NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2018

MARITIME ECONOMICS

MARKING GUIDELINES

Time: 3 hours | 300 marks

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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

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QUESTION 2 THE MARITIME WORLD

2.1 2.1.1 40 million tons

2.1.2 2016

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.

(b)
- Fewer ships calling.
- Fewer jobs in the shipping sector.
- Less demand for fuel and stores.
- Less activity in the shipping sector.

2.1.4 (a) Number of bulk carriers = $\frac{30\ 000\ 000\ t}{150\ 000\ t}$ = **200 bulk carriers**

(b) Number of bulk carriers weekly = $\frac{200}{52}$ = **3 (accept 4)**

(c) 160 000 dwt

2.2 2.2.1 Heavy fuel oil (or HFO or HVF)

2.2.2 Generate electricity

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.

2.2.4
- Using cleaner fuels.
- Installing scrubbers in exhaust flues.

2.3 Explanation of why the shipping sector needs a positive economic climate in which to operate. Give credit for clear and reasonable argument.

QUESTION 3 SHIPPING OPERATIONS

3.1 3.1.1 Panamax Bulker

3.1.2 (a) Hours to load = $\frac{80\ 000\ t}{4\ 000\ t/h}$ = 20 hrs + 4 hrs = **24 hours**

(b) Time finished loading = 08:00 on 4 Dec + 24 hours
= **08:00 on 5 Dec**

(c) 08:00 on 5 Dec + 4 hours = **12:00 on 5 Dec**

(d)
- Draught survey.
- Immigration clearance.
- Customs clearance.
- Cargo documentation completed.
- Other ship's documents completed.

3.1.3 (a) Shorter

(b) Dispatch

3.1.4 (a) NEWCASTLE (3d) ------- (14d) ------- → SHANGHAI (7d) + (5d) (ANCHOR)
SHANGHAI ------- (14d) -------- → NEWCASTLE

(b) 3 + 5 + 14 + 7 + 14 days = **43 days**

(c) $\frac{365\ days}{43\ days}$ = **8 voyages**

(d) 8 × 80 000 t = **640 000 t**

3.1.5 (a) Consignor (or Shipper)

(b) Consignor (or Shipper)

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

3.2.2 No

3.2.3
- No assistance needed.
- Ship arrived in port under her own power.
- Ship not in immediate danger.

3.2.4
- Port State Control
- Flag State Control
- Classification Society
- Port of Newcastle
- Salvage Association (Hull Underwriters)
- P&I Club (correspondents)

3.2.5 off hire

3.2.6 (a) P&I Club

(b) P&I Club

3.2.7 Shipowner

3.2.8 Article on the fire aboard the ship. Award marks for concise, yet complete and clear reporting of the incident.

QUESTION 4 INTERNATIONAL TRADE

4.1 One per voyage

4.2 (a) Oz Coal Exporting Company

(b) Yangtze Coal Company

4.3 4.3.1 No. of round voyages = $\frac{640\ 000 \text{ tons}}{160\ 000 \text{ tons}}$ = **4 voyages**

4.3.2
- Fewer voyages.
- Lower costs.
- Quicker completion of the export operation.

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.

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.

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.

4.4.3 Container ship

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.

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.

4.6
- Shipping is an international business.
- Each voyage can involve several countries.
- Need for legal matters to be resolved amid uniform legal framework.

4.7 4.7.1 International Maritime Organisation (IMO)

4.7.2 SAMSA (South African Maritime Safety Authority)

4.8
- Ask why the ship had stopped.
- Order a tug to take her in tow if necessary.

4.9 4.9.1 Land-based sources

4.9.2
- Ingested by marine animals.
- Pollutes beaches.
- Can enter river estuaries.

QUESTION 5 MARINE ENVIRONMENTAL CHALLENGES

5.1 5.1.1 Wind delays

5.1.2 No effect

5.1.3 Sailing will be delayed until the wind strength drops (vessel is high-sided).

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.

Total: 300 marks

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