

**Demo PDF file. This file includes questions: 10 from 70. Full version of file looks the same as demo, but full version includes all questions. You may download file with all questions by link on bottom of this page**

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## **Q403 - Navigation Problems: Chart Plot**

**1. The following questions (1-10) are based on the Army Corps of Engineers Mississippi River Maps (Cairo to the Gulf) and the Light List. AHP = Above Head of Passes LMR = Lower Mississippi River UMR = Upper Mississippi River OHR = Ohio River ACOE = Army Corps of Engineers At 0825 on 08 March, you get underway from the docks at mile 173.0 (AHP), enroute to the docks at mile 179.0 (UMR) in St. Louis, MO, with a tow of eight barges carrying cement. What is the distance from the River Cement Co. Dock to the mouth of the Ohio River?**

- 718.8 miles
- 780.8 miles
- 953.5 miles
- 981.5 miles

Note:

*The correct answer is 780.8 miles, calculated by subtracting the downstream mile (173.0 AHP) from the upstream mile (953.8 AHP) as indicated on the Army Corps of Engineers Mississippi River Maps.*

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**2. As you pass under the Baton Rouge R.R. and Hwy 190 Bridge C233.9 AHP), you find that the Kinder Morgan Bulk Terminals are indicated by which numbered box?**

- 10
- 7
- 9
- 8

Note:

*Kinder Morgan Bulk Terminals are indicated by box 10 on the chart, as confirmed by its location near the Baton Rouge R.R. and Hwy 190 Bridge at mile 233.9 AHP. Other boxes reference different facilities.*

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**3. You are turning for 9 mph, approaching Fort Adams Lt. (mile 311.4 AHP) and it is reported that the current at Knox Landing is estimated at 4.5 MPH. Which of the following statements is TRUE?**

- Tows and other vessels should navigate as close to the left descending bank as safety will permit.
- You are making 13.5 mph over the ground.
- The inflow channel is a navigable channel for any vessel.
- Old River Control Structure Light and Fort Adams Light may be used as range lights when entering the outflow channel.

Note:

*In the Old River Control/Knox Landing area, vessels must navigate as close to the left descending bank as safety permits due to hazardous currents.*

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**4. At 0715, on March 9, you pass Knox Landing Gage at mile 313.8 (AHP) and estimate the current will average 3.5 mph for the remainder of the time on the Mississippi River. What is your ETA at the mouth of the Ohio River if you increase speed to turn for 10 mph?**

- 0554, 12 March
- 0640, 11 March
- **0943, 13 March**
- 1242, 13 March

Note:

*The remaining distance is 640 miles. Subtracting the 3.5 mph current from the 10 mph speed yields a ground speed of 6.5 mph. The travel time is 640 miles / 6.5 mph = 98.46 hours, or approximately 4 days, 2 hours, and 28 minutes. Adding this to the departure time of 0715 on March 9 results in an ETA of 0943 on March 13.*

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**5. What is the vertical clearance between the highest point of your towboat, if it is 45 feet above the water, and if the Natchez Gage reads 23.4 feet when passing under the Natchez-Vidalia Westbound Highway Bridge?**

- 67.5 feet
- **57.6 feet**
- 52.2 feet
- 45.2 feet

Note:

*Vertical clearance is calculated by subtracting the gage reading and the towboat's air draft from the bridge's low-steel elevation: 126.0 feet - 23.4 feet - 45.0 feet = 57.6 feet.*

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**6. In high water conditions, which publication would you consult for the latest information on buoys between Baton Rouge and Cairo?**

- Coast Pilot
- **U.S.C.G. Local Notice to Mariners**
- Army Corps. of Engineers Navigation Chart
- List of Buoys and Daymarks

Note:

*The U.S. Coast Guard Local Notice to Mariners is the authoritative source for timely updates on aids to navigation, including buoys, particularly during high water conditions.*

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**7. As you approach Buckridge Light (mile 412.5 AHP), which type of daymark would you see on the light structure?**

- Red diamond
- **Green square**
- Red triangle
- Green diamond

Note:

*Buckridge Light, as a port-side aid for upstream traffic, displays a green square daymark according to the U.S. lateral system.*

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**8. At 1019, on 10 March, you pass under the Greenville Bridge (mile 531.3 AHP). What was your average speed since departing River Cement Co. Dock?**

- 6.8 mph
- **7.2 mph**
- 6.5 mph
- 6.2 mph

Note:

*Average speed is calculated by dividing the distance in statute miles between the River Cement Co. Dock and the Greenville Bridge by the elapsed time in hours, resulting in 7.2 mph.*

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**9. As you approach mile 659 (AHP), you notice on the map a dashed line crossing the river at mile 659.9 (AHP). What does this line indicate?**

- **Power line overhead**
- Gas pipelines
- Pipeline submarine
- A ferry crossing

Note:

*A dashed line crossing a river on a U.S. river chart indicates an overhead power line.*

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**10. On which river is New Providence, TN located?**

- **Cumberland**
- Upper Mississippi
- Allegheny
- Ohio

Note:

*New Providence, Tennessee, located within Clarksville in Montgomery County, is situated on the Cumberland River. The Upper Mississippi, Allegheny, and Ohio Rivers do not flow through this region.*

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