1. The use of an anchor to assist in turning in restricted waters is _________.
   A. a last resort  
   B. good seamanship  
   C. the sign of a novice shiphandler  
   D. to be used only with a single-screw vessel

2. When using the anchor to steady the bow while approaching a dock you must be aware of the fact that
   A. the vessel will tend to take a large sheer towards the side where the anchor is down  
   B. steering control is ineffective in trying to turn to the side opposite to that of the anchor being used  
   C. the anchor cable must never lead under the hull  
   D. using an offshore anchor decreases the chances of the anchor holding

3. You are approaching a pier and intend to use the port anchor to assist in docking port side to. You would
   NOT use the anchor if _________.
   A. the current was setting you on the pier  
   B. another vessel is berthed ahead of your position  
   C. the wind was blowing from the starboard side  
   D. there is shallow water enroute to the berth

4. You are going astern (single-screw, right-handed propeller) with the anchor down at a scope of twice the depth of the water. As the anchor dredges, you should expect the _________.
   A. stern to walk to the same side as the anchor being used  
   B. vessel to back in a straight line  
   C. stern to walk to port but at a reduced rate  
   D. stern to walk to port at a faster rate than normal

5. You are using the anchor to steady the bow while maneuvering. You have the proper scope of anchor cable when the _________.
   A. bow is held in position with the engines coming slowly ahead  
   B. anchor is just touching the bottom  
   C. scope is not more than 5 times the depth of the water  
   D. cable enters the water at an angle between 60° and 85° from the horizontal

6. The bow thruster generally is ineffective at _________.
   A. over 3 knots headway  
   B. at any speed astern  
   C. at any speed ahead  
   D. over 1 knot sternway

7. Which statement about a tunnel bow thruster is TRUE?
   A. It provides lateral control without affecting headway.  
   B. It is fully effective at speeds up to about six knots.  
   C. It can be used to slow the ship in addition to backing down.  
   D. It will allow you to hold a position when the current is from astern.

8. Which statement about tunnel bow thrusters fitted to large vessels is TRUE?
   A. They are effective on most vessels at speeds up to 10 knots.  
   B. Because of their location, most modern installations have as much power as a tug.  
   C. They are fully effective at all drafts.  
   D. When going astern at slow speed, they provide effective steering control.
9. As the propeller turns, voids are formed on the trailing and leading edges of the propeller blades causing a loss of propulsive efficiency, pitting of the blades, and vibration. These voids are known as ________.  
   A. advance  B. cavitation  C. edging  D. slip

10. It is easier to dock a right-hand, single-screw vessel ________.  
   A. starboard side to the wharf  B. either side to the wharf  C. port side to the wharf  D. stern to the wharf

11. The best time to work a boat into a slip is ________.  
   A. when the wind is against you  B. with the current setting against you  C. at slack water  D. with a cross current

12. When a tug is pulling on a hawser at right angles to the ship, and the pilot wants to come ahead or astern on the ship's engine, care must be taken that the pilot ________.  
   A. does not break the towline  B. does not get too much way on the vessel  C. keeps a steady course so the towline will remain tight  D. turns the ship toward the direction of pull

13. You are 15 feet off a pier and docking a vessel using only a bow breast line and stern breast line. Once the slack is out of both lines you begin to haul in on the bow breast line. What is the effect on the vessel?  
   A. The bow will come in and the stern will go out.  B. The bow and stern come in equally closer toward the pier.  C. The bow will come in and the stern will remain the same distance off the pier.  D. The stern will come in and the bow will remain the same distance off the pier.

14. You are docking a ship with a single-screw tug assisting on your starboard bow. How should the tug be tied up if you are anticipating that she will have to hold your bow off while you stem the current?  
   A. One head line would be sufficient.  B. The tug would need at least two head lines.  C. The tug should put a spring line up, leading astern on the ship.  D. The tug should put a stern line up, leading ahead on the ship.

15. You are docking a vessel in a slip which has its entrance athwart the tide. You land the ship across the end of the pier, stemming the tide, preparatory to breaking the ship around the corner. You have one tug to assist. Where would you generally tie up the tug?  
   A. Have her on a hawser from the stern.  B. Tie her up on the inshore bow to hold the ship off the end.  C. Tie her up on the offshore bow.  D. Tie her up on the inshore quarter to lift the stern.

16. You are docking a vessel starboard side to with the assistance of two tugs. You are attempting to hold the vessel off by operating both tugs at right angles to the vessel and at full power. You must ensure that ________.  
   A. steerageway is not taken off  B. the bow doesn’t close the dock first  C. the bow closes the dock first  D. the ship has no headway at the time
17 2246  Ref: Shiphandling, Docking  B
You are docking a vessel. If possible, you should __________.
A. go in with the current
B. go in against the current
C. approach the dock at a 90° angle and swing to
D. pass a mooring line to the dock with a heaving line and let the crew pull the vessel in

18 2247  Ref: Shiphandling, Docking  C
You are docking a vessel. Wind and current are most favorable when they are __________.
A. crossing your course in the same direction
B. crossing your course in opposite directions
C. parallel to the pier from ahead
D. setting you on the pier

19 2248  Ref: Shiphandling, Docking  A
You are docking an oceangoing single-screw vessel under normal circumstances with a single tug. The tug is usually used to __________.
A. control the bow and is tied to the offshore bow
B. control the stern and is tied to the stern on the offshore side
C. pull the vessel into the slip and is tied to the bow
D. push the ship bodily alongside and is tied to the offshore side amidships

