

U.S.C.G. Merchant Marine Exam  
Operator Uninspected Passenger Vessel  
Q172 Navigation Problems - Chart 12354 TR  
(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

The following questions are to be answered by plotting on chart 12354 TR, Long Island Sound, and using the supporting publications.

Each question is completely independent of any other question on this exam.

The following information is applicable to all questions.

The abbreviation "psc" stands for "per standard magnetic compass".

VARIATION IS 14° W

**DEVIATION TABLE**

<u>HDG.</u>	<u>MAG.</u>	<u>DEVIATION</u>
000°		2.0°E
030°		3.0°E
060°		4.0°E
090°		2.0°E
120°		1.0°E
150°		1.0°W
180°		2.0°W
210°		3.5°W
240°		3.0°W
270°		1.5°W
300°		0.0°
330°		1.5°E

1. Your present position is LAT 41°05.5'N, LONG 72°38.0'W. Assuming that there is no set and drift, what course must you steer per standard magnetic compass (psc) to arrive at a position midway between New Haven Harbor Channel buoys #1 and #2?
- ☐ (A) 309°psc
  - ☐ (B) 137°psc
  - ☒ (C) 315°psc
  - ☐ (D) 319°psc

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

2. You are on course 262° per standard magnetic compass when you take the following bearings:  
Saybrook Breakwater Light - 338.5°psc  
Little Gull Island Light - 107.5°psc  
Horton Point Light - 240.0°psc

What is your position?

- ☐ (A) LAT 41°11.9'N, LONG 72°16.7'N
- ☐ (B) LAT 41°13.0'N, LONG 72°17.7'W
- ☐ (C) LAT 41°12.1'N, LONG 72°17.3'W
- ☒ (D) LAT 41°12.6'N, LONG 72°17.2'W

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

3. At 1930 your GPS position is LAT 41°08.6'N, LONG 72°41.6'W. At 2024 your position is LAT 41°00.5'N, LONG 72°49.5'W. What is your true course and speed made good?

- ☐ (A) 219° at 10.1 knots
- ☐ (B) 036° at 11.1 knots
- ☒ (C) 216° at 11.2 knots
- ☐ (D) 039° at 9.9 knots

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

4. You are going to anchor at Gardiners Bay in LAT 41°04.5'N, LONG 72°13.0'W. What type of bottom should you expect?

- ☐ (A) Hard rocks
- ☐ (B) Sand
- ☐ (C) Streaked mud
- ☒ (D) Soft mud

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

5. What best describes the condition of the tidal current at New London Harbor Entrance, at 0945 on 3 March 1983?

- ☐ (A) It is slack water.
- ☒ (B) The current has reached its maximum flood velocity.
- ☐ (C) The current is approaching slack water.
- ☐ (D) It has reached its maximum ebb velocity.

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

6. You are on course 119°psc. You sight New Haven Outer Channel Range Rear Light in line with the Outer Channel Range Front Light bearing 346° per standard magnetic compass. What does this indicate?

- (A) the existing deviation table is correct for that heading
- (B) you should swing the vessel to determine the deviation
- (C) the compass error is 16°W
- (D) your compass is affected by a local magnetic disturbance

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

7. At 1815 your GPS position is LAT 41°09.2'N, LONG 72°36.9'W. You are steering course 285° per standard magnetic compass at a speed of 16 knots. At 1909 you fix your position by plotting several compass bearings on nearby known fixed objects. These result in a position of LAT 41°08.5'N, LONG 72°53.7'W. What were your set and drift?

- (A) 243°T at 1.0 knot
- (B) 118°T at 1.9 knots
- (C) 111°T at 2.1 knots
- (D) 292°T at 1.8 knots

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

8. At 0829 your position is LAT 41°02.9'N, LONG 72°57.4'W. You are making turns for 8.5 knots. What is your ETA at a position midway between buoys "1" and "2" at the entrance of New Haven Outer Channel?

- (A) 0938
- (B) 0925
- (C) 0944
- (D) 0931

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

9. (5.8.2.1C5-4) What course should you steer by your standard magnetic compass (psc), between New Haven Light and Stratford Pt. Light, if the set and drift of the current are 345°T at 3.0 knots, and a northerly wind will cause 1° of leeway? Your engines are making turns for 18.0 knots.

- (A) 264.0°psc
- (B) 247.0°psc
- (C) 266.5°psc
- (D) 245.0°psc

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

**10.** (5.8.2.1C10-1) You are operating in the area approximately 2 miles southeast of Kelsey Point when you realize that your vessel's intended track will carry you over the wreck charted at LAT 41°13.5'N, LONG 72°29.6'W. Which statement is TRUE?

- (A) The wreck represents a danger to surface navigation.
- (B) The wreck has been cleared by wire drag to a depth of 39 ft.
- (C) The wreck is visible above the sounding datum.
- (D) The chart indicates the exact position of the wreck.

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