

U.S.C.G. Merchant Marine Exam
Second/Third Mate of Unlimited Tonnage
Q115 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. Information provided in the stem of a test item supersedes any other reference information.

Your cargo vessel has a draft of 22 feet (6.7 meters)
Your height of eye is 30 feet (9.1 meters)
Gyro error is 2°W
Variation is 10°W
"Per standard magnetic compass" is abbreviated "psc"
"Per gyrocompass" is abbreviated "pgc"
"Nautical miles" is abbreviated "nm"

DEVIATION TABLE

<u>Magnetic Heading</u>	<u>Deviation</u>
000°	0°
030°	1.0°W
060°	2.0°W
090°	3.0°W
120°	2.0°W
150°	1.0°W
180°	1.0°E
210°	2.0°E
240°	2.0°E
270°	3.0°E
300°	2.0°E
330°	1.0°E

You are approaching the Chesapeake Bay entrance from sea and bound for Cemphalt Wharf in the Eastern Branch of the Elizabeth River, VA. Your position is LAT 37°17.7'N LONG 75°30.9'W when you change course towards the northeasterly inbound/outbound Chesapeake Bay traffic lanes at 0530, turning for 14.5 knots.

Which of the following is TRUE?

- A. Hog Island Lighted Bell Buoy R"12" is radar ranged at 2.8nm
- B. Hog Island Lighted Bell Buoy R"12" is bearing 267°pgc
- C. Hog Island Lighted Bell Buoy R"12" is bearing 269°pgc
- D. Hog Island Lighted Bell Buoy R"12" is radar ranged at 3.0nm

Correct answer: D

2. At 0540, your position is LAT 37°15.8'N LONG 75°33.7'W. You intend to arrive 0.3nm due North (000°T) of the North Chesapeake Entrance Lighted Whistle Buoy Y"NCA" while leaving Cape Charles Lighted Bell Buoy R"14" to starboard. In a northwesterly breeze and experiencing 6° leeway, which of the following courses should you steer?
- A. 217°psc
 - B. 231°psc
 - C. 211°pgc
 - D. 223°pgc

Correct answer: D

3. Along this track line, what could you expect in heavy northeasterly weather?
- A. Waves breaking in the vicinity southwest of Cape Charles Lighted Bell Buoy R"14"
 - B. Cape Charles Light red sector to be obscured
 - C. Cape Charles Lighted Bell Buoy R"14" to be off station to the north
 - D. U.S. Coast Guard marine weather broadcasts on 162.55Mhz or 162.40MHz

Correct answer: A

4. The meteorological visibility is 9nm. Which of the following is TRUE?
- A. You will see Cape Charles Light before you are abeam Hog Island Lighted Bell Buoy R"12"
 - B. You will first sight Cape Charles Light after you are abeam Hog Island Lighted Bell Buoy R"12"
 - C. Cape Charles Light was visible 1nm before your 0530 course change
 - D. You will first sight Cape Charles Light when abeam Hog Island Lighted Bell Buoy R"12"

Correct answer: A

5. At 0620, steering 219°pgc and turning for 14.5 knots, Chesapeake Light is bearing 191°pgc and Cape Charles Light is bearing 276°pgc. What is the set and drift between 0530 and 0620?
- A. 010°T @ 1.4 knots
 - B. 010°T @ 1.8 knots
 - C. 190°T @ 1.4 knots
 - D. 190°T @ 1.8 knots

Correct answer: D

6. From your 0620 position, what will be the course to make good to arrive 0.3nm due North (000°) of Y"NCA", disregarding set and drift of the current and wind leeway?
- A. 219°pgc
 - B. 221°pgc
 - C. 229°psc
 - D. 233°psc

Correct answer: C

7. At 0620, you reduce speed to 10 knots and, at 0720, change course to 252° pgc when you are 0.3nm due North (000° T) of Y"NCA". If set and drift is 210° T @ 1.2kts and you do not adjust your heading, which of the following is TRUE?
- A. You will set into the traffic separation zone between Y"NCB" and Y"NCC"
 - B. You will set into the traffic separation zone before you reach Y"NCB"
 - C. You will not set into the traffic separation zone before you reach the Precautionary Area
 - D. You will set into the traffic separation zone between Y"NCC" and Y"NCD"

Correct answer: A

8. At 0800, Cape Charles Light is bearing 010° pgc and Cape Henry Light is directly in line with the Chesapeake Bay Entrance Junction Lighted Gong Buoy "CBJ". Which of the following is TRUE?
- A. You are in a charted Danger Area
 - B. The closest point of land is ranged at 2.9 miles
 - C. The closest point of land is ranged at 3.7 miles
 - D. You are in the red sector of Cape Henry Light

Correct answer: B

9. Which of the following is TRUE regarding the "CBJ" buoy?
- A. It is a preferred channel mark indicating the preferred side to leave the buoy on, inbound or outbound
 - B. It is a safe water mark that can be passed on all sides
 - C. It is a lateral mark indicating port and starboard sides of a route to be followed, inbound or outbound
 - D. It is a non-lateral mark that has no lateral significance

Correct answer: A

10. From your 0800 position, which course should you steer to enter the authorized channel that will take you through the opening between Trestle "A" and Trestle "B"?
- A. 281° pgc
 - B. 283° pgc
 - C. 285° pgc
 - D. 288° pgc

Correct answer: C

11. You make good this course at 12.5 knots until you are abeam Thimble Shoal Channel Lighted Buoy R"2" at 0820. At 0820, you change course to 287° T. What time will you pass between Trestle "A" and Trestle "B"?
- A. 0835
 - B. 0838
 - C. 0841
 - D. 0844

Correct answer: C

12. Your arrival at the dock places you alongside during an Extreme Low Water occurrence. Based on Old Point Comfort tidal information, what will your under keel clearance (UKC) be alongside the dock?

- A. 9.5 feet
- B. 10.5 feet
- C. 13 feet
- D. 16.5 feet

Correct answer: A

13. As you pass Thimble Shoal Channel Lighted Buoy R"14" close abeam in your designated channel, what should your fathometer read if your height of tide is negligible?

- A. 7 feet
- B. 10 feet
- C. 23 feet
- D. 33 feet

Correct answer: B

14. At 0930, you are in position LAT 37°00.3'N LONG 76°13.6'W. If you are making good 284°T at 10.0 knots, when is the latest you can make the turn towards Norfolk and still remain in the federal project (dredged/improved) channel disregarding advance and leeway?

- A. 0940
- B. 0937
- C. 0934
- D. 0931

Correct answer: B

15. What light characteristic is the Old Point Comfort Light displaying from your 0930 position?

- A. Fl (2) R 12s
- B. Gp Fl R (2) 12s
- C. 2s fl 2s ec, 2s fl 6s ec
- D. Fl (2) 12s

Correct answer: C