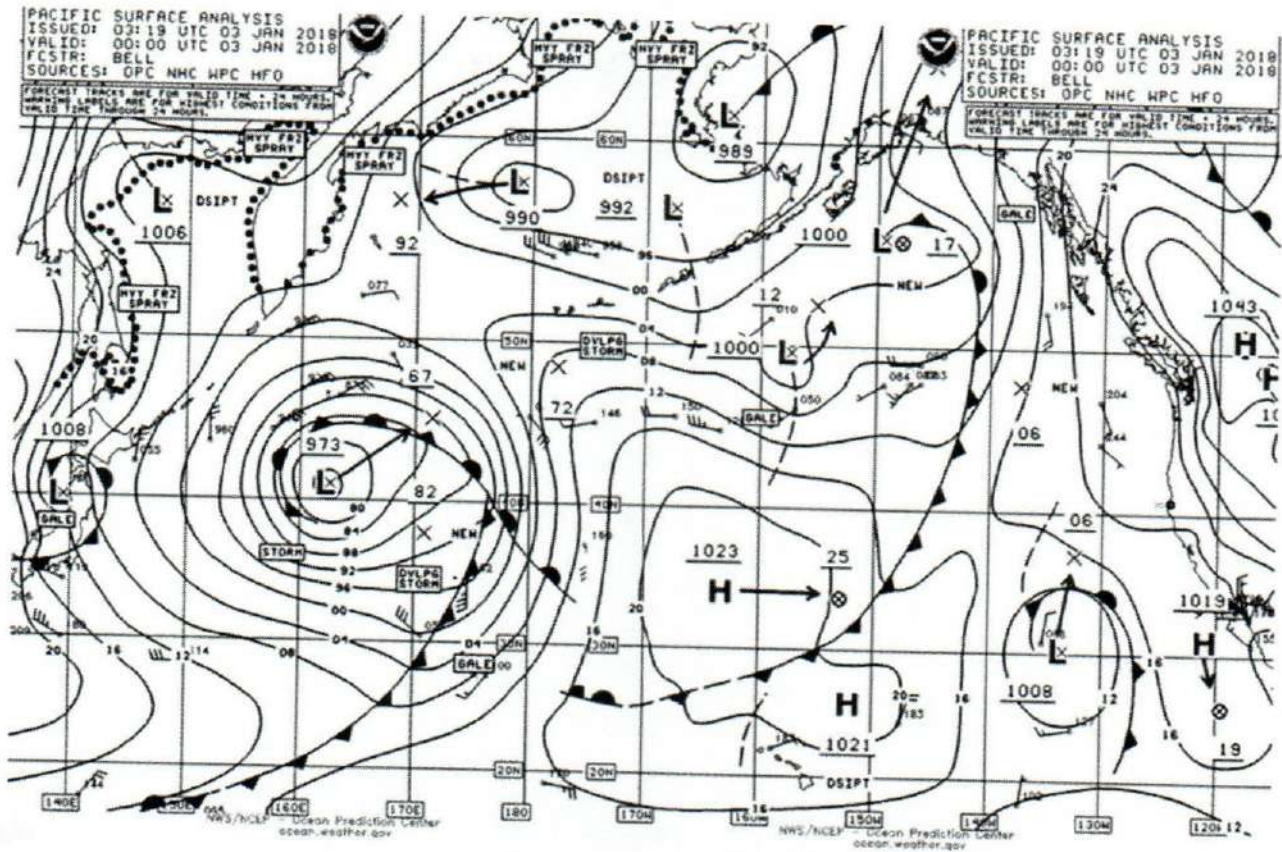


PACIFIC SURFACE ANALYSIS
ISSUED: 03:19 UTC 03 JAN 2018
VALID: 00:00 UTC 03 JAN 2018
FCSTR: BELL
SOURCES: OPC NHC WPC HFO

FORECAST TRACKS ARE FOR VALID TIME + 24 HOURS
WARNING LABELS ARE FOR HIGHEST CONDITIONS FROM
VALID TIME THROUGH 24 HOURS

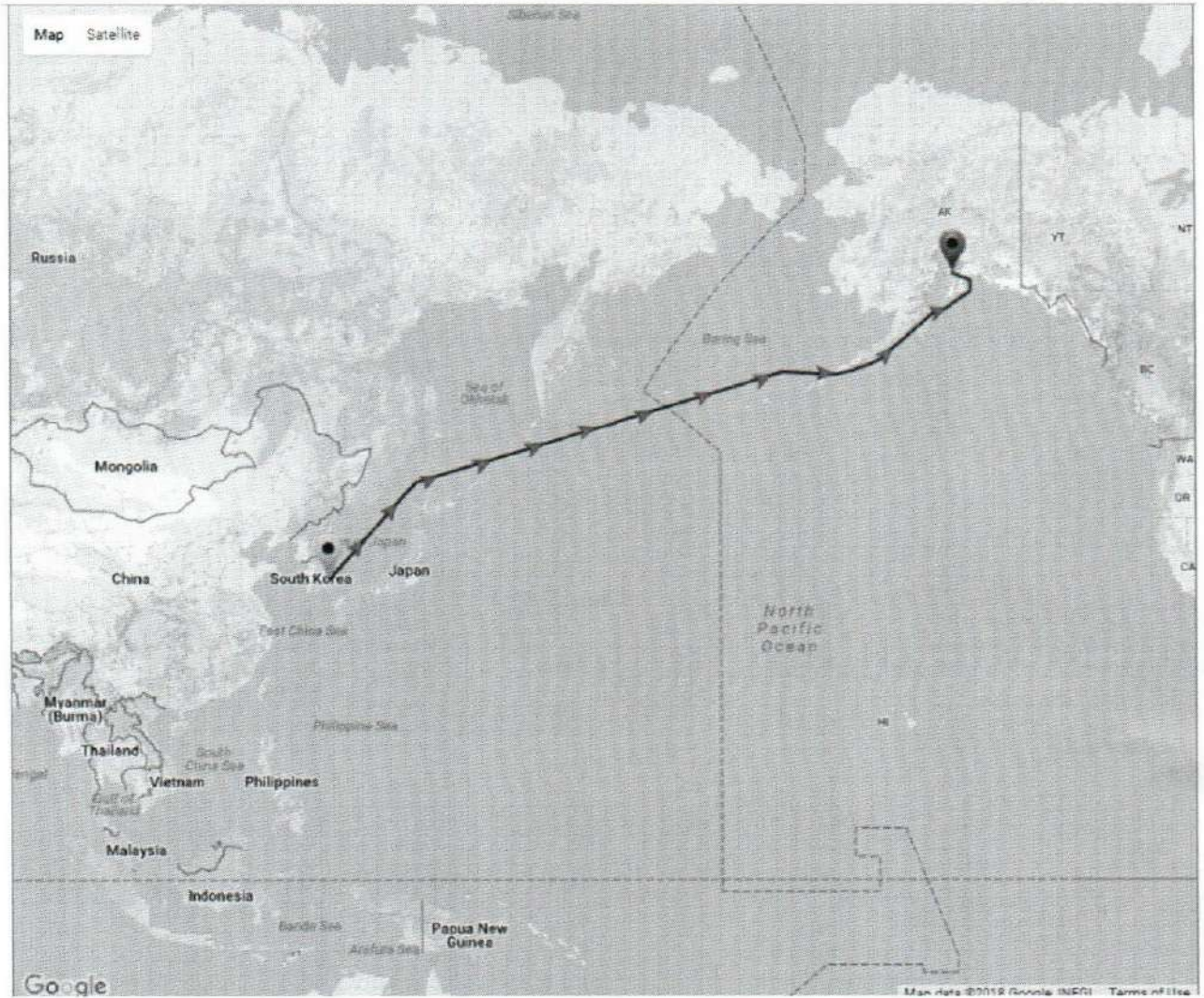
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GOVERNMENT OF SRI LANKA
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GRADE : MASTER ON SHIPS OF 500 GT OR MORE (UNLIMITED)
SUBJECT : GENERAL SHIP KNOWLEDGE
DATE : 3rd April 2023

Time allowed THREE hours Total marks : 180
ANSWER ALL QUESTIONS Pass marks : 50%

Formulae and all intermediate steps taken in reaching your answer should be clearly shown. You may draw sketches wherever required. Electronic devices capable of storing and retrieving are **not** allowed.