20 2271  Ref: Shiphandling, Docking  C
You are landing a single-screw vessel, with a left-handed propeller, starboard side to the dock. As you approach the dock you back your engine with your rudder amidships. You would expect the vessel to __________.
A. lose headway without swinging
B. turn its bow towards the dock
C. turn its stern towards the dock
D. drift away from the dock

21 2273  Ref: Shiphandling, Docking  B
You are landing a single-screw vessel, with a right-hand propeller, starboard side to the dock. When you have approached the berth and back the engine, you would expect the vessel to __________.
A. lose headway without swinging
B. turn her bow toward the dock
C. turn her bow away from the dock
D. head into the wind, regardless of the side the wind is on

22 2296  Ref: Shiphandling, Docking  B
You are on a 120,000 DWT loaded bulk carrier. What is the maximum safe docking speed when coming alongside?
A. 0.1 foot per second (0.06 knot)
B. 0.2 foot per second (0.12 knot)
C. 0.5 foot per second (0.30 knot)
D. 0.75 foot per second (0.44 knot)

23 2558  Ref: Shiphandling, Docking  A
Your vessel is port side to a pier with a spring line led aft from the bow. In calm weather, putting the engines ahead with the rudder hard left should bring __________.
A. the bow in and the stern out
B. both the bow and stern in
C. the bow out and the stern in
D. both the bow and stern out

24 616  Ref: Shiphandling, Heavy Weather  A
If your propeller is racing in rough weather, you should __________.
A. decrease your engine speed
B. ignore it
C. increase your engine speed
D. stop your engine until the rough weather passes
25  619  Ref: Shiphandling, Heavy Weather  A
In a following sea, a wave has overtaken your vessel and thrown the stern to starboard. To continue along your original course, you should __________.
A. use more right rudder  C. increase speed
B. use more left rudder  D. decrease speed

26  692  Ref: Shiphandling, Heavy Weather  B
In which situation could a vessel most easily capsize?
A. Running into head seas  C. Running with following seas
B. Running in the trough  D. Anchored with your bow into the seas

27  1402  Ref: Shiphandling, Heavy Weather  C
Usually the most gentle way of riding out a severe storm on a larger vessel is __________.
A. head on at slow speeds  C. running before the seas
B. hove to  D. to rig a sea anchor

28  1461  Ref: Shiphandling, Heavy Weather  C
What is meant by the term "broaching to"?
A. Having the vessel head toward the sea  C. Being turned broadside to the sea
B. Running before a sea  D. Having the vessel filled with water

29  1625  Ref: Shiphandling, Heavy Weather  A
When a boat turns broadside to heavy seas and winds, thus exposing the boat to the danger of capsizing, the boat has __________.
A. broached  C. trimmed
B. pitchpoled  D. yawed

30  1642  Ref: Shiphandling, Heavy Weather  D
When a vessel is swinging from side to side off course due to quartering seas, the vessel is __________.
A. broaching  C. rolling
B. pitchpoling  D. yawing

31  1709  Ref: Shiphandling, Heavy Weather  B
When making way in heavy seas you notice that your vessel’s screw is being lifted clear of the water and racing. One way to correct this would be to __________.
A. increase speed  C. move more weight forward
B. decrease speed  D. shift the rudder back and forth several times

32  1739  Ref: Shiphandling, Heavy Weather  C
When running before a heavy sea, moving weights aft will affect the handling of a vessel by __________.
A. reducing rolling  C. reducing yawing
B. increasing rolling  D. increasing yawing

33  1765  Ref: Shiphandling, Heavy Weather  C
When the period of beam seas equals the natural rolling period of a vessel, what will most likely occur?
A. Excessive pitching  C. Excessive rolling
B. Excessive yawing  D. No change should be evident

34  1807  Ref: Shiphandling,Heavy Weather  D
Which action reduces the yawing of a vessel in a following sea?
A. Increasing GM
B. Pumping out tanks aft
C. Shifting weights to the bow
D. Shifting weights to the stern

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35. Which measure should NOT be taken to reduce the pounding of a vessel in a head sea?
A. Add ballast in the after peak.  
B. Add ballast forward.  
C. Alter course.  
D. Reduce speed.

36. With a following sea, a vessel will tend to __________.
A. heave to  
B. pound  
C. reduce speed  
D. yaw

37. You are heading into the sea during rough weather. Having too much weight forward can cause your small boat to __________.
A. broach  
B. plunge into the wave  
C. rise rapidly over the wave  
D. list

38. You are steaming in a heavy gale and find it necessary to heave to. Under most circumstances, this is best done by __________.
A. stopping the engines and drifting beam to the seas  
B. going slow astern and taking the seas on the quarter  
C. taking the sea fine on the bow and reducing the speed to the minimum to hold that position  
D. maintaining speed and taking the sea broad on the bow

39. You are underway in heavy weather and your bow is into the seas. To prevent pounding, you should __________.
A. change course, in order to take the seas at an 85 degree angle from the bow  
B. decrease speed  
C. increase speed  
D. secure all loose gear

40. Your vessel is broken down and rolling in heavy seas. You can reduce the danger of capsizing by __________.
A. constantly shifting the rudder  
B. moving all passengers to one side of the boat  
C. rigging a sea anchor  
D. moving all passengers to the stern

41. Your vessel is off a lee shore in heavy weather and laboring. Which action should you take?
A. Put the sea and wind about two points on either bow and reduce speed.  
B. Heave to in the trough of the sea.  
C. Put the sea and wind on either quarter and proceed at increased speed.  
D. Put the bow directly into the sea and proceed at full speed.

