National
Maritime
Center

U.S.C.G. Merchant Marine Exam

Master Uninspected Fishing Vessels

Q185 Navigation Problems – Near Coastal

(Sample Examination)

Choose the best answer to the following Multiple-Choice Questions.

1. A vessel at LAT 40°42.0'N, LONG 74°01.0'W, heads for a destination at LAT 14°41.0'N, LONG 17°26.0'W. Determine the true course and distance by Mercator sailing.

    A. 123°T, 3065.6 miles
    B. 118°T, 3066.5 miles
    C. 123°T, 3066.5 miles
    D. 118°T, 3365.0 miles

Correct answer: D

2. You are taking a time tick using the 2000 signal from Kekaha-Kauai, Hawaii (WWVH). You hear a series of 1 second dashes followed by a 9 second silent period, then a long 1.3 second dash. At the beginning of the long dash, your comparing watch reads 07h 59m 54s. When compared to the chronometer, the comparing watch reads 08h 00m 00s, and the chronometer reads 08h 00m 06s. What is the chronometer error?

    A. 0m 12s fast
    B. 0m 06s fast
    C. No error
    D. 0m 06s slow

Correct answer: C

3. Your vessel is proceeding up a channel, and you see a pair of range lights that are in line ahead. The chart indicates that the direction of this pair of lights is 311°T, and the variation is 8°E. If the heading of your vessel at the time of the sighting is 305° per standard magnetic compass, what is the correct deviation?

    A. 2°E
    B. 2°W
    C. 6°E
    D. 6°W

Correct answer: B

4. On 5 October 2023, you will be docking at the Redwood Marine Terminal in Eureka, CA at the second low tide. The berth is located between NOAA reference tidal station #9418767 and subordinate station #9418801. What time (LST) will you be docking? Illustration D062NG

    A. 2303
    B. 2250
    C. 2150
    D. 2258

Correct answer: D

5. You swung ship and compared the magnetic compass against the gyrocompass to find deviation. Gyro error is 2°E. The variation is 8°W. Find the deviation on a gyro heading of 037°.

    A. 1.0°W
    B. 1.5°W
    C. 1.5°E
    D. 2.0°E

Correct answer: A

6. On 9 November 2023 at 1630, you are inbound at Charleston Harbor Entrance Buoy "10" (ACT6611). What is the direction and velocity of the current you are encountering as you pass Buoy "10"? Illustration D058NG

    A. 0.1kts at 104°T
    B. 0.2kts at 172°T
    C. 0.2kts at 335°T
    D. 0.1kts at 280°T

Correct answer: A

7. You are turning 90 RPM, with a propeller pitch of 24 feet, and an estimated slip of -3%. What is the speed of advance?

    A. 18.8 knots
    B. 21.9 knots
    C. 20.6 knots
    D. 19.2 knots

Correct answer: B

8. You are underway on course 160°T while turning for an engine speed of 10 knots. The current is 210°T at 0.9 knots. What is the speed being made good?