- 1) Your vessel is voyage chartered to carry 33 numbers of windmill parts from Pohang, South Korea to Anchorage (this is the name of the port), Alaska, USA. Vessel is a 5 cargo hold general cargo vessel and vessels static and dynamic data relating to voyage as follows:

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Propeller immersion	: 66%,		
Total DWT aboard	: 20572 t including full ballast		
Total distance from Pohang to Anchorage according to pre-voyage plan is 3665 Nm and average speed: 12Kts.			

Vessel departed Port of Pohang on 30th December 2017 at around 1430 Hrs local time. On 03rd Jan 2018 1100hrs following weather charts received and vessel's current position is 46° 42'N, 148° 48'E. With reference to below routing and weather report answer following questions:

- a) Explain in detail your voyage precautions and actions pertaining to current position of the vessel and weather in North Pacific as per the given weather reports. (25 marks)
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- 2)
- a) A technician visited your vessel for performing annual servicing of radar is reported to have been found fallen on the compass deck (monkey bridge). He's unconscious lying without visible injuries appearing with signs of a seizure. Explain your actions as master. (10 marks)
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- 3) You have just replaced the command of vessel in which a master was taken off due to improper maintenance leading to the vessel being badly neglected.

In order to plan your restoring program to put vessel back to better conditions, explain with the aid of an appropriate graphical and informative sketch the technique you would use to carry out a read behavior assessment of any crew member holding a key position.

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- 4) With regard to deviation of a magnetic compass:
- a) Define any 1 (one) of following coefficients.

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- c) Explain what is Lambda and its use. (05 marks)
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 (04 marks)

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a) You are Master of a handy bulk carrier. Vessel is in restricted waters in fog and thick weather. Briefly describe your precautions and responsibilities as master of the vessel.

