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. At 1200 zone time on 10 October, you depart San Francisco, LAT 37°48.5'N, LONG 122°24.0'W (ZD +8). You are bound for Yokohama, LAT 35°27.0'N, LONG 139°39.0'E, and you estimate your speed of advance at 22 knots. The distance is 4,536 miles. What is your estimated zone time of arrival at Yokohama?

   A. 0111, 19 October
   B. 0211, 19 October
   C. 1011, 19 October
   D. 1911, 19 October

   Correct answer: D

2. Your vessel receives a distress call from a vessel reporting her position as LAT 35°01'S, LONG 18°51'W. Your position is LAT 30°18'S, LONG 21°42'W. Determine the true course from your vessel to the vessel in distress by Mercator sailing.

   A. 160°T
   B. 135°T
   C. 153°T
   D. 149°T

   Correct answer: C

3. On 14 October 2023, you will be docking at the Southern Branch Elizabeth River, VA at the first low tide. The berth is located between NOAA reference tidal station #8638660 and subordinate station #8639348. What time (LST) will you be docking? See illustration D063NG.

   A. 0300
   B. 0325
   C. 0125
   D. 0225

   Correct answer: D

4. If the pitch of the propeller is 26.7 feet, and the revolutions per day are 131,717, calculate the day's run allowing 4% negative slip.

   A. 601.6 miles
   B. 649.4 miles
   C. 578.4 miles
   D. 555.2 miles

   Correct answer: A

5. You wish to check the deviation of your standard magnetic compass. You find a natural range that you steer for and note that the gyrocompass heading is 034°, and the heading by standard magnetic compass is 026°. The gyro error is 1°W. Variation is 9°E. What is the deviation for that heading?

   A. 2°W
   B. 0°
   C. 2°E
   D. 9°E

   Correct answer: A

6. Your vessel arrives in port with sufficient fuel to steam 812 miles at 15 knots. If you are unable to take on bunkers, at what speed must you proceed to reach your next port, 928 miles distant?

   A. 13.6 knots
   B. 15.7 knots
   C. 14.0 knots
   D. 15.3 knots

   Correct answer: C

7. You are steering 142°pgc to make good your desired course. The gyro error is 1°E. The variation is 8°W. What should you steer by standard magnetic compass to make good the desired course?

   DEVIATION TABLE

Magnetic Heading	Deviation
120°	4°E
135°	2°E
150°	0

   A. 133°psc
   B. 146°psc
   C. 148°psc
   D. 151°psc

   Correct answer: D

8. On 10 November 2023 at 0130, 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”? See illustration D058NG.

   A. 0.8kts at 172°T
   B. 0.3kts at 104°T
   C. 0.3kts at 280°T
   D. 0.8kts at 335°T

   Correct answer: C

9. You are taking a time tick using the 1930 signal from Rio de Janeiro, Brazil. You hear the preparatory signal "CQ DE PPE" repeated several times followed by a short dash (0.4 sec), 60 dots (0.1 sec each) and another short dash. At the beginning of the last dash, the comparing watch reads 07h 30m 13s. When compared to the chronometer, the comparing watch reads 07h 31m 56s, and the chronometer reads 07h 30m 21s. What is the chronometer error?

   A. 1m 48s slow
   B. 1m 43s fast
   C. 1m 22s slow
   D. 0m 13s fast

   Correct answer: C

10. 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 magnetic compass heading of 143°.