    A. 10.7 knots
    B. 11.0 knots
    C. 11.6 knots
    D. 12.3 knots

Correct answer: A

9. 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
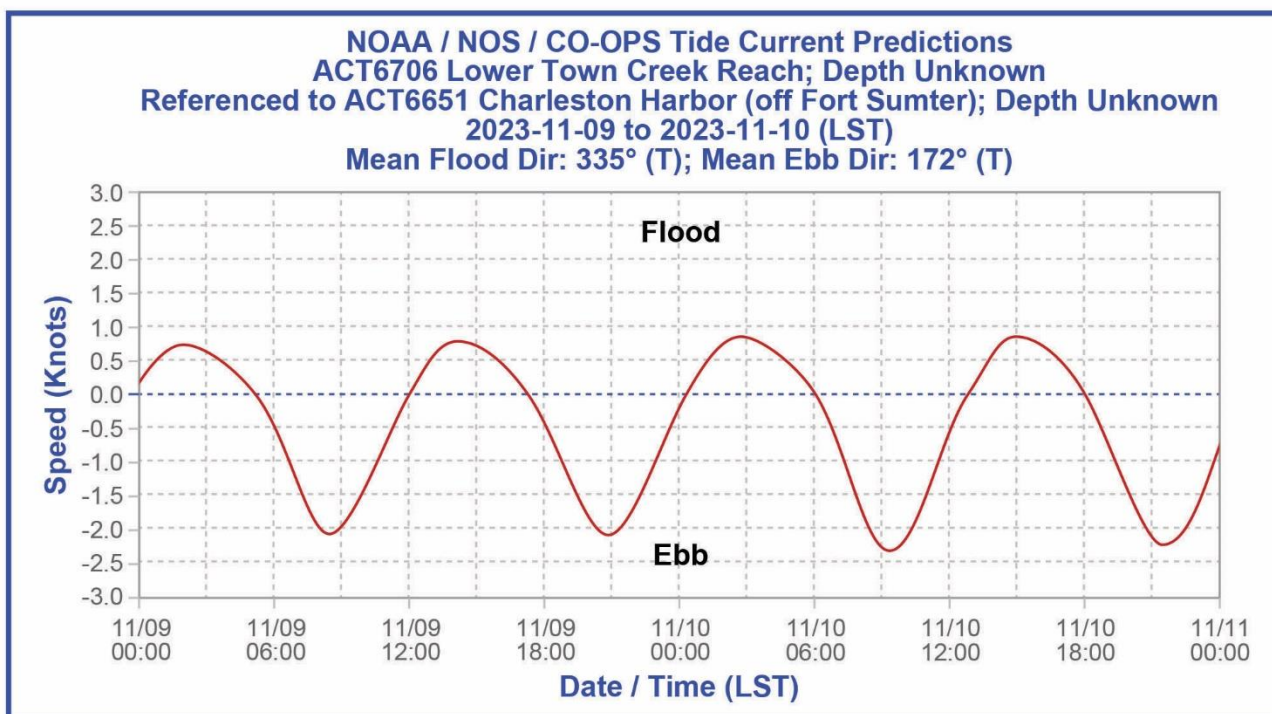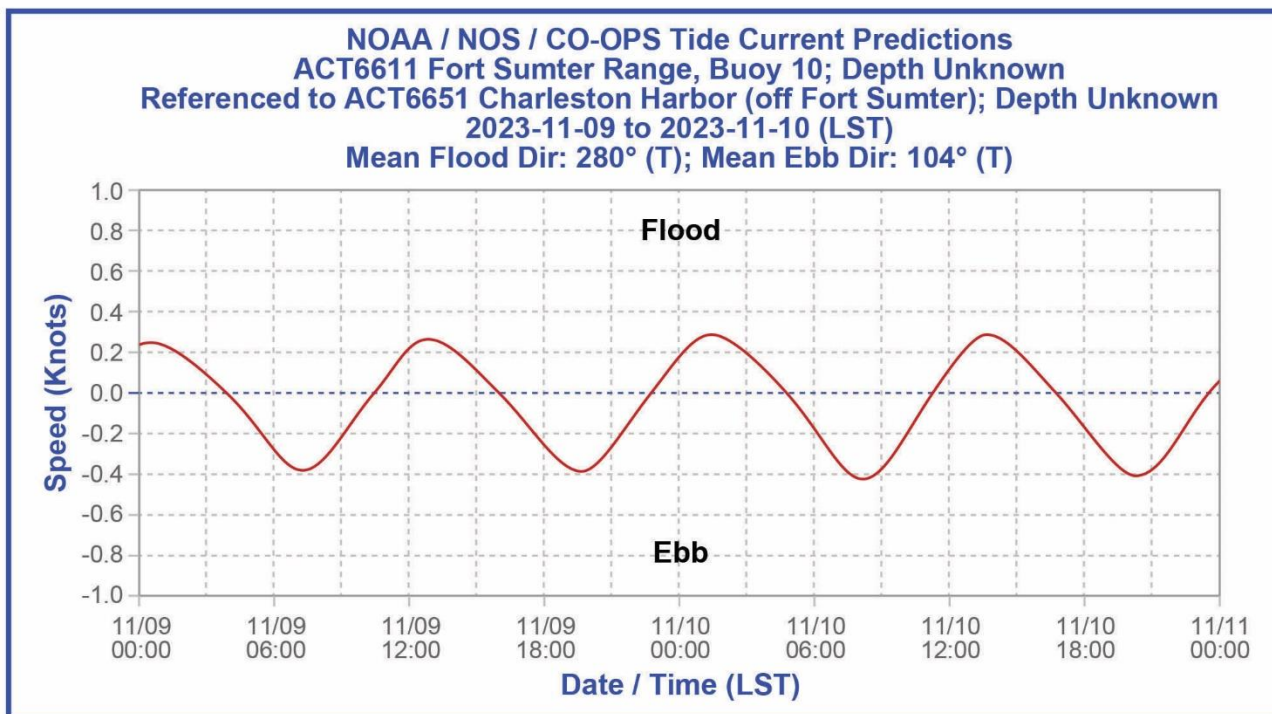   D. 1530, 4 December

Correct answer: C

10. You have steamed 803 miles at 13 knots, and consumed 179 tons of fuel. If you have 371 tons of usable fuel remaining, how far can you steam at 16 knots?

