



NATIONAL SENIOR CERTIFICATE EXAMINATION  
NOVEMBER 2018

**MARITIME ECONOMICS**  
**MARKING GUIDELINES**

Time: 3 hours

300 marks

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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.

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**QUESTION 1          MULTIPLE-CHOICE QUESTIONS**

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

**[60]**

**QUESTION 2 THE MARITIME WORLD**

- 2.1 2.1.1 40 million tons (2)
- 2.1.2 2016 (2)
- 2.1.3 (a)
  - Fewer coal-fired power stations.
  - Less demand for coal for industrial use.Any other plausible reason for a decrease in coal usage. (2 × 2 = 4)
- (b)
  - Fewer ships calling.
  - Fewer jobs in the shipping sector.
  - Less demand for fuel and stores.
  - Less activity in the shipping sector. (4 × 2 = 8)
- 2.1.4 (a) Number of bulk carriers =  $\frac{30\,000\,000\text{ t}}{150\,000\text{ t}} = \mathbf{200\text{ bulk carriers}}$  (4)
- (b) Number of bulk carriers weekly =  $\frac{200}{52} = \mathbf{3\text{ (accept 4)}}$  (4)
- (c) 160 000 dwt (2)
- 2.2 2.2.1 Heavy fuel oil (or HFO or HVF) (2)
- 2.2.2 Generate electricity (2)
- 2.2.3
  - Increases the range of the ship.
  - Fewer bunker stops needed.
  - HFO takes less stowage space on the ship.
  - More space for cargo. (4 × 2 = 8)
- 2.2.4
  - Using cleaner fuels.
  - Installing scrubbers in exhaust flues. (2 × 2 = 4)
- 2.3 Explanation of why the shipping sector needs a positive economic climate in which to operate. Give credit for clear and reasonable argument. (8)
- [50]**

**QUESTION 3      SHIPPING OPERATIONS**

- 3.1    3.1.1 Panamax Bulker (2)
- 3.1.2 (a)    Hours to load =  $\frac{80\,000\text{ t}}{4\,000\text{ t/h}} = 20\text{ hrs} + 4\text{ hrs} = \mathbf{24\text{ hours}}$  (6)
- (b)    Time finished loading = 08:00 on 4 Dec + 24 hours  
= **08:00 on 5 Dec** (6)
- (c)    08:00 on 5 Dec + 4 hours = **12:00 on 5 Dec** (4)
- (d)    • Draught survey.  
• Immigration clearance.  
• Customs clearance.  
• Cargo documentation completed.  
• Other ship's documents completed. (3 × 2 = 6)
- 3.1.3 (a)    Shorter (2)
- (b)    Dispatch (2)
- 3.1.4 (a)    NEWCASTLE (3d) ----- (14d) ----- → SHANGHAI (7d) +  
(5d) (ANCHOR)  
SHANGHAI ----- (14d) ----- → NEWCASTLE (8)
- (b)    3 + 5 + 14 + 7 + 14 days = **43 days** (6)
- (c)     $\frac{365\text{ days}}{43\text{ days}} = \mathbf{8\text{ voyages}}$  (6)
- (d)    8 × 80 000 t = **640 000 t** (6)
- 3.1.5 (a)    Consignor (or Shipper) (2)
- (b)    Consignor (or Shipper) (2)
- 3.2    3.2.1 General arrangement plan (port side)  
Plan must show:  
Holds on fire (holds 3 & 4)/draught (14 m)/freeboard (5 m)  
Length (223 m)/bow/stern/funnel/accommodation/keel (12)
- 3.2.2 No (2)
- 3.2.3 • No assistance needed.  
• Ship arrived in port under her own power.  
• Ship not in immediate danger. (2 × 2 = 4)

- 3.2.4 • Port State Control  
• Flag State Control  
• Classification Society  
• Port of Newcastle  
• Salvage Association (Hull Underwriters)  
• P&I Club (correspondents) (3 × 2 = 6)
- 3.2.5 off hire (2)
- 3.2.6 (a) P&I Club (2)
- (b) P&I Club (2)
- 3.2.7 Shipowner (2)
- 3.2.8 Article on the fire aboard the ship. Award marks for concise, yet complete and clear reporting of the incident. (10)
- [100]**

**QUESTION 4      INTERNATIONAL TRADE**

- 4.1      One per voyage (2)
- 4.2      (a)      Oz Coal Exporting Company (2)
- (b)      Yangtze Coal Company (2)
- 4.3      4.3.1      No. of round voyages =  $\frac{640\,000 \text{ tons}}{160\,000 \text{ tons}} = \mathbf{4 \text{ voyages}}$  (6)
- 4.3.2      • Fewer voyages.  
                     • Lower costs.  
                     • Quicker completion of the export operation. (2 × 2 = 4)
- 4.3.3      • Cargo not required in larger consignments.  
                     • Depth of water at one of the ports.  
                     • Air draught at one of the ports.  
                     Any other plausible reason. (2 × 2 = 4)
- 4.4      4.4.1      • Reduce import duty on parts for the ship.  
                     • Reduce tax.  
                     • Grant concessions for numbers of people employed.  
                     • Subsidise some costs.  
                     Any other plausible concession. (3 × 2 = 6)
- 4.4.2      • Local suppliers of steel will benefit.  
                     • Local suppliers of other parts will benefit.  
                     • Local taxes are paid.  
                     • Training of people.  
                     • Shipyard can build more ships of a similar type. (4 × 2 = 8)
- 4.4.3      Container ship (2)
- 4.5      4.5.1      • At the entrance to Arabian Gulf (or Persian Gulf) (or between  
                     Oman and Iran).  
                     • Only sea passage between Persian Gulf and the open ocean.  
                     • Strait of Hormuz is a strait between the Persian Gulf and the Gulf  
                     of Oman. (2 × 2 = 4)
- 4.5.2      • Arabian Gulf is largest oil-producing area.  
                     • Most of the world's oil passes through this strait.  
                     • Oil is the most important commodity.  
                     • Area is arid; therefore most food has to be imported via the strait.  
                     • Rich area – a lot of consumer goods pass through the strait. (5 × 2 = 10)
- 4.6      • Shipping is an international business.  
             • Each voyage can involve several countries.  
             • Need for legal matters to be resolved amid uniform legal framework. (3 × 2 = 6)

- 4.7    4.7.1   International Maritime Organisation (IMO) (2)
- 4.7.2   SAMSA (South African Maritime Safety Authority) (2)
- 4.8    •   Ask why the ship had stopped.  
          •   Order a tug to take her in tow if necessary. (2 × 2 = 4)
- 4.9    4.9.1   Land-based sources (2)
- 4.9.2   •   Ingested by marine animals.  
                  •   Pollutes beaches.  
                  •   Can enter river estuaries. (2 × 2 = 4)
- [70]**

## **QUESTION 5            MARINE ENVIRONMENTAL CHALLENGES**

- 5.1    5.1.1   Wind delays (4)
- 5.1.2   No effect (4)
- 5.1.3   Sailing will be delayed until the wind strength drops (vessel is high-sided). (4)
- 5.2    Fishing quotas limit the catch; an unlimited catch = destruction of number of fish = number of breeding stock is reduced = fewer fish available for future catch. (4 × 2 = 8)
- [20]**

**Total: 300 marks**