

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 14 January your 0746 zone time DR position is LAT 26°37.0'N, LONG 153°19.0'W. At that time, you observe the Sun bearing 123°psc. The chronometer reads 05h 49m 16s, and the chronometer error is 02m 29s fast. The variation is 3°W. What is the deviation of the standard magnetic compass?

- (A) 3.4°E
- (B) 4.4°W
- (C) 1.4°W
- (D) 1.6°E

If choice C is selected set score to 1.

2. On 13 October your vessel's 1722 zone time DR position is LAT 27°36'S, LONG 136°16'E, when an amplitude of the Sun is observed. The Sun's center is on the celestial horizon and bears 266° per standard magnetic compass. Variation in the area is 2°W. The chronometer reads 08h 24m 19s and is 01m 43s fast. What is the deviation of the standard magnetic compass?

- (A) 2.8°W
- (B) 2.3°E
- (C) 6.8°W
- (D) 4.8°E

If choice A is selected set score to 1.

3. At 0600 zone time, on 16 March your DR position is LAT 20°10.0'N, LONG 81°30.0'W. You are steering course 300°T. The speed over the ground is 10 knots. You observed 3 morning sun lines. Determine the latitude and longitude of your 1130 running fix?

Zone Time	GHA	Observed Altitude	Declination
0800	12°50.0'	19°00.0'	S 01°38.8'
1030	50°20.4'	51°42.0'	S 01°36.5'
1130	65°20.5'	62°11.5'	S 01°35.5'

- (A) LAT 20°42.5'N, LONG 82°26.2'W
- (B) LAT 20°39.0'N, LONG 82°22.9'W
- (C) LAT 20°32.0'N, LONG 82°16.4'W
- (D) LAT 20°28.5'N, LONG 82°12.6'W

If choice B is selected set score to 1.

4. A vessel at LAT 20°00'N, LONG 107°30'W is to proceed to LAT 24°40'N, LONG 112°30' W. What is the course and distance by mid-latitude sailing?
- (A) 315.3°T, 394.0 miles
 - (B) 317.2°T, 397.0 miles
 - (C) 314.0°T, 389.0 miles
 - (D) 318.3°T, 399.0 miles

If choice A is selected set score to 1.

5. The great circle distance from LAT 24°25.3'N, LONG 83°02.6'W to LAT 35°57.2'N, LONG 5°45.7'W is 3966.5 miles. Determine the latitude of the vertex.
- (A) 38°46.2'N
 - (B) 38°16.4'N
 - (C) 38°09.4'N
 - (D) 37°57.3'N

If choice C is selected set score to 1.

6. On 16 July at 2000 zone time, you take a sextant observation of Polaris. Your vessel's DR position is LAT 27°22.0' N, LONG 148°35.0' W, and your sextant reads 26°57.5'. Your chronometer reads 05h 59m 16s, and your chronometer error is 01m 28s slow. Your height of eye is 48 feet, and the index error for your sextant is 1.3' off the arc. What is the latitude of your vessel from your observation of Polaris?
- (A) 26°58.8'N
 - (B) 27°43.4'N
 - (C) 27°36.1'N
 - (D) 26°52.1'N

If choice C is selected set score to 1.

7. On 16 June in DR position LAT 50°57.0'S, LONG 53°03.9'W (ZD+4), you take an ex-meridian observation of Acrux at lower transit. The chronometer time of the sight is 10h 08m 18s, and the chronometer error is 02m 12s fast. The sextant altitude (hs) is 23°49.0'. The index error is 1.1' off the arc, and your height of eye is 26 feet. What is the latitude at meridian transit?
- (A) 51°33.0'S
 - (B) 51°41.2'S
 - (C) 50°41.2'S
 - (D) 51°02.2'S

If choice C is selected set score to 1.

8. On 2 October your 1845 DR position is LAT $28^{\circ}09.2'S$, LONG $167^{\circ}48.1'E$. You observe a faint star through a hole in the clouds at a sextant altitude (hs) of $11^{\circ}37.6'$ bearing $066^{\circ}T$. The index error is 1.3' off the arc, and the height of eye is 42 feet. The chronometer reads 07h 46m 19s and is 0m 51s fast. What star did you observe?
- (A) Scheat
 - (B) Ruckbah
 - (C) Algenib
 - (D) Caph

If choice C is selected set score to 1.

9. On 8 April your 0830 zone time DR position is LAT $22^{\circ}49.0'N$, LONG $84^{\circ}37.0'W$. Your vessel is on course $228^{\circ}T$ at a speed of 19.0 knots. What is the zone time of local apparent noon (LAN)?
- (A) 1147
 - (B) 1150
 - (C) 1154
 - (D) 1144

If choice D is selected set score to 1.

10. On 13 August your 0345 ZT DR position is LAT $21^{\circ}35.0'N$, LONG $135^{\circ}26.0'W$. You are on course $052^{\circ}T$ at a speed of 14 knots. What will be the zone time of sunrise at your vessel?
- (A) 0443
 - (B) 0540
 - (C) 0449
 - (D) 0536

If choice D is selected set score to 1.