42. When taking a Pilot from a pilot vessel in a seaway, which way should you head your vessel if the ladder is on the leeward side?
A. Bow to the sea and no way on your vessel  
B. Sea on the lee quarter with ship moving ahead slowly  
C. Sea on the weather bow and ship moving ahead slowly  
D. Sea on the quarter with sternway on the ship
43 2222 Ref: Shiphandling, Making A Lee
You are approaching the pilot station with the wind fine on the starboard bow and making about 3 knots.
You can help to calm the seas by taking what action just before the pilot boat comes along on the port side?
A. Backing full C. Giving right full rudder
B. Stopping the engines D. A short burst of ahead full with left full rudder

44 914 Ref: Shiphandling, Maneuvering, Twin Screw
The BEST way to steer a twin-screw vessel if you lose your rudder is by using __________.
A. one engine and a steering oar
B. both engines at the same speed
C. one engine at a time
D. one engine running at reduced speed and controlling the vessel with the other

45 115 Ref: Shiphandling, Maneuvering
A large vessel is equipped with a controllable pitch propeller. Which statement is TRUE?
A. When dead in the water, it is often difficult to find the neutral position and slight headway or sternway may result.
B. When going directly from full ahead to full astern, there is complete steering control.
C. When the vessel has headway and the propeller is in neutral, there is no effect on rudder control.
D. When maneuvering in port, full ahead or astern power can usually be obtained without changing shaft RPM.

46 262 Ref: Shiphandling, Maneuvering
A twin screw vessel, making headway with both engines turning ahead, will turn more readily to starboard if you __________.
A. reverse port engine, apply right rudder C. reverse starboard engine, apply right rudder
B. reverse port engine, rudder amidships D. reverse starboard engine, rudder amidships

47 263 Ref: Shiphandling, Maneuvering
A twin-screw ship going ahead on the starboard screw only tends to move __________.
A. in a straight line C. from side to side
B. to port D. to starboard

48 264 Ref: Shiphandling, Maneuvering
A twin-screw vessel can clear the inboard propeller and maneuver off a pier best by holding a(n) __________.
A. forward spring line and going slow ahead on the inboard engine
B. after spring line and going slow astern on the outboard engine
C. forward spring line and going slow ahead on both engines
D. forward spring line and going slow ahead on the outboard engine

49 265 Ref: Shiphandling, Maneuvering
A twin-screw vessel is easier to maneuver than a single-screw vessel because the twin-screw vessel __________.
A. permits the rudder to move faster C. can turn without using her rudder
B. generates more power D. can suck the water away from the rudder

50 266 Ref: Shiphandling, Maneuvering
A twin-screw vessel with a single rudder is making headway. The engines are full speed ahead. There is no wind or current. Which statement is FALSE?
A. If one screw is stopped, the ship will turn toward the side of the stopped screw.
B. The principal force which turns the ship is set up by the wake against the forward side of the rudder.
C. Turning response by use of the rudder only is greater than on a single-screw vessel.
D. With the rudder amidships, the ship will steer a fairly steady course.
A vessel is equipped with twin propellers, both turning outboard with the engines half ahead. If there is no wind or current and the rudders are amidships, what will happen?

A. The bow will swing to starboard.  
B. The bow will swing to port.  
C. The vessel will steer a zigzag course.  
D. The vessel will steer a fairly straight course.

A vessel reduces speed without backing. The rate that her speed through the water decreases depends primarily on the __________.

A. vessel's horsepower  
B. sea state  
C. number of propellers  
D. vessel's displacement

A VLCC (100,000 DWT+) with a 30,000 Shaft Horsepower Steam Turbine is slow to respond to engine movements and has less stopping power than normal ships because it has a __________.

A. bigger propeller  
B. smaller power to weight ratio  
C. smaller propeller  
D. larger power to weight ratio

As a rule, ships of most configurations, when drifting in calm water with negligible current, will lie __________.

A. bow to the wind  
B. beam to the wind  
C. stern to the wind  
D. with the wind on the quarter

Generally, you can best keep a vessel under steering control when the vessel has __________.

A. headway  
B. sternway  
C. no way on, with engines stopped  
D. no way on, with engines full ahead

In order to back a right-handed, single-screw vessel in a straight line, you will probably need to use __________.

A. very little rudder  
B. some left rudder  
C. some right rudder  
D. full left rudder

In stopping distances of vessels, "head reach" can best be described as the __________.

A. difference between the vessel's speed through the water at any instant and the new speed ordered on the telegraph  
B. distance the vessel has actually run through the water since a change of speed was ordered  
C. distance the vessel will run between taking action to stop her and being stationary in the water  
D. speed at which a vessel should proceed to ensure that she will run a predetermined distance, once her engines have been stopped

In twin-screw engine installations while going ahead, maneuvering qualities are most effective when the tops of the propeller blades both turn __________.

A. to starboard  
B. outboard from the center  
C. to port  
D. inboard toward the center

Leeway is the __________.