    A. 1374 miles
    B. 1833 miles
    C. 1099 miles
    D. 2581 miles

Correct answer: C

United States Coast Guard
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D058NG

NOAA / NOS / CO-OPS Tide Current Predictions
ACT6611 Fort Sumter Range, Buoy 10; Depth Unknown
Referenced to ACT6651 Charleston Harbor (off Fort Sumter); Depth Unknown
2023-11-09 to 2023-11-10 (LST)
Mean Flood Dir: 280° (T); Mean Ebb Dir: 104° (T)

NOAA / NOS / CO-OPS Tide Current Predictions
ACT6706 Lower Town Creek Reach; Depth Unknown
Referenced to ACT6651 Charleston Harbor (off Fort Sumter); Depth Unknown
2023-11-09 to 2023-11-10 (LST)
Mean Flood Dir: 335° (T); Mean Ebb Dir: 172° (T)

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NOAA/NOS/CO-OPS
Tide Predictions at 9418767, North Spit CA

High/Low Tide Prediction Data Listing
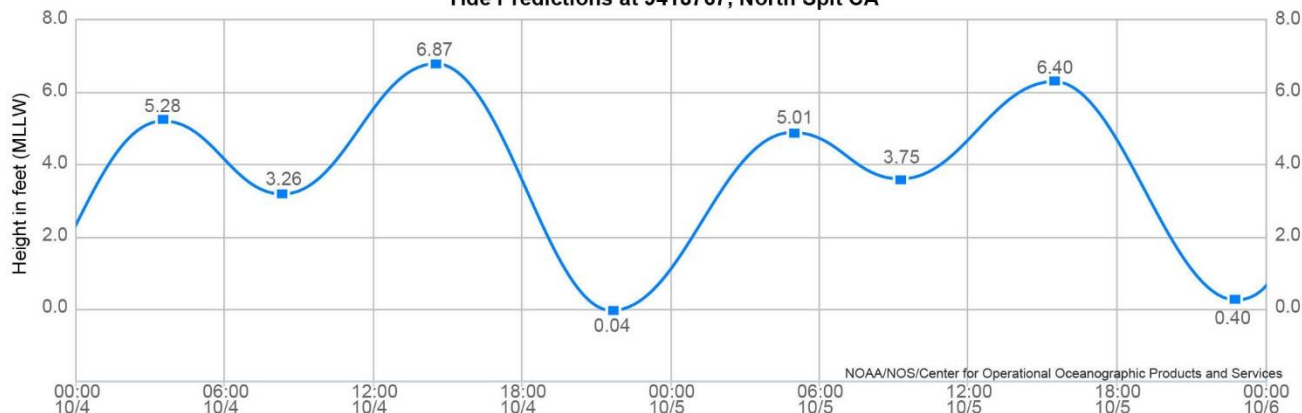
Station Name: North Spit, CA
Action: Daily
Product: Tide Predictions
Start Date & Time: 2023/10/4 00:00
End Date & Time: 2023/10/5 23:59

Source: NOAA/NOS/CO-OPS
Prediction Type: Harmonic
Datum: MLLW
Height Units: Feet
Time Zone: LST

Date	Day	Time	Hgt	Time	Hgt	Time	Hgt	Time	Hgt
2023/10/04	Wed	03:38	5.28 H	08:28	3.26 L	14:33	6.87 H	21:47	0.04 L
2023/10/05	Thu	04:52	5.01 H	09:24	3.75 L	15:25	6.40 H	22:50	0.40 L

NOAA/NOS/CO-OPS
Tide Predictions at 9418801, Eureka CA

High/Low Tide Prediction Data Listing

Station Name: Eureka, CA
Action: Daily
Product: Tide Predictions
Start Date & Time: 2023/10/4 00:00
End Date & Time: 2023/10/5 23:59

Source: NOAA/NOS/CO-OPS
Prediction Type: Subordinate
Datum: MLLW
Height Units: Feet
Time Zone: LST

Date	Day	Time	Hgt	Time	Hgt	Time	Hgt	Time	Hgt
2023/10/04	Wed	04:04	5.60 H	08:41	3.36 L	14:59	7.28 H	22:00	0.04 L
2023/10/05	Thu	05:18	5.31 H	09:37	3.86 L	15:51	6.78 H	23:03	0.41 L

Note: The interval is High/Low, the solid blue line depicts a curve fit between the high and low values and approximates the segments between.
Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tide tables.