

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 should be answered using Chart 12354TR, Long Island Sound - Eastern Part, and the supporting publications.

Your vessel has a draft of 12 feet (3.6 meters)  
Your height of eye is 16 feet (4.8 meters)  
Gyro error is 2°E  
Variation is 14°W

"Per standard magnetic compass" is abbreviated "psc"  
"Per gyrocompass" is abbreviated "pgc"

***DEVIATION TABLE***

<b>Magnetic Heading</b>	<b>Deviation</b>
000°	0°
030°	1°W
060°	2°W
090°	4°W
120°	2°W
150°	1°W
180°	1°E
210°	2°E
240°	3°E
270°	3°E
300°	2°E
330°	1°E

You are on course 082°T, and the engines are turning for 8 knots.  
At 0352, you take the following bearings:

Stratford Point Light 016°pgc  
Stratford Shoal (Middle Ground) Light 137°pgc

What is your 0352 position?

- (A) LAT 41°05.0'N, LONG 73°08.0'W
- (B) LAT 41°05.3'N, LONG 73°07.5'W
- (C) LAT 41°05.2'N, LONG 73°07.8'W
- (D) LAT 41°05.4'N, LONG 73°07.7'W

*If choice C is selected set score to 1.*

**2.** If the visibility is 11 miles, what is the earliest time you can expect to see New Haven Light?

- (A) You will not sight the light.
- (B) 0414
- (C) The light is visible at 0352.
- (D) 0443

*If choice D is selected set score to 1.*

**3.** While on a heading of  $082^{\circ}\text{T}$ , you sight Middle Ground Light in line with Old Field Point Light bearing  $206^{\circ}$  per standard magnetic compass. From this you can determine the \_\_\_\_\_.

- (A) variation
- (B) deviation is  $3.5^{\circ}\text{E}$  for a bearing of  $206^{\circ}$  per standard magnetic compass
- (C) deviation table is correct for that heading
- (D) compass error is  $17.5^{\circ}\text{E}$

*If choice C is selected set score to 1.*

**4.** The maximum ebb current at a location 4.3 miles south of Stratford Point will occur at 0413. The predicted current will be 1.0 knot at  $075^{\circ}$ . What will be your course made good if you steer  $082^{\circ}\text{T}$  at 8 knots?

- (A)  $085^{\circ}\text{T}$
- (B)  $081^{\circ}\text{T}$
- (C)  $087^{\circ}\text{T}$
- (D)  $083^{\circ}\text{T}$

*If choice B is selected set score to 1.*

**5.** Brandford Reef Light has which characteristic?

- (A) Flashing red every 4 seconds
- (B) Flashing red every 3 seconds
- (C) Flashing yellow every 4 seconds
- (D) Flashing white every 6 seconds

*If choice D is selected set score to 1.*

6. At 0415, you take the following bearings:  
Stratford Point Light  $329.5^\circ$ pgc  
Middle Ground Light  $223.5^\circ$ pgc  
Old Field Point Light  $199.5^\circ$ pgc

Which statement is TRUE?

- (A) Your fathometer reads about 76 fathoms.
- (B) You are to the right of your intended track line.
- (C) The course made good since 0352 is  $081^\circ$ T.
- (D) The current's drift is greater than predicted.

*If choice B is selected set score to 1.*

7. If you change course at 0420, what is the course to make good to leave Twenty Eight Foot Shoal Lighted Buoy abeam to port at 1 mile?

- (A)  $084^\circ$ T
- (B)  $082^\circ$ T
- (C)  $086^\circ$ T
- (D)  $079^\circ$ T

*If choice A is selected set score to 1.*

8. At 0430, you take the following bearings:  
Stratford Point Light bearing  $307^\circ$  pgc  
Middle Ground Light bearing  $239^\circ$  pgc

What is your 0430 position?

- (A) LAT  $41^\circ05.8'N$ , LONG  $73^\circ00.8'W$
- (B) LAT  $41^\circ05.0'N$ , LONG  $73^\circ01.1'W$
- (C) LAT  $41^\circ08.9'N$ , LONG  $73^\circ00.0'W$
- (D) LAT  $41^\circ05.5'N$ , LONG  $72^\circ59.7'W$

*If choice A is selected set score to 1.*

9. From your 0430 position, what is the course per standard magnetic compass to a position where Twenty-eight foot Shoal lighted buoy "TE" is abeam to port at 1 mile?

- (A)  $086.0^\circ$
- (B)  $098.0^\circ$
- (C)  $101.5^\circ$
- (D)  $082.5^\circ$

*If choice C is selected set score to 1.*

**10.** By 0430, the wind has increased, and the visibility cleared due to passage of a front. You estimate 3° leeway due to NW'ly winds. What is the course per gyrocompass to pass 1.2 miles due south of Twenty-eight Foot Shoal Lighted Buoy "TE"?

- (A) 083°
- (B) 080°
- (C) 086°
- (D) 090°

*If choice B is selected set score to 1.*

**11.** At 0430, you change course and speed to make good 090°T at 10 knots. At 0433, you slow due to an engineering casualty and estimate you are making good 5.5 knots. At what time will Branford Reef Light bear 000°T?

- (A) 0601
- (B) 0609
- (C) 0620
- (D) 0624

*If choice B is selected set score to 1.*

**12.** According to the Coastwise Distance Tables, what is the approximate distance to New Bedford, MA, from your 0530 DR position, if your 0352 position was 7 miles from Bridgeport, CT (LAT 41°10.3'N, LONG 73°10.8'W)?

- (A) 115 miles
- (B) 91 miles
- (C) 104 miles
- (D) 77 miles

*If choice C is selected set score to 1.*

**13.** At 0550, engineering repairs are complete and speed is increased to 9.6 knots.  
At 0630, Falkner Island Light bears 023°pgc and Horton Point Light bears 097°pgc.  
From your 0630 fix you steer to make good a course of 086°T while turning for 9.6 knots.  
At 0700, Falkner Island Light bears 336.0°pgc and Horton Point Light bears 105.5°pgc.  
The radar range to the south tip of Falkner Island is 5.7 miles.

Which statement is TRUE?

- (A) The speed made good from 0630 to 0700 was 10.1 knots.
- (B) Your course made good from 0630 to 0700 was 082°T.
- (C) You are making good your intended speed.
- (D) The current from 0630 to 0700 was 279°T at 0.6 knot.

*If choice C is selected set score to 1.*

**14.** Which describes the south shore of Long Island Sound from Horton Point to Orient Point?

- (A) Low and marshy
- (B) Bound by gradual shoaling
- (C) Bluff and rocky
- (D) Marked by sandy beaches and wooded uplands

*If choice C is selected set score to 1.*

**15.** If visibility permits, at what range will Orient Point Light break the horizon?

- (A) 9.3 miles
- (B) 10.8 miles
- (C) 13.9 miles
- (D) 17.0 miles

*If choice C is selected set score to 1.*