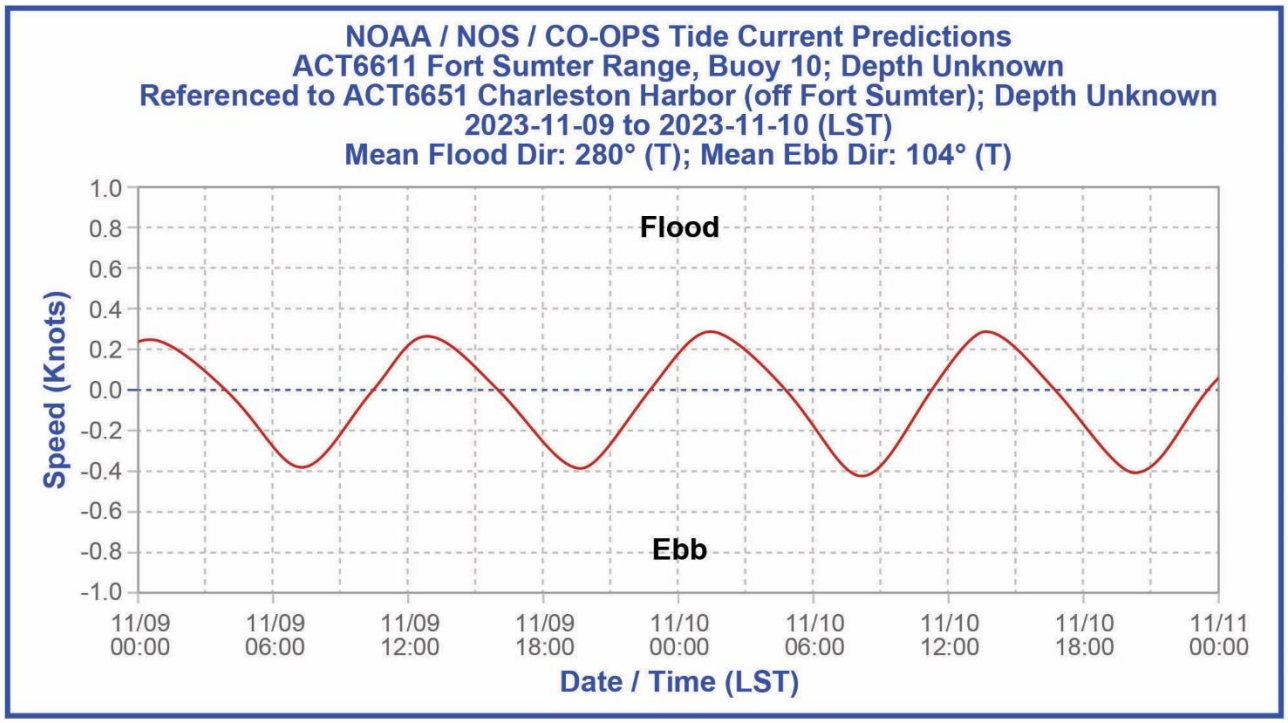
NP-0110

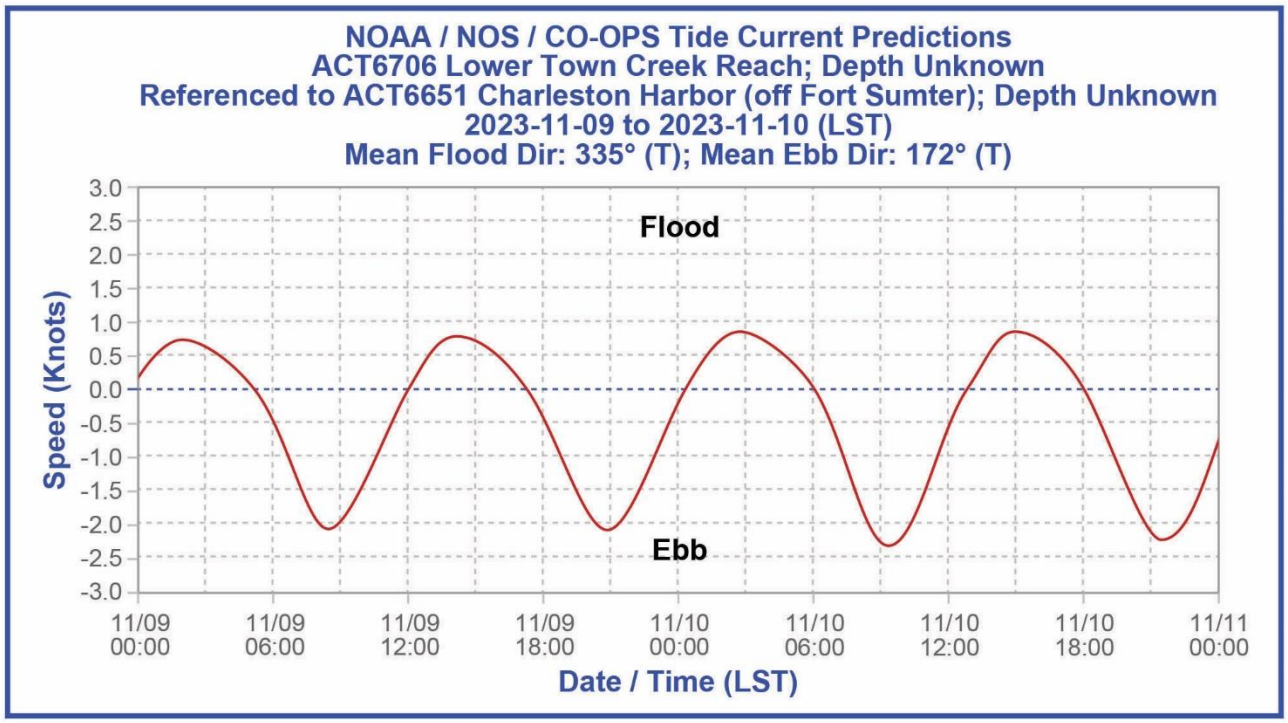
HEADING	
PSC	**PGC**
030.5°	020°
061.5°	050°
092.0°	080°
122.5°	110°
152.0°	140°
181.0°	170°
210.0°	200°
239.5°	230°
269.0°	260°
298.0°	290°
327.5°	320°
358.5°	350°

