THE HONG KONG POLYTECHNIC UNIVERSITY

DEPARTMENT OF MARITIME STUDIES

Course	:	Post experience Diploma in Ship Command
Class	:	Part A
Session	:	1995/96 (Reassessment)
Subject	:	Navigation
Date	:	29 January 1996
Time allowed	:	3 hours

Instructions to Candidates :

This paper contains TWO sections, A and B

Section A contains THREE questions.
Attempt ALL three questions.
Questions in Section A have equal marks and are each worth 20%.

Section B contains SIX questions.
Attempt any FOUR questions.
Questions in Section B have equal marks and are each worth 10%.

Section A

A1. (a) With respect to the operational principles of gyroscopic compasses, explain what is meant by :

(i) Latitude error
(ii) Speed and course error

(b) Explain any method in current use of correcting the above errors.

A2. (a) State the main difference between the recommended routes from publications such as "Ocean Passages" and those from routeing services such as "Ocean Routes".

(b) Explain how shore based routeing organisations prepare and update routeing advice to shipmasters.

A3. Describe the effects on the manoeuvring characteristics of a deep laden vessel when in :-

(a) Shallow water
(b) Confined channels
(c) In close quarters with another ship.

Section B

B4. Explain the occurrence of warm anticyclones. State the season and locations in which they usually exist and describe the weather associated with them.

B5. With respect to the U.S. Navy Navigation Satellite System ("SATNAV") explain how the signal frequency doppler shift is translated into hyperboloids of position.

B6. Explain the principles of "lane identification" as used in the Omega system.

B7. Briefly explain how clutter and interference are reduced or eliminated in computer aided radar systems.

B8. As a Master of a ship, describe how you would ensure that all Navigational Charts and Publications are being updated properly and fit for use in the current voyage.

B9. List the items that should be covered in the Master's Standing Orders with respect to bridge watchkeeping while navigating in coastal waters.

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