



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2021

MARITIME ECONOMICS
MARKING GUIDELINES

Time: 3 hours

300 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

QUESTION 1 MULTIPLE CHOICE

- 1.1 A
- 1.2 B
- 1.3 D
- 1.4 B
- 1.5 D
- 1.6 D
- 1.7 C
- 1.8 C
- 1.9 C
- 1.10 A
- 1.11 A
- 1.12 B
- 1.13 B
- 1.14 B
- 1.15 A
- 1.16 C
- 1.17 B
- 1.18 B
- 1.19 C
- 1.20 C
- 1.21 B
- 1.22 A
- 1.23 C
- 1.24 B
- 1.25 C
- 1.26 D
- 1.27 D
- 1.28 A
- 1.29 C
- 1.30 C

QUESTION 2 THE MARITIME WORLD

- 2.1 2.1.1 October
- 2.1.2 January
- 2.1.3 No
- 2.1.4 Rates are rising/rates are higher than over the entire period.
- 2.1.5 Distance between the ports/supply (or lack) of ships to move the
 steel/level of demand on the two routes
 (Any other plausible answer.)
- 2.1.6 (a) 2017
- (b) Sudden rise in the number of bulkers calling
- (c) Neo-bulk cargo
- (d) Steel bars
- (e) 260 divided by 52 = **5 ships**
- (f) Part (cargo)
- 2.2 2.2.1 14 metres – 10metres=**4 metres**
- 2.2.2 Coal takes up valuable cargo space/coal is more of a pollutant/coal
 is not as calorifically efficient as a fuel.
 (Any other plausible answer.)

QUESTION 3 SHIPPING OPERATIONS

- 3.1 3.1.1 (a) Damage caused by the vessel striking a buoy OR jetty OR other plausible answer.
- (b) Better tax deals/trade routes may require certain flags/employment of cheaper crews/cheaper registration fees.
(Do not award marks for answers such as exploitation of crews or to avoid strict surveys by flag state.)
- (c) Yes
- (d) Port of registry is in a different country to the owner's country
- (e) Vessel will call at Cochin first/therefore Cochin's cargo in tweendeck to avoid overstay.
- 3.1.2 (a) Hold taking longest time = No 5 Hold = $\frac{5500 \text{ tons}}{50 \text{ tons/hour}} = 110 \text{ hours}$
Time to complete loading = $110 + 10 + 27 = 147 \text{ hours}$
- (b) Lashing complete = 08:00 on 20/10 + 147 hrs + 9 hrs
= **20:00 on 26/10**
- (c) ETD Osaka = 20:00 on 26/10 + 2 hours = **22:00 on 26/10**
- 3.2 3.2.1 Days on charter = $6 + 14 + 3 + 5 + 2 + 7 + 8 + 1 = 46 \text{ days}$
- 3.2.2 00:01 on 20 October = 46 days = **23:59 on 4/12**
- 3.2.3 Operational costs = $46 \text{ days} \times \$30\,000 \text{ per day} = \$1\,380\,000$
- 3.2.4 Fuels costs = HFO = $24 \text{ days} \times 36 \times \$350 = \$302\,400$
MDO = $46 \text{ days} \times 3 \times \$456 = \$62\,928$
Total = **\$365 328**
- 3.2.5 Port costs = $\$249\,000 + \$209\,000 + \$202\,000 = \$660\,000$
- 3.2.6 Total costs = $\$1\,380\,000 + \$365\,328 + \$660\,000 + \$290\,000 = \$2\,695\,328$
- 3.2.7 Costs in Yen = $\$249\,000 \times Y109 = Y27\,141\,000$
- 3.3 HFO left = $1\,880 \text{ tons} - (24 \text{ days} \times 36 \text{ tons}) = 1016 \text{ tons}$
- 3.4 3.4.1 Time to reach rendezvous position = $72 \text{ NM} \text{ divided by } 16 \text{ knots} = 4,5 \text{ hours}$
- 3.4.2 Time at rendezvous position = $14:30 \text{ on } 2/11 + 4,5 \text{ hours} = 19:00 \text{ on } 2/11$
- 3.4.3 No.

QUESTION 4 INTERNATIONAL TRADE

- 4.1 4.1.1 Elbe Shipping
- 4.1.2 Tiger Steel Distributors
- 4.2 Two
- 4.3 4.3.1 Shipper (or Osaka Steel Works)
- 4.3.2 Consignee (or Tiger Steel Distributors)
- 4.3.3 Shipper (or Osaka Steel Works)
- 4.4 4.4.1 Strait of Malacca
- 4.4.2 Indian Ocean
- 4.4.3 Most of their oil pass through from Arabian Gulf/Exports and imports with Europe, India & Africa pass through the straits.
(Any other plausible answer.)
- 4.5 4.5.1 Impose customs duties on imported steel/Subsidise local steel production/Grant concessions to local steel producers.
- 4.5.2 Less steel imported = less demand for ships to bring the steel = fewer ships in harbours – impact on ancillary services.
(Any other plausible answer.)
- 4.6 4.6.1 ISPS Code
- 4.6.2 9/11 (or New York terror attacks)
- 4.7 4.7.1 At southern end of Malayan Peninsula (or at the southern end of the Straits of Malacca or other accurate description of the location of Singapore).
- 4.7.2 Approve the ship's plans before construction/Monitor their construction/Register the ships/Undertake surveys to ensure their seaworthiness/Inspect them after accidents and declare them seaworthy before they can resume trading.
(Approve any modifications/Any other plausible answer.)
- 4.7.3 No
- 4.7.4 Posing a pollution threat/Vessel is unseaworthy and posing a danger to Singaporean coast.
- 4.8 Control the exploitation of resources/oil, gas, minerals, fishing.
- 4.9 Large volumes of oil move through the strait/Oil vital to the world's economy/Gulf area needs to import large volumes of consumer goods/food.
(Any other plausible answer.)
- 4.10. Vessel's ETA/Vessel's length/Vessel's draught/Type of cargo she will be discharging/Length of stay/any other plausible answer
(Any)

QUESTION 5 MARINE ENVIRONMENTAL CHALLENGES

- 5.1 5.1.1. Waste that originates from land sources.
 - 5.1.2 Does not decompose readily/sea creatures swallow it and usually die/unsightly.
- 5.2 5.2.1 South-eastern USA (or Caribbean) – hurricanes
 Indian Ocean – tropical cyclones
 - 5.2.2 Strong winds = heavy seas = can damage ships or harbour installations
 = delay cargowork

Total: 300 marks