   A. 2.0°W
   B. 1.5°W
   C. 0.5°W
   D. 0.0°

   Correct answer: A

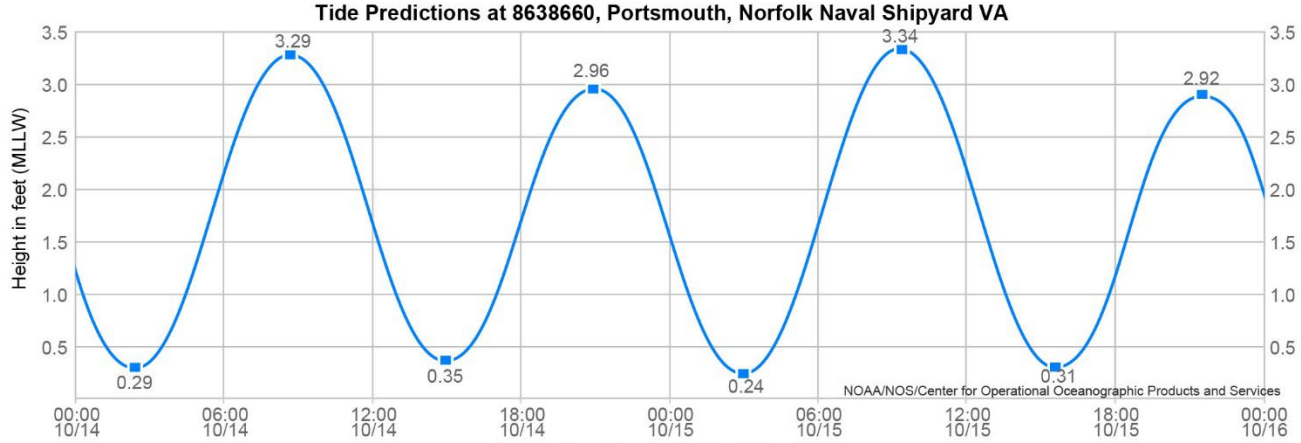
D058NG





D063NG

NOAA/NOS/CO-OPS
Tide Predictions at 8638660, Portsmouth, Norfolk Naval Shipyard VA



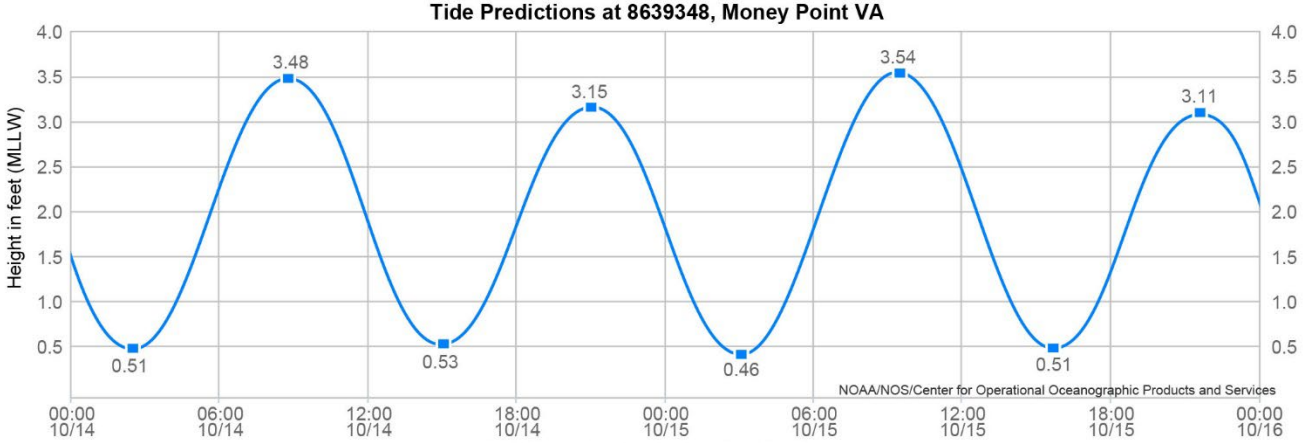
High/Low Tide Prediction Data Listing

Station Name: Portsmouth, Norfolk Naval Shipyard, VA
Action: Daily
Product: Tide Predictions
Start Date & Time: 2023/10/14 00:00
End Date & Time: 2023/10/15 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
2023/10/14	Sat	02:25	0.29 L	08:40	3.29 H	14:58	0.35 L	20:53	2.96 H
2023/10/15	Sun	03:00	0.24 L	09:17	3.34 H	15:37	0.31 L	21:32	2.92 H

NOAA/NOS/CO-OPS
Tide Predictions at 8639348, Money Point VA



High/Low Tide Prediction Data Listing

Station Name: Money Point, VA
Action: Daily
Product: Tide Predictions
Start Date & Time: 2023/10/14 00:00
End Date & Time: 2023/10/15 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
2023/10/14	Sat	02:25	0.51 L	08:48	3.48 H	15:00	0.53 L	21:02	3.15 H
2023/10/15	Sun	03:01	0.46 L	09:25	3.54 H	15:40	0.51 L	21:40	3.11 H

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.