

NATIONAL SENIOR CERTIFICATE EXAMINATION NOVEMBER 2022

MARITIME ECONOMICS

MARKING GUIDELINES

Time: 3 hours 300 marks

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QUESTION 1 THE MARITIME WORLD

- 1.1 1.1.1 Less coal being used as bunker fuel.
 - Coal not environmentally friendly.
 - Coal not calorifically efficient.
 - Other disadvantages of coal
 - 1.1.2 Fewer ships
 - = less port dues paid by ships = less income to the port
 - = fewer ancillary services are used = less revenue earned = fewer jobs

Migration to oil fuel = opportunity for investment

- 1.2 1.2.1 LNG/Wind/Solar
 - 1.2.2 Scrubbers in exhaust systems
 - Cleaner fuels
 - Better designs of hulls to reduce friction
 - Anti-fouling paint

(Any other plausible answer)

- 1.3 1.3.1 Bulk carrier of over 150 000 dwt
 - Length of over about 250 metres
 - Cannot pass through the canals fully laden
 - 1.3.2 Brazil Rotterdam
 - 1.3.3 Greater demand for coal / Northern Hemisphere's winter
 - Fewer ships available
 - 1.3.4 Firming
 - 1.3.5 Longer distance
 - 1.3.6 1.3.6 178 000 × \$22,78 = **\$4 054 840**
 - 1.3.7 Straits of Malacca
- 1.4 1.4.1 Shuttle tanker
 - 1.4.2 Suezmax
 - 1.4.3 Gas tanker
- 1.5 1.5.1 Philippines
 - 1.5.2 Owners unwilling to pay high salaries to western seafarers.
 - Fewer western people desiring sea-going careers / Other attractions ashore.
 - Stricter labour laws in Western countries
 - Russia-Ukraine war

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QUESTION 2 SHIPPING OPERATIONS

- 2.1 2.1.1 Lloyd's Open Form
 - 2.1.2 SCOPIC
 - 2.1.3 Yes, she refloated the ship.
 - 2.1.4 (a) 18 days × 38 tons per day = **684 tons**
 - (b) 2 118 tons 684 tons = **1434 tons**
 - (c) 1434 tons div 478 tons = **3 trips**
 - 2.1.5 Oil kills marine organisms.
 - Among those are phytoplankton and zooplankton that form the basis of marine food chain.
 - Affects on fishing industry
 - Oil takes a long time to disperse or decompose.
 - Unsightly and has a negative effect on tourism. And surrounding area
 - Expensive and difficult to clean up. (Any 5 × 2)
 - 2.1.6 Some fuel had been taken off.
 - Vessel's draught would have been reduced.
 - Deeper water on spring high tide.
 - 2.1.7 Yes
 - 2.1.8 (a) Hull & Machinery
 - (b) P&I Club
 - (c) P&I Club
 - 2.1.9 Assess the damage.
 - Check that repairs have been done and ship seaworthy.
 - Issue seaworthy certificate.

 $(Any 3 \times 2)$

- 2.2 2.2.1 Chief Mate (or Mate or Chief Officer or 1st Officer)
 - 2.2.2 Arbitration
- 2.3 Two
- 2.4 Immigration
 - Customs
 - Port Health

 (3×2)

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2.5 2.5.1 Hold Number 3

2.5.2
$$\frac{8750 \text{ t}}{50 \text{ t/h}} = 175 \text{ hours}$$

- 2.5.3 By rail (or by train or truck)
- 2.5.4 (a) Off hire
 - (b) From 00:01 on 25 July to 23:59 on 5 September = **43 days**
 - (c) Time Charter
- 2.6 2.6.1 (a) Chandler
 - (b) I received Voyage Instructions La Plata to Mombasa.
 - (c) Request Free Pratique
 - (d) No remnant of previous cargo should contaminate next cargo.
 - Wheat cargo to be loaded must not get wet.
 - Requirement of charter party
 - (e) To ensure she is placed at a berth that can accommodate her draught.
 - 2.6.2 Charter Party
 - 2.6.3 (a) Cargo Owner
 - Charterer
 - Shipowner
 - Insurers
 - Port state

 $(Any 2 \times 2)$

- (b) To avoid delay once the ship is alongside.
- 2.6.4 (a) Demurrage
 - (b) Charterer pays Shipowner
- 2.6.5 Port Dues
 - Tug and Pilotage charges
 - Stores (or chandler)
 - Stevedoring

(Any other plausible answer for THIS port call)

QUESTION 3 INTERNATIONAL TRADE

- 3.1 3.1.1 International Ship and Port Security Code (or ISPS)
 - 3.1.2 Three times
 - 3.1.3 Gibraltar/Mumbai (or Singapore)
 - 3.1.4 (a) Liberian (or Cypriot)
 - (b) Better tax regime
 - Can employ crews from any country
 - Cheaper registration fees
 - Trade purposes
 - Less stringent regulations

 $(Any 2 \times 2)$

- (c) Lower pay scales for Filipinos
 Non-availability of Greek crews
 Unionization fo Greek crews
- (d) Liberia (or Cyprus)
- (e) Award marks for clear expression of opinion regarding the use of a flag of convenience for OR against.
- (f) Award marks for clear explanation why Maritime Law in one country must comply with internationally agreed maritime law.
- - 3.2.2 Shipper
- Iron ore cargoes FOB means foreign consignee pays for and chooses the ship foreign ship employing foreign crews.
 - If CIF South African shipper pays for and chooses the ship could bea South African ship (or employing South African crew).
 - Agency and Insurance can be nominated by the shipper and could be South African.

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- 3.4 3.4.1 Iron Ore
 - Coal
 - Grain
 - Containers
 - Gas

(Any other **important** cargo but NOT oil) (Any 2 × 2)

- 3.4.2 West Africa (or Nigeria or Angola)
- 3.4.3 Indian Ocean

3.4.4 (a)
$$\frac{80 \text{ ships}}{24 \text{ hrs}}$$

= 3,3 round off = **4**

(b) 80 ships
$$\times$$
 365 days = **29 200**

(c)
$$29\ 200 \times \frac{5}{100}$$

= **1 460**

- (d) 1 460 ships × R1 000 000 = **1 460 000 000**
- (e) Port dues
 - Tug and Pilotage charges
 - Stores
 - Repairs
 - Crew changes

(Any other plausible sources of revenue (but NOT fuel)) (Any 3×2)

QUESTION 4

- 4.1 4.1.1 Mid-Latitude Cyclone (or depression)
 - 4.1.2 Alter course (or reduce speed or seek refuge) (Any other plausible answer)
 - 4.1.3 NO
 - 4.1.4 It may delay ships' movements ether through heavy seas or strong wind.
 - Wind may stop cargo work, especially container operations.
 - Rain will stop cargo work involving weather-sensitive cargo.
 (Any other plausible answer)
 (Any 3 x 2)
- 4.2 Ballast water may contain organisms from area where the water is taken in. If discharged in a foreign port, foreign organisms may colonise water in the port, therefore ballast water must be exchanged en route from loading port to discharge port.
- 4.3 Orca (or Killer Whale)
- 4.4 Hurricane
- 4.5 Plastic does not decompose easily or quickly.
 - Marine creatures ingest plastic.
 - Marine creatures die from plastic in digestive system.
 - Marine creatures become entangle in plastic tape or similar material.
 - Unsightly and affects tourism.
 (Any 3 x 2)

Total: 300 marks