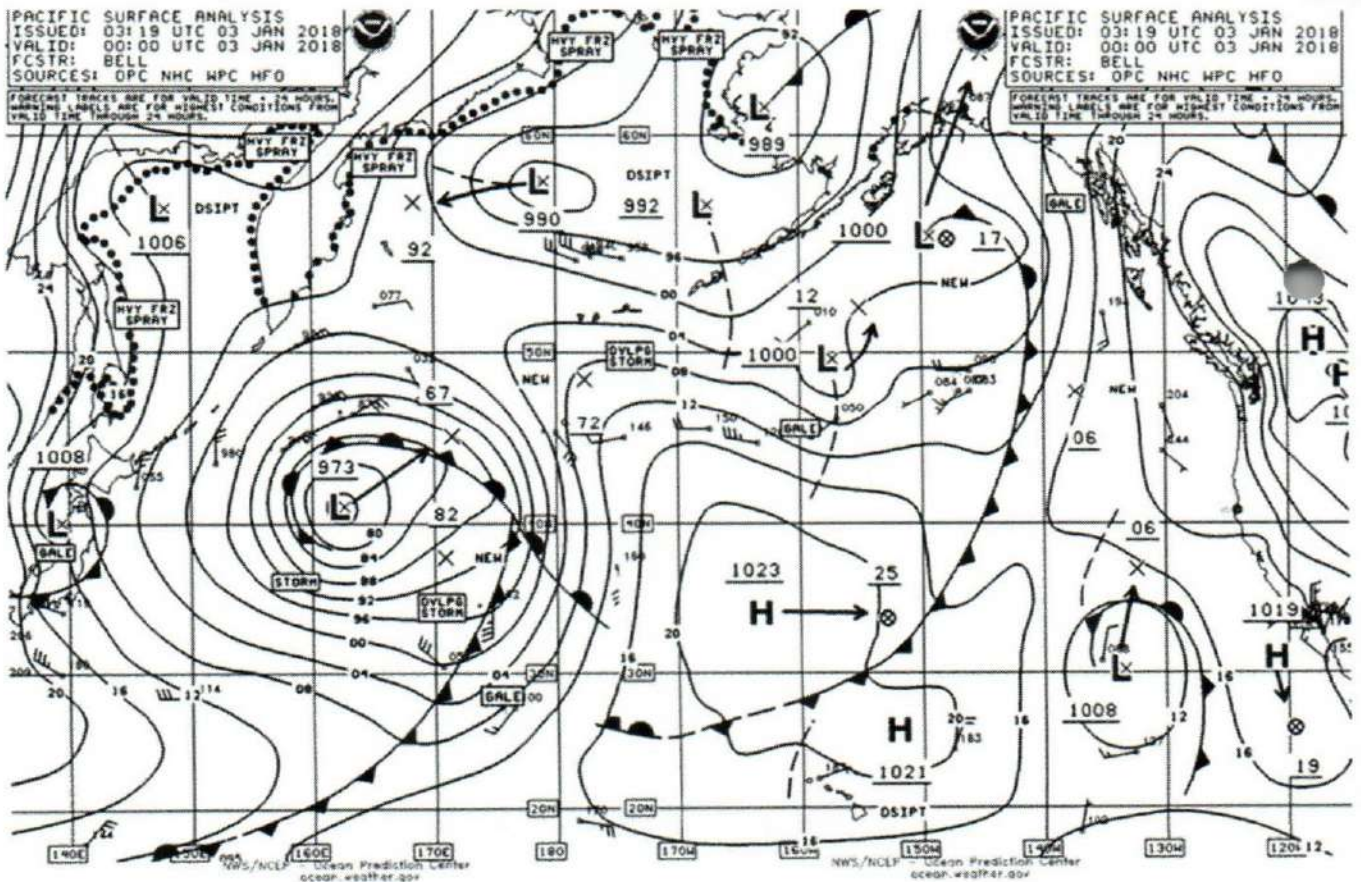
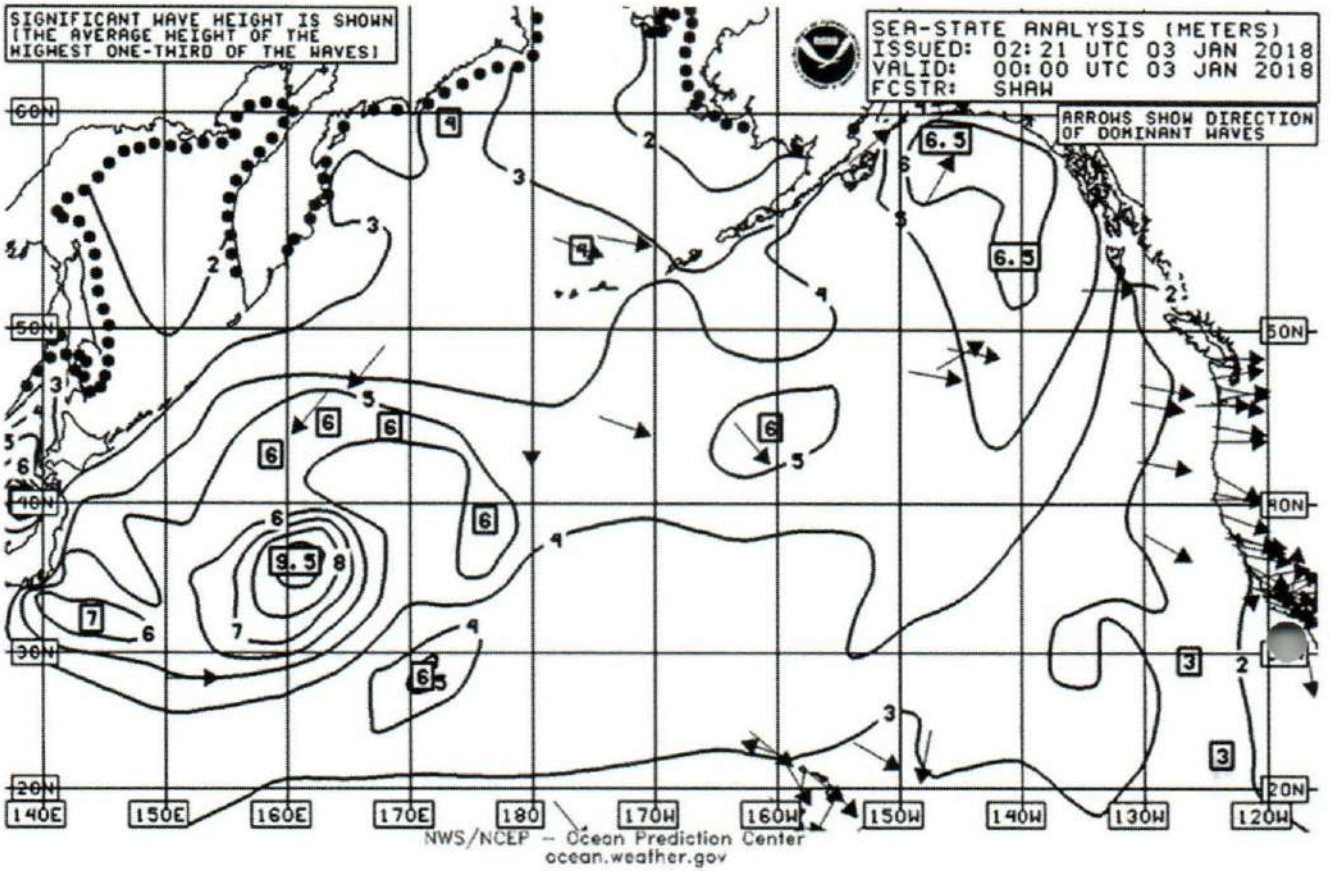
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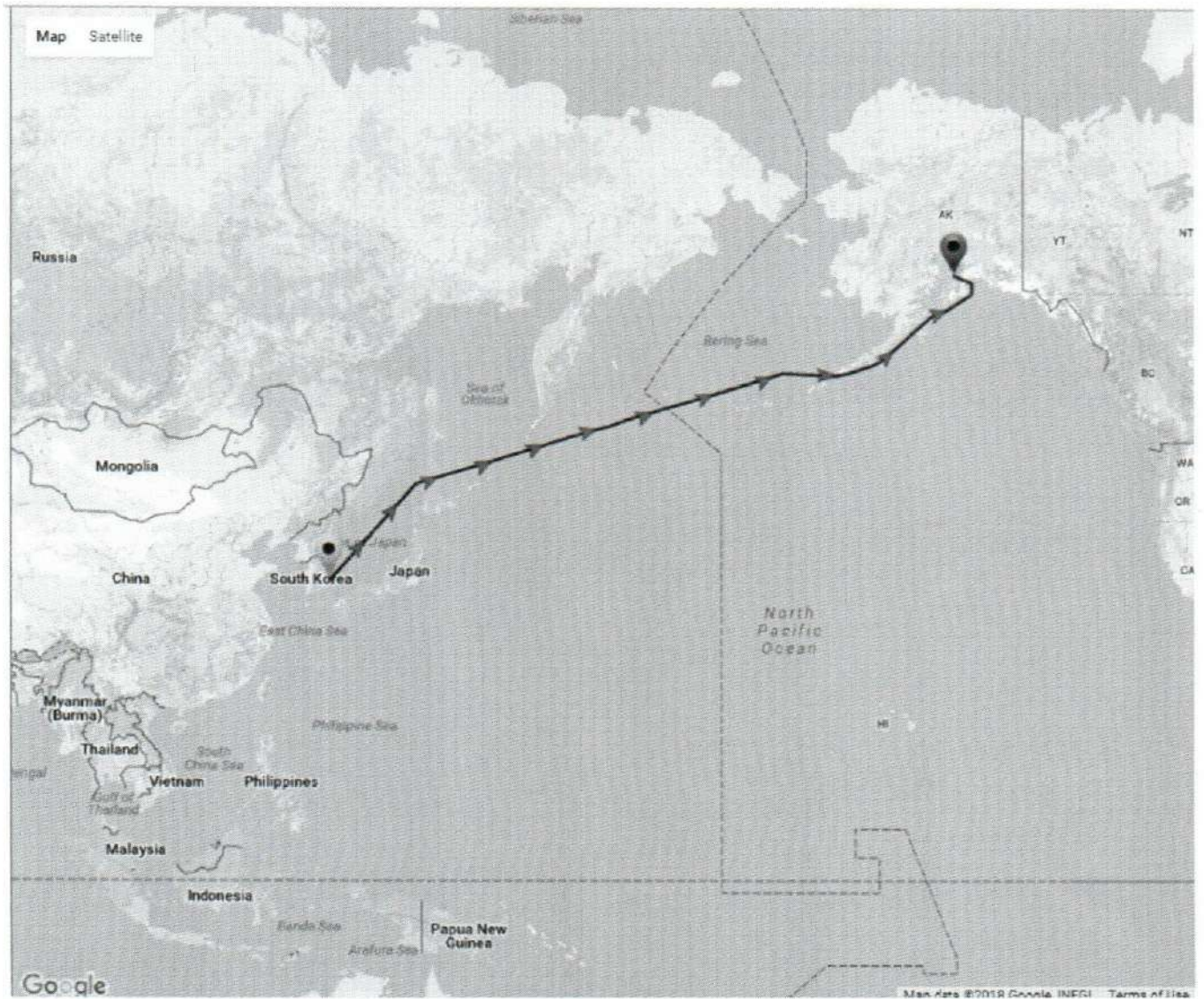
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calculate coet
Analysis - new ship
Tentative - 1 yr stable (initial)
defeat (05 marks) master act