A. difference between the true course and the compass course  
B. momentum of a vessel after her engines have been stopped  
C. lateral movement of a vessel downwind of her intended course  
D. displacement of a vessel multiplied by her speed
60 730 Ref: Shiphandling, Maneuvering

Most of your vessel’s superstructure is forward. How will the vessel lie when drifting with no way on?

A. With the wind from ahead  C. With the wind off the starboard beam
B. With the wind off the port beam  D. With the wind from abaft the beam

61 759 Ref: Shiphandling, Maneuvering

On a single-screw vessel, when coming port side to a pier and being set off the pier, you should __________.

A. swing wide and approach the pier so as to land starboard side to
B. approach the pier on a parallel course at reduced speed
C. make your approach at a greater angle than in calm weather
D. point the vessel’s head well up into the slip and decrease your speed

62 767 Ref: Shiphandling, Maneuvering

On a twin-screw, twin-rudder vessel, the most effective way to turn in your own water, with no way on, is to put __________.

A. one engine ahead and one engine astern, with full rudder
B. one engine ahead and one engine astern, with rudders amidships
C. both engines ahead, with full rudder
D. both engines astern, with full rudder

63 769 Ref: Shiphandling, Maneuvering

On a vessel with a single propeller, transverse force has the most effect on the vessel when the engine is put __________.

A. full ahead  C. half ahead
B. full astern  D. slow astern

64 962 Ref: Shiphandling, Maneuvering

The distance that a vessel travels from the time that the order to put engines full astern until the vessel is dead in the water is known as __________.

A. advance  C. surge
B. head reach  D. transfer

65 972 Ref: Shiphandling, Maneuvering

The effect of wind on exposed areas of the vessel is most noticeable when __________.

A. backing  C. going full ahead
B. going slow ahead  D. turning

66 1182 Ref: Shiphandling, Maneuvering

The rudders are amidships and both screws are going ahead. What will happen if the starboard screw is stopped?

A. The bow will go to port.  C. The bow will remain steady.
B. The bow will go to starboard.  D. The stern will remain steady.

67 1643 Ref: Shiphandling, Maneuvering

When a vessel with a single right-hand propeller backs to port the __________.

A. bow falls off to starboard  B. vessel moves to port without changing heading
C. bow swings to port  D. vessel moves to starboard without changing heading

68 1677 Ref: Shiphandling, Maneuvering

When comparing twin screw tug to single-screw tugs, which statement about a twin-screw tug is FALSE?

A. If one engine fails, you do not lose control of the tow.
B. It is more maneuverable.
C. It develops more bollard pull for the same horsepower.
D. It is generally subject to more propeller damage from debris in the water.
When turning a ship in restricted space with a strong wind, it is normally best to __________.
A. go ahead on both engines with the rudder hard to one side, if on a twin-screw vessel
B. back down with the rudder hard to one side, if on a single-screw vessel
C. take advantage of the tendency to back to port, if on a twin-screw vessel
D. turn so that the tendency to back into the wind can be used, if on a single-screw vessel

Which characteristic is a disadvantage of a controllable-pitch propeller as compared to a fixed-pitch propeller?
A. Slightly higher fuel consumption
B. Lack of directional control when backing
C. Inefficient at high shaft RPM
D. Some unusual handling characteristics

Which of the following is an inherent advantage possessed by a twin-screw vessel in opposition to a single-screw vessel?
A. The correct trim will be obtained more easily
B. The drag effect will be cancelled out
C. The side forces will be cancelled out
D. The vessel's speed will be increased

Which statement about stopping a vessel is TRUE?
A. A lightly laden vessel requires as much stopping distance as a fully laden vessel when the current is from astern.
B. A vessel is dead in the water when the back wash from astern operation reaches the bow.
C. A tunnel bow thruster can be used in an emergency to reduce the stopping distance.
D. When a vessel is dead in the water any speed displayed by Doppler log reflects the current.

Which statement concerning the handling characteristics of a fully loaded vessel as compared with those of a light vessel is FALSE?
A. A fully loaded vessel will be slower to respond to the engines.
B. A fully loaded vessel will maintain her headway further.
C. A light vessel will be more affected by the wind.
D. A light vessel loses more rudder effect in shallow water.

Which statement is FALSE?
A. Your stern is sucked down and your draft increases when going from deep to shallow water.
B. Excessive speed while passing moored vessels may cause them to surge and break their moorings.
C. Excessive speed while passing a tow being pushed ahead or pushing a tow into an eddy too fast may break up the tow.
D. None of the above

With rudders amidships and negligible wind, a twin-screw vessel moving ahead on the port screw and backing on the starboard screw will __________.
A. move in a straight line
B. pivot to starboard
C. pivot to port
D. walk sideways to starboard

With rudders amidships and negligible wind, a twin-screw vessel moving astern with both engines backing will back __________.
A. to port
B. to starboard
C. in a fairly straight line
D. in a circular motion
You are aboard a right-handed single-screw vessel with headway on. The engine is put full astern and the rudder hard left. What will the bow do?
A. It will swing to the left, and will swing left faster as the vessel loses way.
B. It will swing to the left, straighten out and then swing to the right as the vessel loses way.
C. It will swing to the left without increasing or decreasing its swing.
D. The bow will swing to the right.

