U.S.C.G. Merchant Marine Exam

Master Uninspected Fishing Vessels

Q186 Navigation Problems - Oceans

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. On 30 March in DR position LAT 20°26.2'N, LONG 131°17.9'E, you take an ex-meridian observation of the Moon's lower limb at upper transit. The chronometer time of the sight is 10h 36m 02s, and the chronometer error is 02m 06s slow. The sextant altitude (hs) is 48°21.4'. The index error is 2.0' on the arc, and your height of eye is 40 feet. What is the latitude at meridian transit?

- ○ (A) LAT 20°44.8'N
- • (B) LAT 20°31.9'N
- ○ (C) LAT 20°23.7'N
- ○ (D) LAT 20°15.6'N

If choice B is selected set score to 1.

2. 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.

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 22 May your 0437 ZT DR position is LAT 25°18.5' N, LONG 51°18.0' W. You observe an unidentified star bearing 097°T at an observed altitude (Ho) of 48°20.0'. The chronometer reads 07h 40m 40s and is 03m 24s fast. What star did you observe?

- ○ (A) Diphda
- • (B) Markab
- ○ (C) Hamal
- ○ (D) Sabik

If choice B is selected set score to 1.

6. 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.

7. On 16 February your 0640 zone time (ZT) position was LAT 23°46.0'N, LONG 156°24.0'W. Your vessel was steaming on course 222°T at a speed of 18.0 knots. An observation of the Sun's lower limb was made at 0910 ZT. The chronometer read 07h 08m 06s and was slow 01m 56s. The observed altitude (Ho) was 27°15.8'. LAN occurred at 1245 ZT (ZD +10). The observed altitude (Ho) was 55°25.3'. What was the longitude of your 1245 ZT running fix?

- ○ (A) 157°37.2'W
- • (B) 157°42.0'W
- ○ (C) 157°45.7'W
- ○ (D) 157°47.2'W

If choice B is selected set score to 1.

8. 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.

9. 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.

10. 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.