

Manoeuvre and vessel handling questions

Question 1 (1 Mark)

If a displacement vessel is trimmed by the stern it will:

- a. steer well.
- b. be difficult to turn.
- c. not develop maximum power.
- d. steer poorly.

Question 2 (1 Mark)

In order to make a three-point turn (i.e. to turn short around) with a right-handed single screw, a vessel should start the turn by going:

- a. slow astern on the engine with the rudder over to port.
- b. slow ahead on the engine with the rudder over to port.
- c. full astern on the engine with the rudder over to starboard.
- d. full ahead on the engine with the rudder over starboard

Question 3 (1 Mark)

To turn a vessel with a right handed propeller short-round, by using engines on ahead and astern propulsion along with the rudder movements, the preferred way to start the turn is to go:

- a. astern with the rudder hard over to port.
- b. astern with the rudder hard over to starboard.
- c. ahead with the rudder hard over to port.
- d. ahead with the rudder hard over to starboard.

Question 4 (1 Mark)

In a narrow channel, a vessel with a right hand propeller wishing to turn short round through 180 degrees by using her engines on ahead and astern propulsion along with the rudder movement, should start the turn:

- a. on the starboard side of the channel.
- b. by putting the rudder hard over to port.
- c. from the centre of the channel.
- d. on the port side of the channel.

Question 5 (1 Mark)

To make the stern swing to port when you are berthing alongside a jetty you:

- a. turn the wheel to port and go astern on the engine.
- b. turn the wheel to midships and go ahead on the engine.
- c. turn the wheel to starboard and go ahead on the engine.
- d. turn the wheel to port and go ahead on the engine.

Question 6 (1 Mark)

The greatest transverse thrust is produced by:

- a. a large, slow revving propeller.
- b. a small, fast revving propeller.
- c. a large, fast revving propeller.
- d. a small, slow revving propeller.

Question 8 (1 Mark)

Shallow water effect will cause a barge shaped vessel to:

- a. move bodily to port.
- b. move bodily to starboard.
- c. squat by the stern.
- d. squat by the head.

Question 9 (1 Mark)

List precautions to be taken and explain actions to counter the effects of external conditions on manoeuvring a vessel including:

- tidal streams, confined waters, poor visibility
- heavy weather including strong winds, high sea state, heavy swell and surf.
- proximity to other vessels that are berthed, at anchor, underway but stopped, or underway and making way for particularly large vessels.
- crossing a river entrance bar

Question 10 (1 Mark)

Interaction between vessels can be reduced by:

- a. decreasing clearance between vessels.
- b. decreasing the draught of both vessels.
- c. increasing clearance between vessels.
- d. increasing the draught of both vessels.

Question 11 (1 Mark)

Interaction between vessels can be reduced by:

- a. decreasing draught.
- b. increasing draught.
- c. increasing speed.
- d. decreasing speed.

Question12 (1 Mark)

In heavy weather, the best course to steer is:

- a. beam to sea.
- b. head to sea.
- c. 10-20 degrees off the sea..
- d. stern to sea.

Question 13 (1 Mark)

In a current, it is easiest to berth a single screw vessel safely when:

- a. it has the current astern.
- b. it is stemming the current.
- c. the current is setting off the berth.
- d. the current is setting onto the berth.

Question 14 (1 Mark)

The safest method of heaving to is to:

- a. Hold course with sea right astern.
- b. Hold course with sea on the bow.
- c. Hold course with sea on the quarter.
- d. Stop engine, secure all openings and drift.

Question 15 (2 Marks)

You are master of a vessel that is heading into a heavy sea. Explain how you would best turn the vessel round to run with the sea.

Question 16 (2 Marks)

Briefly explain why it is dangerous to run before a heavy sea.

Question 17 (2 Marks)

Explain why a coastal bar entrance should be navigated with caution.

Question 18 (2 Marks)

Taking a vessel across a river bar can be a hazardous operation under the wrong conditions. Describe:

a) What precautions you would take before undertaking the crossing

b) Best conditions for crossing the bar.

Question 19 (1 Mark)

After strong easterly or southeasterly winds, it is generally safest to enter a NSW bar port:

- a. at spring tides.
- b. on the ebb tide.
- c. at neap tides.
- d. on the flood tide.

Question 20 (1 Mark)

Manoeuvre a vessel to let go and weigh anchor demonstrating:

- briefing requirements for crew
- preparations for letting go
- manoeuvring to let go and lay out cable
- an ability to assess when a vessel has its cable or the anchor is holding

- an ability to recognise when an anchor is dragging
- manoeuvres to shorten in cable and weigh anchor
- procedures for securing the anchor for sea
- a knowledge of the different types of anchors and their use
- a knowledge of the factors to be considered in choosing an anchorage

Question 21 (1 Mark)

Manoeuvre a vessel to berth and cast off from alongside a wharf demonstrating:

- briefing requirements for crew
- safety requirements onboard
- correct manoeuvring actions for the prevailing conditions of wind and tide

Question 22 (1 Mark)

With the wind dead ahead and tied up to a wharf, what action would you take to get out safely?

