NATIONAL SENIOR CERTIFICATE EXAMINATION
MAY/JUNE 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.

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QUESTION 1 THE MARITIME WORLD

1.1 1.1.1 Carbon Dioxide / Carbon Monoxide / Sulphurous Oxide

1.1.2 (a) Increase cost of fuel / Increase operating costs for ship

(b) Global warming (or Climate change)

(c) Use of scrubbers in exhaust flues / Use of renewable energy sources / Use of gas

1.1.3 Low calorific grade / Takes space that cargo or passengers could take / Shorter range for ships
Other

1.2 1.2.1 Suezmax / Tanker

1.2.2 Bravo Dock

1.2.3 Length / Width / Availability

1.2.4 15 March + 2 days + 2 days **= 19 March (accept 20 March)**

1.2.5 19 March (or 20 March) + 5 days = 29 March + 1 day **= 30 March (Accept 31 March)**

1.3 1.3.1 WAF/ROTTERDAM (or 130 000 tons)

1.3.2 Three

1.3.3 (a) 38,08 per ton

(b) $38,08 × 270 000 per ton **= $9 736 200**

1.3.4 $\frac{\$4\,300\,000}{275\,000 \text{ tons}}$ **= $15,64 (or $15,63) per ton**

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QUESTION 2 SHIPPING OPERATIONS

2.1 2.1.1 (a) Ship colliding with a wharf (or buoy or any other fixed or floating object)

(b) More favourable tax system / Crew with any nationality / Trade routes / Ability to obtain a bank loan / Political reasons / Other plausible reason to flag out

(c) Yes

(d) Registered in Marshall Islands / Owned in London

2.1.2 (a) $\frac{840 \text{ cars}}{20 \times 2}$ = 21 hours + 4 hours **= 25 hours**

(b) 25 hours + 4 hours **= 29 hours**

(c) 18:00 on 29 March + 32 hours **= 02:00 on 31 March**

(d) NO

(e) Dispatch

(f) Draught survey / Immigration clearance / Customs clearance / Stowaway check
Other

2.1.3 (a) Lion Shipping

(b) Hayadaka Shipping South Africa

2.1.4 (a) Shipper

(b) Consignee

(c) Consignee

2.1.5 Ro-ro ship

2.2 2.2.1 (a) Pacific Insurers (or FFO Insurers)

(b) Asian Maritime Insurers (or Hull & Machinery)

(c) Southern P&I Club (or P&I Club)

2.2.2 (a) Owner

(b) $430 000 × R14,58 **= R6 269 400**

2.2.3 High windage / strong wind

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2.3 2.3.1 Quicker / Cargo handled only at shipper's premises and consignee's premises / Less chance of theft of cargo / Less chance of damage to cargo / Other

2.3.2 (a) $\frac{384 \text{ nautical miles}}{16 \text{ knots}}$ **= 24 hours**

(b) 1 day × 31 tons **= 31 tons**

(c) The equivalent of 1 446 20-foot containers

(d) Feeder service

(e) Bill of Lading

(f) Manifest

2.4 2.4.1 Hazardous Cargo (or Dangerous Cargo)

2.4.2 C

2.4.3 Special label on it

2.5 Container cargo = 1 397 teu Capacity = 1 446 teu Therefore NO – not fully laden

QUESTION 3 INTERNATIONAL TRADE

3.1 3.1.1 (a) $30 000 per day × (3 + 26 + 5 + 26 + 7) **= $2 010 000**

(b) HFO: 52 tons per day × (26 + 26 + 7) = 3 068 ton × $450/ton
= $1 380 600
MDO: 3 tons per day x 67 days = 201 tons × $550/ton
= $110 550
Total fuel costs **= $1 491 150**

(c) Richards Bay: 3 days × $18 000/day = $54 000
Japan: 5 days × $26 000/day = $130 000
Total **= $184 000**

(d) $2 010 000 + 1 491 150 + 184 000 + 270 000 = **$3 955 150**

(e) $\frac{\$3\,955\,150}{185\,000 \text{ tons}}$ **= $21,38/ton**

3.1.2 Salaries / Depreciation / Insurance / Maintenance / Various tariffs & fees

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3.2 3.2.1 Arabian Gulf (or Persian Gulf)

3.2.2 It will increase

3.2.3 Threat to close the strait / Threat to security of oil supplies / Rush to get oil / Higher oil price

3.2.4 Containers / Grain / Coal / Minerals

3.2.5 Any TWO oil-producing areas

3.3 3.3.1 MARPOL

3.3.2 SOLAS

3.3.3 STCW 95-2010

3.3.4 ISPS

3.3.5 SOLAS

3.4 3.4.1 Winter / very rough seas on southern coast of South America

3.4.2 GENERAL ARRANGEMENT DIAGRAM: 4200 tons in Hold No 1; rest distributed through the other four holds

3.4.3 Fertiliser (or Chemical Industries)

3.5 3.5.1 Delivered Duty Paid (Shipper pays for everything during the shipment)

3.5.2 Full Container Load (one shipper and one consignee)

3.5.3 Device to lock a container to one beneath or to deck/hatchcover

3.6 3.6.1 Keep industry going / strategic considerations / keep people employed

3.6.2 Give tax concessions / Increase customs duty on imported tyres

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QUESTION 4 MARINE ENVIRONMENTAL CHALLENGES

4.1 Use discretion to allocate marks according to a reasoned argument in favour of (or against) the cost of the polar supply ship.

4.2 4.2.1 Plastic does not readily decompose / Stays in sea for many years / Danger that marine animals will ingest plastic / Humans eat fish with traces of plastic in it / Unsightly on beaches / Other

4.2.2 Any plausible measure to prevent plastic from reaching the sea

4.3 4.3.1 Depression (or Mid-latitude cyclone or cold front)

4.3.2 Violent movement of ship / galley unable to prepare food / difficult to sleep / difficult to keep balance / possible injury / other

4.3.3 (a) Ballast water exchange

(b) Introduce alien species to a pristine area / Any other effect of ballast water on environment

Total: 300 marks

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