

U.S.C.G. Merchant Marine Exam

Apprentice Mate Steersman

Q421 Chart 12354TR

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions:

1. The Light List shows that a navigational light has a nominal range of 15 miles and a height above water of 29 feet (8.8 meters). Your height of eye is 52 feet (15.8 meters) and visibility is 6.0 miles. At which approximate range will you first sight the light?
- (A) 8.0 miles
 - (B) 11.0 miles
 - (C) 14.5 miles
 - (D) 16.0 miles

If choice B is selected set score to 1.

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

You are on a coastwise voyage from Bridgeport, Conn., to Boston, Mass.
You intend to divert to a position off New Haven, Conn., to evacuate an injured crew member.
Your height of eye is 53 feet and your vessel's deep draft is 34 feet.
Gyro error is 2°W.
Use 14°W variation where required.

At 0820 Old Field Point Light bears 206° per gyrocompass, and Stratford Shoals Middle Ground Light bears 322° per gyrocompass. The radar range to Middle Ground Light is 1.5 miles.

What is your 0820 position?

- (A) LAT 41°02.5'N, LONG 73°04.9'W
- (B) LAT 41°02.3'N, LONG 73°05.2'W
- (C) LAT 41°02.6'N, LONG 73°05.2'W
- (D) LAT 41°02.0'N, LONG 73°05.1'W

If choice A is selected set score to 1.

3. From your 0820 position you change course to your rendezvous position, one mile due south of buoy "NH", speed 14.5 knots. You estimate the current to be 260°T at 0.5 knot. The wind is northwesterly at 20 knots and you estimate 2° leeway. What is your course per gyrocompass (pgc) to the rendezvous position, if you correct your heading for current and leeway?
- (A) 045°
 - (B) 043°
 - (C) 039°
 - (D) 041°

If choice A is selected set score to 1.

4. At 0847 you take a round of bearings as follows: Middle Ground Shoal Light - 237°pgc Stratford Point Light - 289°pgc New Haven Light - 019°pgc. What were the set and drift since your 0820 position?
- (A) Set 360°T, drift 0.3 kt
 - (B) Set 180°T, drift 0.3 kt
 - (C) Set 360°T, drift 0.6 kt
 - (D) Set 180°T, drift 0.6 kt

If choice C is selected set score to 1.

5. From your 0847 fix, you change course to arrive at the rendezvous position and, correcting for current, you estimate your speed over the ground at 15 knots. What is your ETA at the rendezvous?
- (A) 0911
 - (B) 0905
 - (C) 0902
 - (D) 0908

If choice D is selected set score to 1.

6. At 1022 when you complete the evacuation, you get underway on course 098°T and order turns for 14.5 knots. You take the following round of bearings at that time:
Stratford Point Light - 260° per gyrocompass
New Haven Light - 326° per gyrocompass
SW Ledge Light - 358° per gyrocompass

Determine your ETA and distance off when abeam of Falkner Island Light, if there are no set and drift?

- (A) 1102, 3.0 miles
- (B) 1118, 3.3 miles
- (C) 1114, 3.1 miles
- (D) 1108, 3.3 miles

If choice D is selected set score to 1.

7. As you cross the New Haven Outer Channel range, you observe the range in line bearing 335.5° per gyrocompass. The helmsman reports that he was heading 100° per gyrocompass, and that the standard magnetic compass read 109° at the time of the observation. What are the gyro error and deviation of the standard magnetic compass on this heading?
- (A) Gyro error 2°E, deviation 3°E
 - (B) Gyro error 0° , deviation 2°W
 - (C) Gyro error 2°W, deviation 9°W
 - (D) Gyro error 2°W, deviation 3°E

If choice D is selected set score to 1.

- 8.** At 1038 Branford Reef Light bears 019° pgc, Falkner Island Light bears 075° pgc, and the radar range to Branford Reef Light is 3.0 miles. Which statement is TRUE of your 1038 position?
- (A) Your fathometer reads about 25 feet.
 - (B) You are making more speed over the ground, since your 1022 fix, than indicated by your engine RPM.
 - (C) You are abeam of Townshend Ledge
 - (D) You are required by regulation to change course to avoid steaming through the dumping ground.

If choice A is selected set score to 1.

- 9.** Which of the following describes the north shore of Long Island, from Horton Point to Orient Point?
- (A) bluff and rocky
 - (B) marked by long sandy beaches at low water
 - (C) low and sparsely wooded
 - (D) marshy and backed with sand dunes

If choice A is selected set score to 1.

- 10.** The visibility is excellent. When Race Rock Light Tower breaks the horizon, how far will you be from the Tower?
- (A) 14.0 miles
 - (B) 9.6 miles
 - (C) 8.5 miles
 - (D) 17.9 miles

If choice D is selected set score to 1.