

Demo PDF file. This file includes questions: 10 from 470. Full version of file looks the same as demo, but full version includes all questions. You may download file with all questions by link on bottom of this page

Q108 - Navigation Problems: Near Coastal

1. On 6 June 1983, at 1719 EST (ZD +5), what will be the predicted height of tide at Chester, PA?

- 0.8 feet(0.2 meters)
- **1.1 feet (0.3 meters)**
- 3.5 feet (1.1 meters)
- 4.7 feet (1.4 meters)

Note:

The predicted tide height at Chester, PA on June 6, 1983, at 1719 EST is 1.1 feet (0.3 meters). This is determined by interpolating between the surrounding high and low tides using the official 1983 Tide Tables.

2. You are at anchor in the anchorage at the entrance to Delaware Bay. You weigh anchor at 1445 DST (ZD +4) on 24 July 1983 and proceed northbound enroute to Philadelphia at a speed of 10 knots. Which of the following should you expect to experience?

- a flood current from Ship John Shoal Lt. to Philadelphia
- an ebb current north of New Castle, DE
- a flood current the entire trip
- **a weak flood between Reedy Island and Edgemoor**

Note:

Based on the 1983 Tidal Current Tables for Delaware Bay, a northbound transit at 1445 DST with a speed of 10 knots will experience a weak flood current between Reedy Island and Edgemoor.

3. The charted depth alongside the south face of Mystic Pier, Charlestown, MA, is 35 feet. Your maximum draft is 38 feet. You wish to have 2 feet under the bottom, on a rising tide, when you go alongside to discharge a heavy lift. What is the earliest time after 0900 EST (ZD +5), on 2 February 1983, that you can dock?

- 1020
- 1050
- 1127
- **1137**

Note:

The correct docking time is 1137 because that is the earliest time the tide reaches a height of 5 feet above chart datum, providing the necessary 40 feet of water depth for a 38-foot draft and 2 feet of under-keel clearance. This requires using tide tables and interpolation to determine the time on the rising tide.

4. You are on course 251°pgc and 241° per magnetic compass, when you observe a range in line bearing 192°pgc. The chart indicates that the range is in line on a bearing of 194°T. The variation is 16°E. What is the deviation of the magnetic compass?

- 2°E
- 2°W
- **4°W**
- 10°W

Note:

The deviation is 4W because the compass heading is 4 more westerly than the vessel's magnetic heading after accounting for gyro error and variation.

5. You desire to make good 152°T. The magnetic compass deviation is 4°E, the variation is 5°E, and the gyro error is 3°E. A southwesterly wind produces a 4° leeway. Which course would you steer per standard compass to make good the true course?

- 143°psc
- 137°psc
- **147°psc**
- 141°psc

Note:

To steer a true course of 152T, account for 4 leeway to port, then convert the resulting true heading to a compass course by subtracting the total easterly variation and deviation of 9. This yields a compass course of 147psc.

6. You desire to make good a true course of 129°. The variation is 7°E, magnetic compass deviation is 4°E, and gyrocompass error is 2°W. An easterly wind produces a 4° leeway. What is the course to steer per standard magnetic compass to make the true course good?

- **114°psc**
- 122°psc
- 116°psc
- 126°psc

Note:

To achieve a true course of 129, subtract leeway, variation, and deviation to determine the course to steer per standard magnetic compass, resulting in 114psc.

7. You desire to make good a true course of 132°. The variation is 10°W, magnetic compass deviation is 5°E, and gyrocompass error is 5°W. A northeast by east wind produces a 5° leeway. What is the course to steer per standard magnetic compass to make the true course good?

- 135°psc
- **132°psc**
- 137°psc
- 142°psc

Note:

To achieve a true course of 132, correct for leeway, then apply variation (add West) and deviation (subtract East) to determine the standard magnetic compass course, resulting in 132psc.

8. You desire to make good a true course of 203°. The variation is 19°E, magnetic compass deviation is 2°W, and gyrocompass error is 1°E. A westerly wind produces a 3° leeway. What is the course to steer per standard magnetic compass to make the true course good?

- 223°psc
- 210°psc
- 183°psc
- **189°psc**

Note:

To make good a true course of 203, correct for leeway (3), then convert true to magnetic and magnetic to compass, accounting for variation (19E) and deviation (2W). This results in a course to steer of 189 per standard magnetic compass.

9. You desire to make good a true course of 223°. The variation is 2°E, magnetic compass deviation is 2°E, and gyrocompass error is 1°W. An east-southeast wind produces 3° leeway. What is the course to steer per standard magnetic compass to make the true course good?

- 223°psc
- **216°psc**
- 213°psc
- 220°psc

Note:

To steer the desired true course of 223, account for 3 starboard leeway, 2E variation, and 2E deviation by subtracting these values from the true course. This results in a course of 216 per standard magnetic compass.

10. Determine the duration of the first PM slack water on 3 March 1983, east of the Statue of Liberty, when the current is less than 0.1 knot.

- 10 minutes
- **13 minutes**
- 16 minutes
- 19 minutes

Note:

The duration of the first PM slack water on 3 March 1983, east of the Statue of Liberty, when the current is less than 0.1 knot, is 13 minutes, as determined by the 1983 Tidal Current Tables.