You are aboard a single-screw vessel (right-hand propeller) going full ahead with good headway. The engine is put astern and the rudder is placed hard left. The stern of the vessel will swing to __________.
A. starboard until headway is lost and then to port
B. port
C. port until headway is lost and then may possibly swing to starboard
D. port slowly at first and then quickly to port

You are aboard a single-screw vessel with a right-handed propeller. The vessel is dead in the water and the rudder is amidships. If you reverse your engine you would expect your vessel to __________.
A. kick its stern to port
B. kick its stern to starboard
C. move astern without swinging
D. swing its stern to starboard, then to port

You are backing on twin engines with rudders amidships, when your port engine stalls. To continue backing on course, you should __________.
A. apply left rudder
B. apply right rudder
C. increase engine speed
D. keep your rudder amidships

You are backing on twin engines with rudders amidships. Your starboard engine stalls. To continue backing on course, you should __________.
A. apply left rudder
B. apply right rudder
C. increase your engine speed
D. keep your rudder amidships

You are conning a twin-screw vessel going ahead with rudders amidships. If the port screw stops turning the bow will __________.
A. go to port
B. go to starboard
C. not veer to either side
D. go first to port and then to starboard

You are drifting in a locale where there is no current. As a rule, your vessel will lie __________.
A. bow to the wind
B. beam to the wind
C. stern to the wind
D. with the wind on the quarter

You are going ahead on twin engines when you want to make a quick turn to port. Which actions will turn your boat the fastest?
A. Reverse port engine; apply left rudder
B. Reverse port engine; rudder amidships
C. Reverse starboard engine; apply left rudder
D. Reverse starboard engine; rudder amidships
85 2252 Ref: Shiphandling, Maneuvering
You are going ahead on twin engines with rudder amidships. Your starboard engine stalls. To continue on course, you should __________.
A. apply left rudder  
B. apply right rudder  
C. increase engine speed  
D. keep your rudder amidships

86 2253 Ref: Shiphandling, Maneuvering
You are going ahead on twin engines with rudders amidships. Your port engine stalls. To continue your course you should __________.
A. apply right rudder  
B. apply left rudder  
C. keep your rudder amidships  
D. increase engine speed

87 2272 Ref: Shiphandling, Maneuvering
You are landing a single-screw vessel with a right-handed propeller port side to a dock. As you approach the dock, you back down on your engine with rudder amidships. You would expect the vessel to _______.
A. drift away from the dock  
B. lose headway without swinging  
C. swing its stern towards the dock  
D. swing its stern away from the dock

88 2308 Ref: Shiphandling, Maneuvering
You are on a large vessel fitted with a right-handed controllable-pitch propeller set at maximum forward pitch. Which statement about reversing is TRUE?
A. When the pitch is reversed, the stern will slew to port even with headway.  
B. The vessel will respond to the rudder until sternway is developed, then the stern will slew to starboard.  
C. There will probably be a loss of steering control.  
D. The vessel will have full rudder control throughout the speed change from ahead to astern.

89 2309 Ref: Shiphandling, Maneuvering
You are on a large vessel fitted with a right-handed controllable-pitch propeller. When making large speed changes while decreasing pitch, which statement is TRUE?
A. You will probably have full directional control throughout the speed change.  
B. You may lose rudder control until the ship’s speed has dropped to correspond to propeller speed.  
C. The stern will immediately slew to starboard due to unbalanced forces acting on the propeller.  
D. The stern will immediately slew to port due to unbalanced forces acting on the propeller.

90 2320 Ref: Shiphandling, Maneuvering
You are on a single-screw vessel with a left-handed propeller making no way in the water. How will your vessel react when you apply right rudder?
A. Bow will kick to starboard  
B. Bow will kick to port  
C. Rudder alone has no effect on the vessel  
D. Stern will kick to port, then slowly swing to starboard

91 2322 Ref: Shiphandling, Maneuvering
You are on a single-screw vessel with a right-handed propeller. The vessel is going full speed astern with full right rudder. The bow will swing __________.
A. quickly to port, then more slowly to port  
B. probably to port  
C. slowly to port, then quickly to starboard  
D. probably to starboard

92 2344 Ref: Shiphandling, Maneuvering
You are operating a twin-screw vessel and lose your port engine. You continue to operate on your starboard engine only. Which action would you take to move your vessel ahead in a straight line?
A. Compensate with right rudder.  
B. Compensate with left rudder.  
C. Surge the starboard engine.  
D. Rudder amidships - no compensation is necessary on a twin-screw vessel.
You are stopped with no way upon your vessel at the pilot station. Your vessel is a large twin-screw ship. You must come around 180° to board your Pilot. How should you use the engines and rudder to turn the ship fastest in the least amount of space?

A. Full ahead on the engines and hard over rudder
B. Full ahead on one engine, full astern on the other
C. Half ahead with hard over rudder, then full astern on inboard engine
D. Slow ahead with hard over rudder

You may BEST turn a twin-screw vessel about, to the right, in a narrow channel by using __________.

A. both engines ahead and helm
B. one engine only
C. port engine ahead and the starboard engine astern
D. both engines astern and use helm

Your ship is dead in the water with the rudder amidships. As the right-handed screw starts to turn ahead, the bow will tend to go __________.

A. to starboard
B. to port
C. straight ahead
D. as influenced by the tide and sea

Your twin-screw vessel is moving ASTERN with rudders amidships. The starboard screw suddenly stops turning. Your vessel's head will __________.

A. go to port
B. go to starboard
C. remain stationary
D. suddenly drop down

Your vessel is a single-screw ship with a right-hand propeller. There is no current. The easiest way to make a landing is __________.

