

HONG KONG POLYTECHNIC  
CENTRE FOR MARITIME STUDIES

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Course : Post experience Diploma in Ship Command  
Subject : Shipboard Operations  
Class : PeDSC Part B  
Session : 1993/94  
Date : 7 June 1994  
Time allowed : 3 hours

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Instructions to Candidates : Attempt Questions 1, 2 and 3 and any four of the remainder.

This paper has nine questions.  
Minimum pass marks 60%.

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Available from : Stability data for "Mexna III".  
Invigilator

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A1. M.V. MEXNA III is floating at drafts: Forward 6.49m, Aft 7.52m, Port Amidships 6.98m, Starboard Amidships 7.01m in dock water of R.D. 1.016.

What is the maximum amount of cargo she can load to be at her summer mark in seawater?

Known weights: Fuel Oil 473.1t, Diesel Oil 64.5t, Fresh Water 162.0t, Constant 84.0t. Ballast 438.2t.

(Forward and after draft marks are at the perpendiculars)

(20 marks)

A2. (a) State the documentation to be kept onboard a cargo ship concerning the tests and inspections of lifting gear.

(b) State the periodical inspections to be carried out on lifting gear.

(c) Who is authorised to carry out these tests and inspections?

(20 marks)

A3. You join a 15 year old, 9 hold, gearless bulk carrier due to load a full cargo of iron ore as Mate. Bearing in mind the number of recent bulk carrier losses :

(a) State the inspections you would make of the ship's structure before commencing to load.

(b) State the factors you would consider when planning the loading sequence.

(c) State the precautions when loading.

(20 marks)

- B4. A vessel of displacement 8000 tonnes, KG 7.91m, is loading a heavy lift of 75 tonnes. The ship's heavy lift derrick plumbs a point 11.7m from the centreline and the head is 20.0m above the keel. KM 8.9m (constant).

Calculate the maximum angle of list and state when it will occur.

(10 marks)

- B5. A vessel of 16000t displacement is floating in dock water of R.D. 1.005. She has a rectangular double bottom tank 10m long and 20m wide. The tank is undivided and is used to carry bunkers of R.D. 0.93. What is the free surface moment of this tank?

(10 marks)

- B6. A vessel's minimum permitted freeboard occurs when the draft is 7.31m. The length of the vessel is 122m and the tipping centre is 3.05m forward of amidships. The TPC is 16t and the present drafts are F. 6.15m A. 7.82m. How much more cargo can this vessel load?

(10 marks)

- B7. State all the points to consider while planning to load a full load of rice in bags in India for discharge in Northern Europe in Winter.

(10 marks)

- B8. You are onboard an OBO carrier and have just completed discharging a cargo of ore in bulk. Describe how you would prepare your ship to carry her next cargo of oil.

(10 marks)

- B9. The Code of Safe Practice for Solid Bulk Cargoes published by IMO contains important information on the following :

- (a) MFAG table number
- (b) EmS Number

Describe the usefulness of the information contained in (a) and (b).

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