



香 港 政 府 海 事 處

*Marine Department*

*Hong Kong Government*

*Pleasure Vessel Operator Grade 1 Certificate of  
Competency*

*Part A: Navigation (Written Examination)*

Time Allowed: 1 hour 50 minutes

Answer **ALL (5)** questions

*Use Chart No.HK3001, Deviation Card No.3,  
Variation 1.5°W and  
Tide Table 2015*

*The position given after names of prominent points are to be used for identification  
purpose only.*

**CANDIDATES ARE NOT ALLOWED TO WRITE OR DISFIGURE THIS PAPER**

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*This Paper consists of this page and another three printed pages*

**Important notes to Candidates:-**

- Write down your name on top of the answer sheet.
- Write the question number on the top left hand corner of each page.
- Answer each question on a new page.
- No need to copy down the question onto the answer sheet.
- Switch off mobile phone and all communication devices at the Examination hall.
- Return all question paper after examination.
- Return all used and unused answer sheet after examination.
- The whole progress of examination is recorded by close circuit televisions (CCTV) and voice recorders are also fitted in the examination hall.
- You are not allowed to take recording or photo of any question or answer paper.
- Do not disturb or help other candidate(s) to answer question.

If you contravene the above rules, you may be disqualified or given no marks on paper.

1. At 1600 hours, a vessel found Round Island Peak (61) (Lat. 22°32.5' N Long. 114° 19.8' E) in transit with Crescent Island Peak (137) (Lat. 22°31.8' N Long. 114°18.6' E) bearing 244°(C), and at same time Tai Leng Peak (150) (Lat. 22°30.4' N Long. 114° 19.9' E) bearing 206°(C).

The vessel then set sail on a compass course 191°(C) at speed 6 knots.

Later on, when Tai Leng Peak was abeam, the vessel changed its course to a destination at 3 cables north of Che Lei Pai Light (Lat. 22°28.1' N Long. 114° 17.4' E).

Assuming a current was flowing on 056°(T) and at 1.2 knots.

- Find: (a) the time and position of the vessel in Latitude and Longitude when passing abeam Tai Leng Peak; and  
(b) the compass course to steer from the turning point off Tai Leng Peak to the destination.

(25 marks)

2. A vessel was proceeding on 330°(C) at 9 knots and the current setting 020°(T) at 1.5 knots.

At 1300 hours, Wong Mau Chau L/H (Lat. 22°26.9' N Long. 114°23.7' E) was found bearing 246°(C).

After steaming for 20 minutes, Wong Mau Chau L/H was obscured by the vessel's superstructures, but Cham Pai L/H (Lat. 22°29.4' N Long. 114°21.9' E) was observed bearing 221°(C).

- Find: (a) the distance off Wong Mau Chau L/H at 1300 hours; and  
(b) the vessel's position in Latitude and Longitude at 1320 hours.

(20 marks)

3. The speed of a vessel was 8 knots. At 1100 hours, the vessel was in position Lat. 22°24.7' N Long. 114°26.0' E and intended to reach a position east of Ping Chau PC-B Buoy (Lat. 22°32.6' N Long. 114°26.9' E) distance 0.2 mile off.

- Find: (a) the compass course to steer counteracting a current of 147°(T) at 1.0 knot and allowing 5° leeway for a strong easterly wind; and

- (b) the time of arrival at the destination.

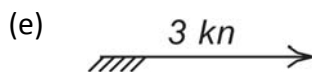
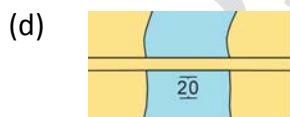
(20 marks)

4. (a) Find out the time and height of the high and low tides of Tai O on 23rd May 2015.
- (b) What is semi-diurnal tide?
- (c) Explain High and Low tides.
- (d) What is chart datum?
- (e) Known: Sounding under keel = 6.4m  
 Draft of a vessel = 1.2m  
 Height of tide = 0.6m  
 To find: Charted depth.
- (20 marks) (All questions carry equal marks)

5. Explain the meaning of the following Chart Symbols/Abbreviations:



(b) **SD**



(15 marks) (All questions carry equal marks)

-END-

## Reference material

DEVIATION CARD 自差表		No. 3
Ship's Head by Compass (degree) 船艏羅經方向(度)	Deviation (degree) 自差(度)	
000	2½W	西
020	1½W	西
040	½W	西
060	½E	東
080	2E	東
100	3E	東
120	4E	東
140	4½E	東
160	5E	東
180	5E	東
200	4E	東
220	3E	東
240	1½E	東
260	NIL	
280	2W	西
300	4W	西
320	5W	西
340	4W	西
360	2½W	西

