

U.S.C.G. Merchant Marine Exam
Second/Third Mate of Unlimited Tonnage
Q115 Chart 12354TR
(Sample Examination)

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

1. The following questions are based on Chart 12354TR, Long Island Sound – Eastern Part, and the supporting publications. Information provided in the stem of a test item supersedes any other reference information.

Your vessel draws 18 feet (5.5 meters)
Your height of eye is 41 feet (12.5 meters)
Variation is 14°W
Gyro Error is 2°E

"Per standard magnetic compass" is abbreviated "psc"
"Per gyrocompass" is abbreviated "pgc"
"Nautical miles" is abbreviated "nm"

DEVIATION TABLE

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

At 1845, you are outbound in New London Harbor approaching Eastern Point. You are directly on the outbound range, steering 172°pgc. Based on this observation, what is your gyro error?

- A. 1°W
- B. 2°W
- C. 1°E
- D. 2°E

Correct answer: D

2. A westerly breeze freshens up, causing your vessel to experience 6° leeway. What course must you steer to remain on the centerline of the channel?

- A. 181.5°psc
- B. 192.5°psc
- C. 166°pgc
- D. 182°pgc

Correct answer: B

3. If you do not correct for 6° leeway from a westerly breeze and no other factors affect the set of the vessel, which of the following would be TRUE?
- A. The rear range would be sighted to the right of the front range
 - B. The ranges would remain directly in line with your vessel
 - C. The rear range would be sighted to the left of the front range
 - D. You will be set to the West

Correct answer: A

4. At 1900, your position is LAT 41°17.2'N LONG 72°04.9'W. What is the color of New London Harbor Light from this position?
- A. Green
 - B. White
 - C. Red
 - D. Alternating white and red

Correct answer: B

5. From your 1900 position, you will steer towards Cornfield Lighted Whistle Buoy "CF" and leave it abeam to starboard at 1nm. What speed do you need to make good to pass abeam of the buoy at 2015?
- A. 11.5 knots
 - B. 12.0 knots
 - C. 12.5 knots
 - D. 11.0 knots

Correct answer: A

6. Little Gull Island Light and Bartlett Reef Light are directly in line and Bartlett Reef Light is ranged at 0.4nm. For the next 35 minutes, you will make good 243°pgc at 13.2 knots. What is your new position?
- A. LAT 41°12.6'N LONG 72°17.0'W
 - B. LAT 41°12.7'N LONG 72°16.9'W
 - C. LAT 41°12.9'N LONG 72°17.0'W
 - D. LAT 41°12.8'N LONG 72°17.3'W

Correct answer: D

7. You will still leave the "CF" buoy with a 1nm CPA to starboard. From your last position, what course must you make good to meet this CPA requirement?
- A. 237°pgc
 - B. 233°pgc
 - C. 237°T
 - D. 233°T

Correct answer: B

8. If you left the "CF" buoy abeam to starboard while steering 235°T to make good 233°T , what would the "CF" buoy be bearing when on the beam?
- A. $325^{\circ}\text{T}/323^{\circ}\text{pgc}$
 - B. $323^{\circ}\text{T}/321^{\circ}\text{pgc}$
 - C. $327^{\circ}\text{T}/325^{\circ}\text{pgc}$
 - D. $329^{\circ}\text{T}/327^{\circ}\text{pgc}$

Correct answer: A

9. At 2020, Rocky Point is bearing 140°pgc at 2.1nm. At this time, you change course to maintain a 1nm CPA with Twenty-Eight Foot Shoal Lighted Buoy "TE" to starboard. At 2030, Horton Point Light is bearing 192°pgc . At 2050, Horton Point Light is bearing 126°pgc . You are making 13.5 knots. What was your CPA with the RG "TE" buoy based on your course made good to your 2050 running fix position?
- A. 0.8nm
 - B. 1.0nm
 - C. 1.3nm
 - D. 1.6nm

Correct answer: C

10. At 2050, you change course to 254°pgc . Based on prevailing visibility conditions, the luminous range of Falkner Island Light is 7nm. If you continue to make good 13.5 knots along your 254°pgc course, which of the following is TRUE?
- A. Falkner Island Light will be visible for 50 minutes from your vessel
 - B. Falkner Island Light will be visible for 25 minutes from your vessel
 - C. Falkner Island Light will never be visible from your vessel
 - D. Falkner Island Light will be visible from 2050 to 2123 from your vessel

Correct answer: B

11. Visibility is now exceptional. At 2200, you receive orders to proceed to New Haven, CT. At this time, Branford Reef Light is bearing 012°pgc , New Haven Light is bearing 335°pgc and Falkner Island Light is bearing 045°pgc . What is your position?
- A. LAT $41^{\circ}04.1'N$ LONG $72^{\circ}51.0'W$
 - B. LAT $41^{\circ}03.8'N$ LONG $72^{\circ}51.5'W$
 - C. LAT $41^{\circ}04.1'N$ LONG $72^{\circ}51.4'W$
 - D. LAT $41^{\circ}04.2'N$ LONG $72^{\circ}51.7'W$

Correct answer: C

12. You will make arrival at the entrance to New Haven Harbor (LAT $41^{\circ}13.05'N$ LONG $72^{\circ}54.35'W$) at 2300. Set and drift is 114°T at 1.8 knots. From your 2200 position, what course must you steer and speed to turn for to make this arrival?
- A. 346°pgc at 10.4 knots
 - B. 346°pgc at 9.2 knots
 - C. 336°pgc at 10.4 knots
 - D. 336°pgc at 9.2 knots

Correct answer: C

- 13.** Regarding Navigation Rules of the Road and your approach to New Haven Harbor, which of the following is TRUE?
- A. You will be become subject to the Inland Navigation Rules once you enter New Haven Harbor
 - B. You will become subject to the Inland Navigation Rules when you arrive at your 2300 position
 - C. You will become subject to the Inland Navigation Rules once you clear New Haven Lighted Whistle Buoy "NH"
 - D. You have been subject to the Inland Navigation Rules since you departed New London Harbor

Correct answer: D

- 14.** Your speed of advance(intended speed) for the 1900 to 2300 transit was 13.5 knots. Your speed made good from 1900 to 2300 was 11.8 knots. If you maintained constant rpm's from 1900 to 2300, which of the following is TRUE if only tidal currents affected your vessel's speed?
- A. Eastern Long Island Sound currents were primarily flooding during the transit
 - B. Your speed of advance was the charted distance transited over this 4 hour period
 - C. Eastern Long Island Sound currents were primarily ebbing during the transit
 - D. Your speed of advance was your speed along the actual track made good

Correct answer: C

- 15.** At 2300, you are on the centerline of New Haven Harbor Outer Channel Range steering 331.6°pgc. Which of the following is TRUE?
- A. You have no compass error
 - B. You should switch to the smallest scale chart for this area
 - C. You should switch to Chart 12371 for your continued transit inbound
 - D. You have no gyro error

Correct answer: C