

U.S.C.G. Merchant Marine Exam

Mate of Unlimited Tonnage

Q311 Chart 12221TR

(Sample Examination)

Choose the best answer to the following Multiple-Choice Questions.

1. The following questions are based on Chart 12221TR, Chesapeake Bay Entrance, and the supporting publications.

The draft of your vessel is 9.0 feet (2.75 meters)

Gyro error is 2°W

Variation is 10°W

"Per standard magnetic compass" is abbreviated "psc"

"Per gyrocompass" is abbreviated "pgc"

DEVIATION TABLE

Magnetic

Heading Deviation

000°	1.5°E
030°	2.0°E
060°	1.0°E
090°	0°
120°	1.0°W
150°	1.5°W
180°	2.5°W
210°	1.5°W
240°	1.0°W
270°	0.5°W
300°	0°
330°	0.5°E

On 31 July, you are anchored at LAT 37°22.4'N, LONG 75°39.9'W

You get underway at 0240 enroute to Yorktown, VA

What is the course psc from the anchorage to point A located 0.5 mile east of Cape Charles Lighted Bell Buoy 14?

- A. 194°psc
- B. 187°psc
- C. 180°psc
- D. 190°psc

Correct answer: A

2. Which of the following describes the coast between Great Machipongo Inlet and Cape Charles?

- A. marked by prominent, isolated, barren hills
- B. broken by the mouths of several major rivers
- C. low, with sandy beaches bordered by marsh and woodlands
- D. composed of high, rocky bluffs and wooded uplands

Correct answer: C

3. If your engines turn for 6.5 knots, and you encounter a 0.5 knot southerly current, what is your ETA at point A?
- A. 0511
 - B. 0501
 - C. 0450
 - D. 0400

Correct answer: C

4. What is the course to steer per gyrocompass from the anchorage to point "A" if easterly winds are causing 3° of leeway?
- A. 181°pgc
 - B. 185°pgc
 - C. 189°pgc
 - D. 178°pgc

Correct answer: A

5. At 0250, Great Machipongo Inlet Light "5" (37°21.8'N, 75°43.7'W) bears 279°pgc.

At 0320, the light bears 320° pgc.

If you are making good 6.5 knots, what is the position of your 0320-running fix?

- A. LAT 37°18.00'N, LONG 75°39.75'W
- B. LAT 37°18.10'N, LONG 75°39.30'W
- C. LAT 37°18.10'N, LONG 75°39.55'W
- D. LAT 37°17.95'N, LONG 75°39.95'W

Correct answer: C

6. At 0400, you obtain the following information:

Sand Shoal Inlet South Light bearing 303° true at 7.1nm

What is your 0400 position?

- A. LAT 37°14.2'N, LONG 75°40.7'W
- B. LAT 37°14.0'N, LONG 75°40.7'W
- C. LAT 37°14.1'N, LONG 75°41.3'W
- D. LAT 37°14.1'N, LONG 75°40.5'W

Correct answer: B

7. The visibility is about 5 miles. Which statement about Cape Charles Light is TRUE?

- A. You will not see the light until you are within 5 miles of the light.
- B. The light has been visible since you departed the anchorage.
- C. The light was visible at about 0400.
- D. The light will not be visible until you enter the inbound leg of the traffic separation scheme.

Correct answer: C

8. Which statement about your 0400 position is TRUE?
- A. Anchoring, trawling and fishing are prohibited.
 - B. The ocean floor is composed of shale.
 - C. You are governed by the Inland Rules of the Road.
 - D. You are within the territorial sea and contiguous zone.

Correct answer: D

9. At 0405, you increase speed.
- At 0500, your position is LAT 37°06.0'N, LONG 75°41.1'W.
- What is the approximate depth of the water under the keel?
- A. 54 feet (16.4 meters)
 - B. 66 feet (20.0 meters)
 - C. 46 feet (13.9 meters)
 - D. 62 feet (18.8 meters)

Correct answer: C

10. At 0600, you are entering the inbound leg of the traffic separation scheme at position LAT 36°59.2'N, LONG 75°47.6' W. Course is 250°T.
- At 0605, Cape Henry Light bears 249°T
At 0610, Cape Henry Light bears 248°T
At 0625, Cape Henry Light bears 247°T
- Based on this, you know you are _____.
- A. meeting a current from dead ahead
 - B. being set to the south
 - C. running with a current from dead ahead
 - D. being set to the north

Correct answer: D

11. Which of the following is a characteristic of the abandoned lighthouse at Cape Henry?
- A. octagonal, black and white tower
 - B. gray, pyramidal tower
 - C. mound of broken rubble
 - D. black, skeleton structure

Correct answer: B

12. Weather broadcasts for the Norfolk area are broadcast on which frequency?
- A. 162.55 MHz
 - B. 162.35 MHz
 - C. 162.30 MHz
 - D. 162.50 MHz

Correct answer: A

13. When Cape Henry Light is abeam, what is the approximate distance to Yorktown?

- A. 34 miles
- B. 55 miles
- C. 58 miles
- D. 42 miles

Correct answer: A

14. As you pass between trestle "B" and trestle "C" of the Chesapeake Bay Bridge - Tunnel, you sight along the trestle "C" when it is in line. The trestle bears 057° per standard magnetic compass while the vessel is heading 320°T. Which of the following can be determined from this information?

- A. deviation is 10°W
- B. vessel should be swung to check the deviation table
- C. deviation table is correct for that bearing
- D. compass error is 12°W

Correct answer: B

15. The wind is easterly and will cause 2° of leeway. The current is 180° at 0.5 knot. If your engines are turning for 8.0 knots, what should you steer to remain in York River Entrance Channel?

- A. 315°T
- B. 310°T
- C. 304°T
- D. 307°T

Correct answer: A