

**CHECK YOUR PROGRESS** [\(Pdf view\)](#)

**NAME:**

**NAVIGATION 1 AUS 802 Wilsons Prom.** [Answers](#)

Use [chartlet](#) and the [deviation card](#) provided at the end of this file.

**Question 1 (10 Marks)**

Plot the following positions:

Position 1 Lat  $39^{\circ} 17.0' S$  Long  $146^{\circ} 03.8' E$

Position 2 Lat  $39^{\circ} 08.0' S$  Long  $146^{\circ} 14.8' E$

Then find:

- the true course to steer from Position 1 to Position 2
- the time taken to steam from Position 1 to Position 2 at a speed of 6.25 knots
- the ETA at Position 2 if the time of departure from Position 1 was 2245 on 1<sup>st</sup> April

**Question 2 (10 Marks)**

South East Point, Wattle Island and the centre of Rodondo Island were all at a radar range of 3 miles. Fix the ship's position and find the compass deviation if South East Point bore 020 by ships compass. Use a Variation of  $13^{\circ} E$ , but do not use the Deviation Card provided.

### Question 3 (15 Marks)

At 1100 the summit of Norman Is (96) bore  $050^{\circ}.5M$  and Citadel Is. Lt bore  $097^{\circ}M$ .

The vessel then steered a course of  $127^{\circ}M$  at 5 knots.

At 1230, Cleft Is (113) (Skull Rock) bore  $068^{\circ}M$ , and the radar range of its nearest edge was 7.2 miles.

Use a Variation of  $13^{\circ}E$  in this question.

Now do the following:

- a. plot and record the 1230 DR position
- b. plot and record the 1230 Fix position
- c. find the course made good between 1100 and 1230
- d. find the speed made good between 1100 and 1230
- e. find the set drift and rate of the current experienced between 1100 and 1230

**Question 4 (15 Marks)**

At 1400 South East Point Light bore  $278^{\circ}M$ , and the radar range of the nearest edge of South East Point was 6.0 miles.

Find the compass course to steer to pass 1 mile to the north of Forty Foot Rocks, allowing for a current setting  $130^{\circ}T$  at a rate of 1.5 knots and leeway of  $10^{\circ}$  from a strong northerly wind. The vessel's speed is 6 knots.

Also calculate the Course Made Good, the Speed Made Good, and the E.T.A. when abeam of the summit of Rodondo Is

Use the Deviation Card provided and a Variation of  $13^{\circ}E$ .

**Question 5 (15 Marks)**

At 2115 in calm conditions and no current, steaming at 10 knots on a course of  $217^{\circ}\text{C}$ , Clifty Is. Lt. bore  $267^{\circ}.5\text{C}$ . Later on at 2130, the light bore  $333^{\circ}.5\text{C}$ . Using the running fix method, fix the ship's position at 2130.

Then find the compass course to steer, and the required ship's speed to reach a way point in Lat  $39^{\circ} 07'.5 \text{ S}$   $146^{\circ} 30'.0 \text{ E}$  at 2306. Use the Deviation Card provided and a Variation of  $13^{\circ}\text{E}$ .

**Question 6 (10 Marks)**

Using the tidal information provided at the internet site find the times and heights of the tides at Sydney on 1/6/08.

**Question 7 (6 Marks)**

Using the Australian National Tide Tables graph and the tidal information calculate the height of the tide Eden at 0700 on Sunday 1/6/08

**Question 8 (4 Marks)**

Find the under keel clearance of a vessel drawing 3 metres passing over a charted depth of 2.5 metres. Height of tide 2 metres.

**Question 9 (1 Mark)**

What is the full meaning of the symbol



**Question 10 (1 Mark)**

What is the full meaning of the symbol



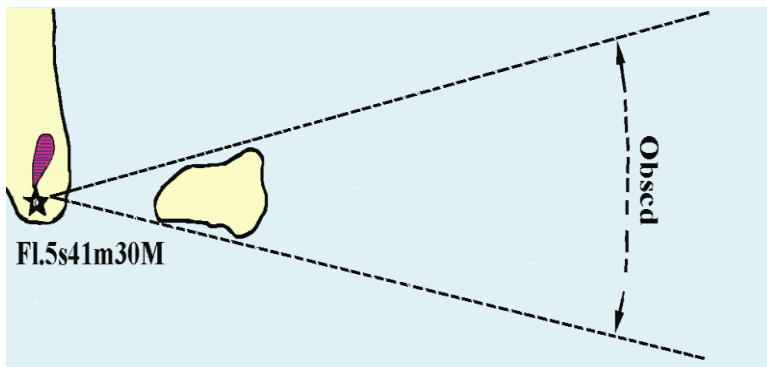
**Question 11 (1 Mark)**

What is the full meaning of the symbol



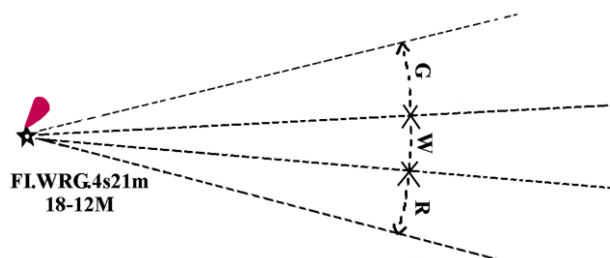
**Question 12 (1 Mark)**

What is the full meaning of the symbol



**Question 13 (1 Mark)**

What is the full meaning of the symbol



**Question 14 (4 Marks)**

Using the Geographical Range Table provided, find the range at which a ship with a bridge height of eye of 5 metres would raise Hogan Island Light 135 M on a dark clear night with perfect visibility is \_\_\_\_\_ miles.