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17/25

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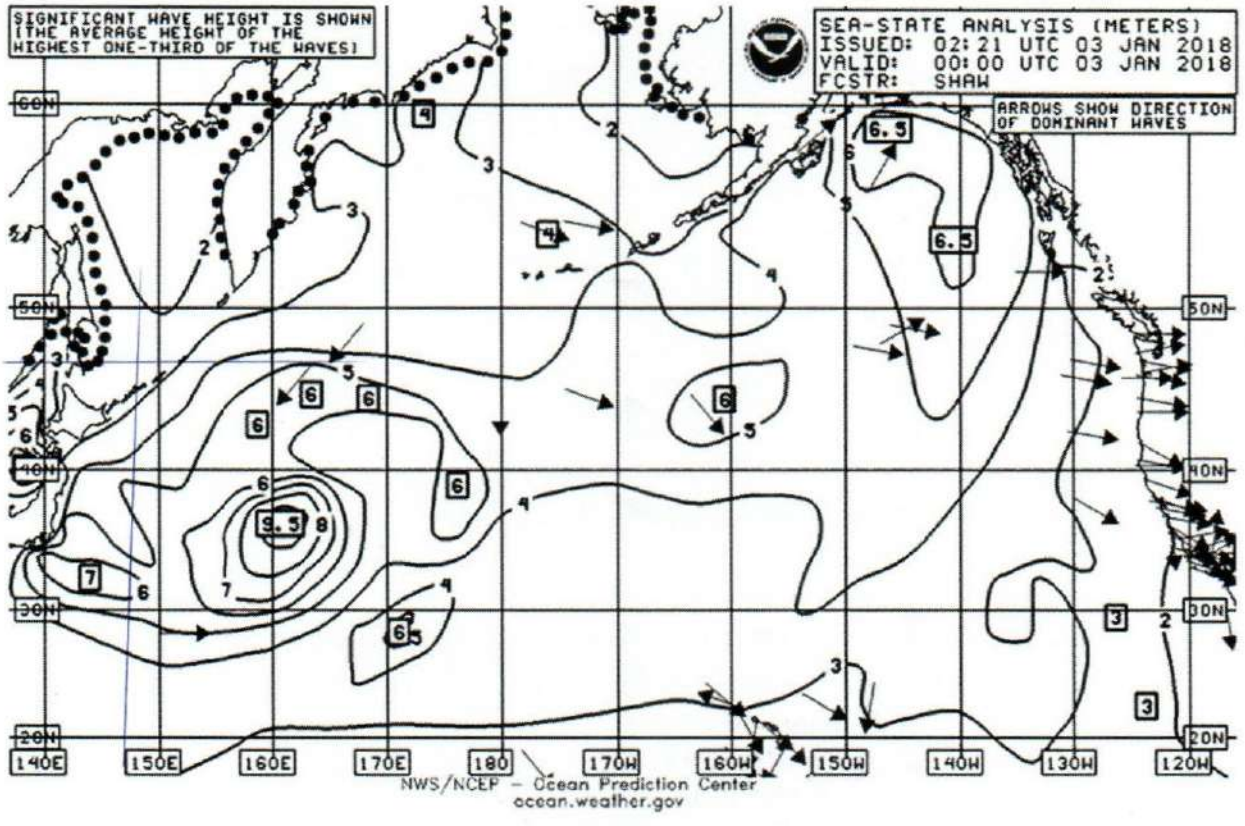
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(10 marks)

