

U.S.C.G. Merchant Marine Exam
Apprentice Mate Steersman
Q414 Navigation Problems - Chart 13205TR
(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 22 miles and a height above water of 48 feet (14.6 meters). Your height of eye is 35 feet (10.7 meters) and the visibility is 20.0 miles. At what approximate range will you first sight the light?
- (A) 10.5 nm
 - (B) 14.7 nm
 - (C) 13.2 nm
 - (D) 32.0 nm

If choice B is selected set score to 1.

2. The following questions are to be answered using Chart 13205 TR, Block Island Sound, and supporting publications.

Your height of eye is 55 feet and your vessel's draft is 22 feet.

Your present course is 111°T and your vessel's engines are turning RPMs for 13 knots.

At 1930 Race Rock Light bears 111°T , and Little Gull Island Light bears 172°T .

What is your position at 1930?

- (A) LAT $41^{\circ}16.1'\text{N}$, LONG $72^{\circ}08.3'\text{W}$
- (B) LAT $41^{\circ}15.3'\text{N}$, LONG $72^{\circ}12.9'\text{W}$
- (C) LAT $41^{\circ}15.6'\text{N}$, LONG $72^{\circ}09.6'\text{W}$
- (D) LAT $41^{\circ}15.8'\text{N}$, LONG $72^{\circ}07.1'\text{W}$

If choice D is selected set score to 1.

3. From your 1930 position, you set a course of 150°T . Your engine speed is 13 knots. What will be your distance off Valiant Rock Bell Buoy "1A" when abeam, if you make good your true course of 150° ?
- (A) 1.2 miles
 - (B) 1.0 miles
 - (C) 0.8 mile
 - (D) 1.4 miles

If choice B is selected set score to 1.

4. Available information indicates that there is a set and drift in this area of 290°T at 2 knots. Allowing for this set and drift, what course must you steer to make good a true course of 150° , while maintaining an engine speed of 13 knots, from your 1930 position?
- (A) 145°T
 - (B) 149°T
 - (C) 141°T
 - (D) 153°T

If choice A is selected set score to 1.

5. What is the speed you can expect to make good over your course while steering to make 150°T ?
- (A) 11.0 knots
 - (B) 11.4 knots
 - (C) 14.4 knots
 - (D) 14.0 knots

If choice B is selected set score to 1.

6. At 1949 Little Gull Island Light bears 270°T and is 1.7 miles off. From this position, you change course to 118°T and increase engine speed to 18 knots. If you make good your course and speed, at what time should Shagwong Reef Lighted Bell Buoy "7SR" bear 180°T ?
- (A) 2025
 - (B) 2016
 - (C) 2022
 - (D) 2019

If choice B is selected set score to 1.

7. At 2027 you obtain a radar range to Shagwong Point of 3.4 miles and a tangent bearing to the east end of Long Island of 172°T . Which statement is TRUE?
- (A) Your course made good from 1949 to 2027 is 111°T .
 - (B) Your speed made good from 1949 to 2027 is 14.0 knots.
 - (C) You are inside a precautionary area.
 - (D) You are to the left of your DR track.

If choice D is selected set score to 1.

8. From your 2027 position you change course to 106°T , while maintaining an engine speed of 18 knots. What is your ETA at a position where Block Island Sound South Entrance Obstruction Lighted Buoy "BIS" is abeam?
- (A) 2039
 - (B) 2047
 - (C) 2043
 - (D) 2050

If choice D is selected set score to 1.

9. At 2054 Block Island Southeast Point Light bears 054°T at 6.9 miles and Southwest Ledge Lighted Bell Buoy 2 is 1.6 miles off to port. What is the set and drift from 2027 to 2054?
- (A) 307°T at 3.1 knots
 - (B) 127°T at 3.1 knots
 - (C) 307°T at 1.4 knots
 - (D) 127°T at 1.4 knots

If choice B is selected set score to 1.

10. From your 2054 position, you change course to 066°T . Maintaining course and speed of 18 knots, at what time can you expect to first cross the 90-foot curve if you experience no set and drift?
- (A) 2105
 - (B) 2117
 - (C) 2111
 - (D) 2125

If choice A is selected set score to 1.