U.S.C.G. Merchant Marine Exam

Mate Uninspected Fishing Vessels

Q194 Navigation Problems - Oceans

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. On 16 January your 0930 ZT DR position is LAT 26°07.0'S, LONG 51°43.0'E. Your vessel is on course 238°T at a speed of 17.0 knots. What is the ZT of local apparent noon (LAN)?

- (A) 1145
- (B) 1148
- (C) 1152
- (D) 1156

If choice A is selected set score to 1.

2. Determine the great circle distance and initial course from LAT 26°00.0'S, LONG 56°00.0'W to LAT 34°00.0'S, LONG 18°15.0'E.

- (A) 3841 miles, 068°T
- (B) 3705 miles, 153°T
- (C) 3849 miles, 248°T
- (D) 3805 miles, 117°T

If choice D is selected set score to 1.

3. On 23 August in DR position LAT 24°07.0'N, LONG 136°16.0'E, you observe an amplitude of the Sun. The Sun's center is on the visible horizon and bears 074.5°psc. The chronometer reads 08h 56m 19s and is 02m 34s fast. Variation in the area is 2°W. What is the deviation of the magnetic compass?

- (A) 2.5°E
- (B) 2.8°W
- (C) 4.5°E
- (D) 4.8°W

If choice C is selected set score to 1.

4. On 6 August your 1552 zone time DR position is LAT 24°26.0'S, LONG 73°19.0'E.
At that time, you observe the Sun bearing 302°psc.
The chronometer reads 10h 55m 07s, and the chronometer error is 02m 38s fast.
The variation is 6°E.
What is the deviation of the standard magnetic compass?

- (A) 4.1°W
- (B) 4.6°E
- (C) 5.9°E
- (D) 6.1°W

If choice D is selected set score to 1.

5. On 7 March at 1838 ZT, in DR position LAT 34°26.9' N, LONG 58°16.2' W, you observe Polaris for latitude. The sextant altitude (hs) is 35°08.4'. The index error is 2.5' off the arc. The height of eye is 54 feet. What is the latitude at the time of the sight?

- ○ (A) 34°29.8'N
- • (B) 34°33.4'N
- ○ (C) 34°34.8'N
- ○ (D) 34°36.8'N

If choice B is selected set score to 1.

6. On 1 July your 0515 ZT fix gives you a position of LAT 24°36.0'S, LONG 151°42.0'W. Your vessel is on course 300°T, and your speed is 10.0 knots. Local apparent noon (LAN) occurs at 1215 ZT, at which time a meridian altitude of the Sun's lower limb is observed. The observed altitude (Ho) for this sight is 42°55.0'. What is the calculated latitude at LAN?

- ○ (A) 24°03.6'S
- ○ (B) 24°02.5'S
- • (C) 24°01.0'S
- ○ (D) 24°00.0'S

If choice C is selected set score to 1.

7. On 16 February your 0300 ZT DR position is LAT 28°32.0'S, LONG 176°49.0'E. You are on course 082°T at a speed of 21 knots. What will be the zone time of sunrise at your vessel?

- ○ (A) 0534
- • (B) 0552
- ○ (C) 0631
- ○ (D) 0645

If choice B is selected set score to 1.

8. On 2 April your 0830 zone time fix gives you a position of LAT 20°16.0'S, LONG 004°12.0'E. Your vessel is steaming a course of 143°T at a speed of 18.0 knots. An observation of the Sun's upper limb is made at 0903 zone time, and the observed altitude (Ho) is 42°39.6'. The chronometer reads 09h 05m 40s, and the chronometer error is 02m 15s fast. Local apparent noon occurs at 1145 zone time, and a meridian altitude of the Sun's lower limb is made. The observed altitude (Ho) for this sight is 63°46.2'. Determine the vessel's 1200 zone time position.

- ○ (A) LAT 21°10.1'S, LONG 004°53.9'E
- ○ (B) LAT 21°14.0'S, LONG 004°55.0'E
- • (C) LAT 21°18.0'S, LONG 005°00.5'E
- ○ (D) LAT 22°42.0'S, LONG 004°57.0'E

If choice C is selected set score to 1.

9. You depart LAT 49°38'N, LONG 152°49'E, for LAT 49°38'N, LONG 176°12'E. What are the course and distance by parallel sailing?

- (A) 090°T, 909 miles
- (B) 090°T, 1204 miles
- (C) 270°T, 909 miles
- (D) 270°T, 1204 miles

If choice A is selected set score to 1.

10. On 21 November at 2100 zone time, you depart LAT 32°12.0'N, LONG 69°26.0'W enroute to LAT 12°05.0'N, LONG 7°32.0'W. The distance is 3,519 miles, and the average speed will be 12.5 knots. What is the zone time of arrival?

- (A) 1330, 3 December
- (B) 1530, 3 December
- (C) 1830, 3 December
- (D) 1530, 4 December

If choice C is selected set score to 1.