- Hospitalise
- due diligence
- seaworthy
- n.c/p
- 1st party.

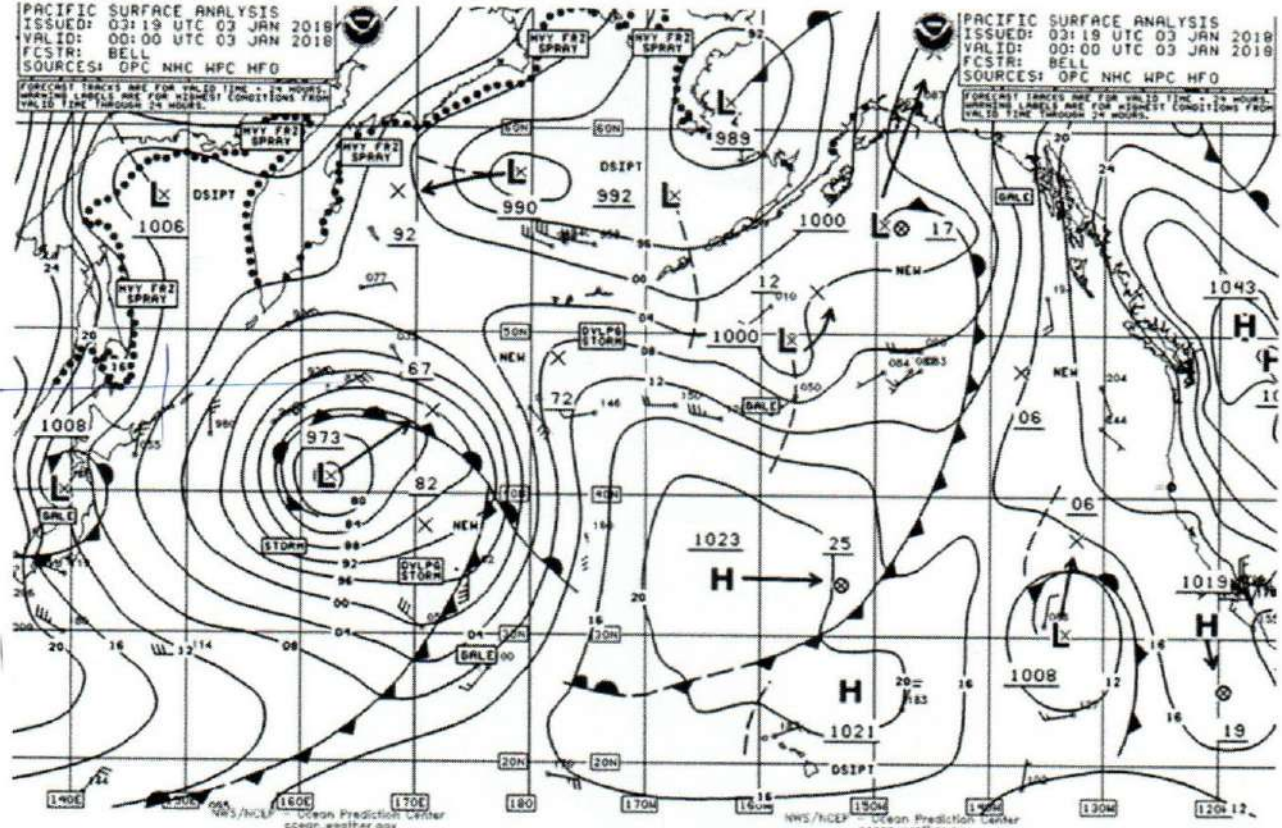


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