A. port side to
B. starboard side to
C. dropping anchor and swinging the ship in to the pier
D. either port or starboard side to, with no difference in degree of difficulty

Your vessel is backing on the starboard screw, and going ahead on the port screw. The bow will __________.

A. back on a straight line
B. move ahead on a straight line
C. swing to port
D. swing to starboard

The distance that a ship moves forward with each revolution of its propeller, if there is no slip, is called __________.

A. advance
B. head reach
C. pitch
D. transfer

The pivoting point of a fully loaded vessel with normal trim proceeding ahead at sea speed is __________.

A. right at the bow
B. one-third the length of the vessel from the bow
C. one-half the length of the vessel from the bow
D. two-thirds the length of the vessel from the bow
101 1658 Ref: Shiphandling, Pivot Point  D
When backing down with sternway, the pivot point of a vessel is __________.
A. at the bow  
B. about one-third of the vessel's length from the bow  
C. aft of the propellers  
D. about one-quarter of the vessel's length from the stern

102 1784 Ref: Shiphandling, Pivot Point  B
When underway and proceeding ahead, as the speed increases, the pivot point tends to __________.
A. move aft  
B. move forward  
C. move lower  
D. remain stationary

103 1148 Ref: Shiphandling, Rolling Period  C
The period of roll is the time difference between __________.
A. zero inclination to full inclination on one side  
B. full inclination on one side to full inclination on the other side  
C. full inclination on one side to the next full inclination on the same side  
D. zero inclination to the next zero inclination

104 1768 Ref: Shiphandling, Rolling Period  A
When the wave period and the apparent rolling period are the same __________.
A. synchronous rolling occurs  
B. roll period decreases  
C. roll period increases  
D. roll amplitude is dampened

105 509 Ref: Shiphandling, Rudder  A
Flanking rudders effect a vessel's heading because of the __________.
A. effect of the propeller flow on the rudders  
B. water flow due to the vessel's movement through the water  
C. tunnel affect of the water flow past opposing rudders  
D. discharge current being channeled to impinge on the vessel's deadwood

106 593 Ref: Shiphandling, Rudder  A
If a tug equipped with flanking rudders is to be turned in a confined circle, when going astern, the stern will move to port the quickest if __________.
A. the rudder is hard to port and the flanking rudders are hard to port  
B. the rudder is amidships and the flanking rudders are hard to port  
C. the rudder is hard to port and the flanking rudders are hard to starboard  
D. all rudders are hard to starboard

107 2123 Ref: Shiphandling, Rudder  B
Which type of rudder may lose its effectiveness at angles of 10 or more degrees?
A. Contra-guide  
B. Balanced spade  
C. Unbalanced  
D. Flat plate

108 69 Ref: Shiphandling, Shallow Water  C
A common occurrence when a vessel is running into shallow water is that __________.
A. the wake is less pronounced  
B. the vessel is more responsive to the rudder  
C. "squat" will cause a decrease in bottom clearance and an increase in draft  
D. All of the above

109 71 Ref: Shiphandling, Shallow Water  C
A condition where two currents meet at the downstream end of a middle bar can be determined by a __________.
A. small whirlpool  
B. smooth patch of water  
C. V-shaped ripple with the point of the V pointing downstream  
D. V-shaped ripple with the point of the V pointing upstream
110 83  Ref: Shiphandling, Shallow Water
A deep draft VLCC (100,000 DWT+) navigating in a narrow channel or canal _________.
A. draws more water than when underway in deep water
B. draws less water with an increase in speed
C. requires less power for a given speed
D. steers better under full power

111 172  Ref: Shiphandling, Shallow Water
A predictable result of a vessel nearing a bank or edge of a channel is that the _________.
A. stern is drawn to the bank as the bow sheers off
B. bow sheers toward the bank
C. vessel continues in a straight line, but with greatly reduced maneuverability
D. vessel will be drawn bodily into the bank unless the engines are stopped

112 213  Ref: Shiphandling, Shallow Water
A snag or other underwater obstruction may form a _________.
A. V-shaped ripple with the point of the V pointing upstream
B. V-shaped ripple with the point of the V pointing downstream
C. small patch of smooth water on a windy day
D. smoothing out of the vessel's wake

113 306  Ref: Shiphandling, Shallow Water
A vessel proceeding along the bank of a river or channel has the tendency to _________.
A. continue in line with the bank  C. sheer away from the bank
B. hug the bank  D. increase speed

114 314  Ref: Shiphandling, Shallow Water
A vessel traveling down a narrow channel, especially if the draft is nearly equal to the depth of the water, may set off the nearer side. This effect is known as _________.
A. smelling the bottom  C. bank suction
B. squatting  D. bank cushion

115 318  Ref: Shiphandling, Shallow Water
A vessel will "squat" when it proceeds underway _________.
A. only in deep water  C. in all depths of water
B. only in shallow water  D. only in narrow channels

116 325  Ref: Shiphandling, Shallow Water
A V-shaped ripple with the point of the V pointing upstream in a river may indicate a _________.
A. submerged rock, not dangerous to navigation  C. towed-under buoy
B. sunken wreck, not dangerous to navigation  D. All of the above

117 326  Ref: Shiphandling, Shallow Water
A wedge of water building up between the bow and nearer bank which forces the bow out and away describes _________.
A. bank cushion  C. combined effect
B. bank suction  D. bend effect

118 465  Ref: Shiphandling, Shallow Water
Conditions for crossing a rough bar are usually best at _________.
A. low water slack
B. high water slack
C. high water ebb
D. high water flood
119  519   Ref: Shiphandling, Shallow Water  
For the deepest water when rounding a bend in a river, you should navigate your vessel _________.
A. toward the inside of the bend
B. toward the outside of the bend
C. toward the center of the river just before the bend, then change course for the river's center after the bend
D. in the river's center

120  552   Ref: Shiphandling, Shallow Water  
How does a vessel's rate of turn change when entering shallow water?
A. It is faster.
B. It is slower.
C. There is no change.
D. It remains constant for varying propeller revolutions.