**Question 15 (6 Marks)**

Use the Luminous Range Diagram provided and Chart No. AUS 802. The luminous range of Citadel Island light if the meteorological visibility was 5 miles is \_\_\_\_\_ .

**Question 16 (10 Marks)**

Name five publications you would refer to in planning a passage from Port Jackson in NSW to Mackay in Queensland.


**Question 17 (2 Marks)**

The soft iron bar which is commonly installed on the forward side of the compass binnacle in large vessels is known as the:

- a. Flinders Bar
- b. Quadrantal Corrector
- c. Kelvin Corrector
- d. Heeling Error Corrector



**Question 18 (2 Marks)**

A vessel's automatic pilot steering device is best suited for use in:

- a. pilotage waters
- b. good visibility
- c. poor visibility
- d. open waters

**Question 19 (2 Marks)**

Tails below a depth sounder's trace become larger when the:

- a. sea is rough
- b. vessel is over a hard seabed
- c. vessel is over seaweed
- d. vessel is in shallow water

**Question 20 (2 Marks)**

In GPS receivers an outage can last for periods up to:

- a. 10 minutes
- b. 30 minutes
- c. 2 hours
- d. 4 hours

**Question 21 (2 Marks)**

The term "dithering" as applied to GPS means that:

- a. the system is occasionally turned off
- b. there is a difference between chart datum and WGS
- c. the accuracy is reduced for civilian users
- d. the errors are abnormally large and variable

<b>DEVIATION CARD 2 NAVIGATION</b>		
<b>Magnetic Heading</b>	<b>Deviation</b>	<b>Ships Head By Compass</b>
356°	4°W	000°
015°	5°W	020°
034°	6°W	040°
056°	4°W	060°
078°	2°W	080°
099°	1°W	100°
121°	1°E	120°
143°	3°E	140°
164°	4°E	160°
186°	6°E	180°
208°	8°E	200°
230°	10°E	220°
248°	8°E	240°
266°	6°E	260°
283°	3°E	280°
301°	1°E	300°
319°	1°W	320°
338°	2°W	340°
356°	4°W	360°
Study example only- Not for navigation		

## AUS 802 – Point latitudes

Anser I	39°08'.6	Norman I	39°01'.4
Arch Rk	38°50'.4	Norman Pt	39°03'.3
Bell Pt	38°50'.8	North East It	39°12'.0
Big Rk	39°30'.4	North Rock	39°26'.2
C Liptrap	38°54'.6	Notch I	38°56'.5
C Wellington	39°04'.0	Oberon Pt	39°04'.8
Citadel I	39°07'.0	Passage Rk	39°29'.6
Clarendon Rk	39°28'.2	Pillar Pt	39°02'.6
Cleft I	39°09'.5	Rabbit I	38°54'.6
Cliffy I	38°57'.1	Rabbit Rk	38°55'.0
Cone I	39°29'.8	Rag I	38°57'.3
Curtis I	39°28'.4	Ramsbotham Rks	39°04'.2
Dannevig I	39°06'.4	Refuge Cove	39°02'.5
Deal I	39°28'.8	Rodondo I	39°14'.0
Devils Tower	39°22'.7	Round I	39°13'.8
Dover I	39°28'.4	Seal I	38°55'.6
East I	39°13'.0	Seal Rk	39°11'.6
East Moncoeur I	39°13'.8	Sealers Cove	39°01'.1
Erith I	39°26'.8	Shellback I	38°58'.2
Forty Foot Rks	39°12'.2	Skull Rk	39°09'.5
Glennie Group	39°06'.8	South East Pt	39°08'.0
Grinder Pt	38°54'.0	South Pt	39°08'.3
Gt Glennie I	39°05'.5	South West I	39°31'.4
Hogan I	39°13'.6	South West Pt	39°07'.6
Horn Pt	39°01'.8	Sugarloaf Rk	39°31'.4
Judgement Rks	39°30'.6	Three Mile Pt	38°53'.0
Kanowna I	39°09'.4	Tongue Pt	38°59'.8
Kent Group	39°27'.4	Twin Is	39°12'.4
Lighthouse Pt	38°50'.6	W Moncoeur I	39°13'.8
Long I	39°12'.6	Waratah Lt	38°51'.8
McHugh I	39°07'.0	Waterloo Pt	39°05'.4
Monkey Pt	38°54'.8	Wattle I	39°08'.4
Mt Wilson	39°03'.4	White	38°54'.5

## Workings