

## U.S.C.G. Merchant Marine Exam

### Apprentice Mate Steersman

#### Q421 Chart 12221TR

#### (Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. The Light List indicates that a light has a nominal range of 20 miles and is 52 feet (16 meters) high. If the visibility is 20 miles and your height of eye is 20 feet (6 meters), at what approximate distance will you sight the light?
- ☐ (A) 33.0 nm
  - ☐ (B) 20.0 nm
  - ☒ (C) 13.5 nm
  - ☐ (D) 8.5 nm

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

2. The following questions are to be answered using chart 12221 TR, Chesapeake Bay Entrance, and supporting publications.

Your vessel is enroute from New York, NY, to Baltimore, MD.  
Your vessel's draft is 29 feet, and your height of eye is 54 feet.

Your present course is 206°T and your speed is 18 knots.  
Use 10°W variation where required.

At 0705 your position is Latitude 37°20.8' N Longitude 75°29.9' W. If a northwesterly breeze is causing 3 degrees leeway what is the true course to steer in order to pass Hog Island Lighted Bell Buoy "12" at a distance abeam of two miles?

- ☐ (A) 212°T
- ☒ (B) 209°T
- ☐ (C) 206°T
- ☐ (D) 203°T

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

3. At 0725 you determined your vessel's position to be 37°15.5'N, 75°33.2'W. Assuming that you make good your course of 206°T and a speed of 18 knots, at what time would you expect to be abeam of Cape Charles Lighted Bell Buoy "14"?
- ☐ (A) 0750
  - ☒ (B) 0758
  - ☐ (C) 0802
  - ☐ (D) 0754

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

4. (5.8.2.2B1-3) At about what time will you see Chesapeake Light if visibility is exceptionally clear?

- ☐ (A) 0738
- ☒ (B) 0729
- ☐ (C) 0733
- ☐ (D) 0742

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

5. At 0741 you are still steering a course of 206° true, with a speed of 18 knots. At this time you observe Cape Charles Lighted Bell Buoy "14" bearing 222°T and Hog Island Lighted Bell Buoy "12" bearing 015°T. What were the set and drift experienced since 0725?

- ☐ (A) 042°T at 3.3 knots
- ☐ (B) 049°T at 2.5 knots
- ☒ (C) 259°T at 3.2 knots
- ☐ (D) 240°T at 1.9 knots

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

6. From your 0741 position, you wish to change course in order to pass 2.2 miles easterly of Cape Charles Lighted Bell Buoy "14". Your engine speed is now 14.0 knots. You estimate the current to be 240°T at 1.8 knots. What is the true course to steer to make good the desired course?

- ☐ (A) 179°T
- ☐ (B) 185°T
- ☒ (C) 190°T
- ☐ (D) 197°T

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

7. At 0811 your vessel's position is 37°04.9'N, 75°39.7'W. You are steering a course of 220°T at a speed of 14.0 knots. At what time would you expect the buoys in the northeasterly traffic scheme to line up, if you do not correct for a southwesterly current of 1.8 knots?

- ☐ (A) 0831
- ☐ (B) 0826
- ☐ (C) 0846
- ☒ (D) 0841

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

8. At 0841 Chesapeake Light bears  $164^{\circ}\text{T}$ , Cape Charles Light bears  $312^{\circ}\text{T}$ , and Cape Henry Light bears  $247^{\circ}\text{T}$ . What was your course made good since 0811?

- (A)  $226^{\circ}\text{T}$
- (B)  $230^{\circ}\text{T}$
- (C)  $233^{\circ}\text{T}$
- (D)  $237^{\circ}\text{T}$

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

9. From your 0841 position, you are steering a course of  $241^{\circ}\text{T}$  to the northeasterly inbound channel entrance, your speed is now 15 knots. What is your ETA abeam of buoy "NCA" (LL#375)?

- (A) 0911
- (B) 0901
- (C) 0850
- (D) 0855

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

10. As you pass through the Chesapeake Bay Bridge and Tunnel, you take a bearing of  $047^{\circ}\text{pgc}$  along trestle C when it is in line. The helmsman reports the vessel's heading as  $316^{\circ}\text{pgc}$  and  $329^{\circ}\text{psc}$ . What is the deviation on that heading?

- (A)  $1^{\circ}\text{W}$
- (B)  $1^{\circ}\text{E}$
- (C)  $3^{\circ}\text{E}$
- (D)  $9^{\circ}\text{W}$

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