121  554   Ref: Shiphandling, Shallow Water  
How does the effect known as "bank suction" act on a single-screw vessel proceeding along a narrow channel?
A. It pulls the stern toward the bank.
B. It heels the vessel toward the bank.
C. It pushes the entire vessel away from the bank.
D. It pulls the bow toward the bank.

122  555   Ref: Shiphandling, Shallow Water  
How does the effect known as "bank suction" act on a single-screw vessel proceeding along a narrow channel?
A. It pulls the bow toward the bank.
B. It heels the vessel toward the bank.
C. It pushes the entire vessel away from the bank.
D. It pulls the stern toward the bank.

123  654   Ref: Shiphandling, Shallow Water  
In most cases, when a large merchant vessel enters shallow water at high speed the _________.
A. maneuverability will increase
B. speed will increase
C. bow will squat farther than the stern
D. vessel will rise slightly, on a level plane

124  661   Ref: Shiphandling, Shallow Water  
In order to reduce your wake in a narrow channel you should _________.
A. apply enough rudder to counter the effect of the current
B. change your course to a zigzag course
C. reduce your speed
D. shift the weight to the stern

125  676   Ref: Shiphandling, Shallow Water  
In the context of shiphandling, what would be the definition of shallow water?
A. Water depth of less than twice a vessel's draft
B. Water depth of less than 1½ times a vessel's draft
C. Under keel clearance of twice a vessel's draft
D. Under keel clearance of less than 10 feet

126  697   Ref: Shiphandling, Shallow Water  
Insufficient space between the hull and bottom in shallow water will prevent normal screw currents resulting in _________.
A. waste of power
B. sudden sheering to either side
C. sluggish rudder response
D. All of the above
127 732 Ref: Shiphandling, Shallow Water
Most very large ocean going vessels, such as bulk carriers and large tankers, tend to squat__________.
A. by the bow C. at the end nearest the bottom
B. by the stern D. evenly fore and aft

128 825 Ref: Shiphandling, Shallow Water
River currents tend to__________.
A. pick up speed where the channel widens
B. run slower in the center of the channel
C. hug the inside of a bend
D. cause the greatest depth of water to be along the outside of a bend

129 969 Ref: Shiphandling, Shallow Water
The effect known as "bank cushion" acts in which of the following ways on a single-screw vessel proceeding along a narrow channel?
A. It forces the bow away from the bank.
B. It forces the stern away from the bank.
C. It forces the entire vessel away from the bank.
D. It heels the vessel toward the bank.

130 1354 Ref: Shiphandling, Shallow Water
Two vessels are abreast of each other and passing port to port in a confined waterway. What should you expect as your bow approaches the screws of the other vessel?
A. Your speed will significantly increase.
B. Your draft will significantly decrease.
C. Your bow will sheer towards the other vessel.
D. Your bow will sheer away from the other vessel.

131 1407 Ref: Shiphandling, Shallow Water
Water may boil up around the stern of a vessel in a channel due to__________.
A. slack water when upbound C. a cross current
B. shallow water D. a head current

132 1410 Ref: Shiphandling, Shallow Water
What affect does shallow water have on a vessel's stopping distance?
A. The stopping distance is shorter.
B. The stopping distance is longer.
C. There is no difference in the stopping distance.
D. The propeller is more effective when going astern in shallow water.

133 1644 Ref: Shiphandling, Shallow Water
When a wedge of water builds up between the head of the barge and the bank it is referred to as__________.
A. bank cushion
B. bank suction
C. bow wave
D. veering cushion

134 1693 Ref: Shiphandling, Shallow Water
When hugging a bank in a narrow channel, you should take precautions against__________.
A. bank suction, squat and the effects of vessels passing close aboard
B. clogged sea chests, plugged sea strainers and overheated machinery
C. striking underwater obstructions close to the bank
D. All of the above
135  1728  Ref: Shiphandling, Shallow Water  A
When piloting a vessel, how are visual references used to establish a constant rate of turn?
A. Fixed objects that stay on the same relative bearing when the ship is turning indicate a constant rate of turn.
B. Visual references cannot be used to maintain a constant rate of turn.
C. Begin the turn when the fixed object is on the beam.
D. Keep the fixed object's relative bearing opening, for a constant rate of turn.

136  1748  Ref: Shiphandling, Shallow Water  B
When steaming through an anchorage, a shipmaster should __________.
A. avoid crossing close astern of the anchored ships
B. avoid crossing close ahead of the anchored ships
C. keep the ship moving at a good speed to reduce set
D. transit only on a flood tide

137  1783  Ref: Shiphandling, Shallow Water  C
When turning a vessel in shallow water, which statement is TRUE?
A. The rate of turn is increased.
B. The rate of turn is decreased.
C. The turning diameter increases.
D. The turning diameter remains the same.

138  1796  Ref: Shiphandling, Shallow Water  A
When you enter shallow water, you would expect your rudder response to __________.
A. be sluggish and your speed to decrease
B. be sluggish and your speed to increase
C. improve and your speed to decrease
D. improve and your speed to increase

139  1834  Ref: Shiphandling, Shallow Water  B
Which effect does speed through the water have on a vessel which is underway in shallow water?
A. A decrease in the speed results in a decrease in steering response and maneuverability.
B. An increase in speed results in the stern sucking down lower than the bow.
C. An increase in speed results in the vessel rising on an even plane.
D. A decrease in speed results in the vessel sucking down on an even plane.

140  1991  Ref: Shiphandling, Shallow Water  A
Which shallow water effect will increase dramatically if you increase your ship's speed past its "critical speed"?
A. Squatting
B. Smelling the bottom
C. Sinkage
D. Bank cushion

141  2141  Ref: Shiphandling, Shallow Water  C
Which most likely occur when entering shallow water?
A. Rudder action will become more effective.
B. The vessel's list will change.
C. The vessel's trim will change.
D. An increase in speed will occur.

142  2289  Ref: Shiphandling, Shallow Water  A
You are making a sharp turn in a channel and using a buoy four points on the bow to gauge your rate of turn. If you observe the buoy moving aft relative to you, what should you do?
A. Increase the rate of turn
B. Decrease the rate of turn
C. Maintain a constant rate of turn
D. Decrease speed

143  2290  Ref: Shiphandling, Shallow Water  B
You are making a sharp turn in a channel and using a buoy four points on the bow to gauge your rate of turn. If you observe the buoy moving forward relative to you, what should you do?
A. Increase the rate of turn
B. Decrease the rate of turn
C. Maintain a constant rate of turn
D. Increase speed
You are on a single-screw vessel with a right-handed propeller, and you are making headway. When you enter shallow water, __________.
A. you will have better rudder response
B. your speed will increase without a change in your throttle
C. your rudder response will become sluggish
D. your vessel will tend to ride higher

You are proceeding along the right bank of a narrow channel aboard a right-handed single-screw vessel. The vessel starts to sheer due to bank suction/cushion effect. You should __________.
A. stop engines and put the rudder left full
B. back full with rudder amidships
C. decrease speed and put the rudder right full
D. increase speed and put the rudder right full

You are proceeding at a slow speed with your starboard side near the right bank of a channel. If your vessel suddenly sheers toward the opposite bank, the best maneuver would be __________.
A. full ahead, hard left rudder
B. full ahead, hard right rudder
C. full astern, hard left rudder
D. full astern, hard right rudder

You intend to overtake a vessel in a narrow channel. As you approach the other vessel's stern __________.
A. you will gain speed
B. both vessels will gain speed
C. the vessels will drift together
D. the vessels will drift apart

You notice that your speed has decreased, the stern of your vessel has settled into the water, and your rudder is sluggish in responding. The MOST likely cause is __________.
A. mechanical problems with the steering gear
B. shallow water
C. loss of lubricating oil in the engine
D. current

Your ship is in shallow water and the bow rides up on its bow wave while the stern sinks into a depression of its transverse wave system. What is this called?
A. Broaching
B. Fish tailing
C. Squatting
D. Parallel sinkage

Your vessel is proceeding along a narrow channel. The effect called bank cushion has which effect on the vessel?
A. Forces the bow away from the bank
B. Forces the stern away from the bank
C. Forces the entire vessel bodily away from the bank
D. Decreases the draft at the bow

A single-screw vessel going ahead tends to turn more rapidly to port because of propeller __________.
A. discharge current
B. suction current
C. sidewise force
D. thrust
Sidewise force of the propeller tends to throw a vessel's stern to the right or left, depending on rotation. This force is caused by _________.
A. back current from the rudder
B. greater pressure on the right or left side of the propeller, depending on rotation
C. lower pressure on the right or left side of the propeller, depending on rotation
D. torque from the velocity and angle at which the surrounding water impinges upon the propeller blades

The force exerted by a propeller which tends to throw the stern right or left is called _________.
A. slip
B. sidewise force
C. rotational force
D. thrust

A stream of water immediately surrounding a moving vessel's hull, flowing in the same direction as the vessel is known as _________.
A. directional current
B. forward current
C. propeller current
D. wake current

As a ship moves through the water, it causes a wake, which is also moving forward relative to the sea. In addition to a fore and aft motion, this wake also has a(n) _________.
A. downward and inward flow
B. downward and outward flow
C. upward and inward flow
D. upward and outward flow

As a ship moves through the water, it drags with it a body of water called the wake. The ratio of the wake speed to the ship's speed is called _________.
A. propeller velocity
B. speed of advance
C. wake distribution
D. wake fraction

Which statement is TRUE concerning the vessel's slipstream?
A. It has no effect on the steering of the vessel.
B. It has no effect on the rudder when the helm is amidships.
C. Its velocity is the same as that of the wake.
D. The propeller gives it a helical motion.

Your vessel must moor port side to a berth limited by vessels ahead and astern using a single tug. You are stemming a slight current and there is a light breeze off the dock. Your tug should be made up to the vessel's _________.
A. stern on a hawser
B. quarter
C. waist
D. bow