- a. place fenders forward, let go forward and swing the bow out.
- b. put a stern spring on the vessel and let go the stern line.
- c. put double springs on the vessel and let go aft.
- d. place fenders aft, let go forward and swing the bow out.

Question 23 (2 Marks)

You return to port with engine gearbox problems. You cannot select astern power, and are limited to using only ahead power. There is a strong wind blowing parallel to the berth, and you decide to berth the vessel heading into the wind. With the aid of a simple sketch, briefly describe how you would berth your vessel in this situation, without being able to select astern power.

Question 24 (1 Mark)

Assume that your vessel has an inboard engine with a single right handed propeller, that there is no wind or current, and you are berthed port side to a jetty. If you decide to leave the berth by springing the stern off the berth, then the appropriate action to take is to let go all lines except the:

- a. after spring and go astern on the engine.
- b. after spring and go ahead on the engine.
- c. forward spring and go ahead on the engine.
- d. forward spring and go astern on the engine.

Question 25 (1 Mark)

Assume that your vessel has an inboard engine with a single right handed propeller, that there is no wind or current, and you are berthed port side to a jetty. If you decide to leave the berth by springing the stern off the berth, then the appropriate action to take is to let go all lines except the:

- a. forward spring and go astern on the engine.
- b. after spring and go astern on the engine.
- c. forward spring and go ahead on the engine.
- d. after spring and go ahead on the engine.

Question 26 (2 Marks)

With the aid of a simple sketch, describe how you would depart from a berth in a river to go to sea. The berth is parallel to the river bank, the tide is ebbing, there is a strong wind blowing downstream. You are heading downstream, and berthed port side to between two large fishing trawlers.

Question 27 (1 Mark)

A single screw vessel is along side starboard side to. The best way for her to unberth in a strong wind from astern is to start with the following manoeuvre:

- a. stern line on, slow ahead, hard starboard.
- b. aft spring on, slow ahead, hard port.
- c. forward spring on, slow ahead, hard port.
- d. head line on, slow astern, hard starboard.

Question 28 (1 Mark)

Manoeuvre a vessel to come to and slip from a buoy or pick up a mooring demonstrating:

- briefing requirements for crew
- safety requirements onboard
- correct manoeuvring actions for the prevailing conditions of wind and tide

Question 29 (1 Mark)

By comparison to being moored to a buoy, a vessel that is at anchor has:

- a. a much larger swinging circle.
- b. a much smaller swinging circle.
- c. to check on her position more frequently.
- d. to be less concerned about the holding ground.

Question 30 (1 Mark)

Manoeuvre a vessel to take another small vessel in tow demonstrating

- briefing requirements for own crew and master of the other vessel
- safety requirements and preparations towing vessel and vessel being towed
- correct manoeuvring actions for the prevailing conditions and types of vessels to approach the other vessel, pass and take up the tow and subsequently release the tow

Question 31 (1 Mark)

You are off the coast, and about to take a small vessel in tow. You should:

- a. always increase speed quickly after connecting up.
- b. take the strain as soon as possible after connecting up.
- c. always increase speed slowly after connecting up.
- d. let the other vessel fall downwind after connecting up.

Question 32(1 Mark)

When towing in heavy weather, the towline should be:

- a. as long as practicable.
- b. weighted to provide elasticity.
- c. as short as practicable.
- d. doubled up to provide elasticity.

Question 33 (1 Mark)

To avoid excessive chafing in a tow line, you should:

- a. periodically "freshen the nip".
- b. regularly vary the towing speed.
- c. only use synthetic rope.
- d. only tow from the stern.

Question 34 (1 Mark)

You have been asked to provide a tow to another vessel that is in distress. By law, the only time you can refuse to give such assistance is if:

- a. it places your vessel or crew in danger.
- b. you have other commitments.
- c. it may delay your own vessel.
- d. the other party will not pay enough.

Question 35 (2 Marks)

With the aid of a simple sketch, briefly describe the execution of a “Williamson” turn that is used in recovering a person who has fallen overboard.

Question 36 (1 Mark)

Describe the principles of stability and trim in a small vessel and the disposition of passengers and cargo required to maintain stability and trim within safe limits

Question 37 (1 Mark)

A tender ship is caused by:

- a. the centre of gravity being too high.
- b. the centre of gravity being too low.
- c. the centre of buoyancy being too high.
- d. the centre of buoyancy being too low.

Question 38 (1 Mark)

To remedy the problems associated with a tender ship it is necessary to:

- a. Lower weights within the vessel.
- b. Raise weights within the vessel.
- c. Discharge bottom weights in the vessel.
- d. Load weights high up in the vessel.

Question 39 (2 Marks)

Whilst at sea, what checks can you make to ensure that your vessel maintains its stability?

Question 40 (1 Mark)

Free surface effect of liquids in a vessel's tanks, causes:

- a. the centre of buoyancy to move up.
- b. A increase in the vessel's stability
- c. a reduction in the vessel's stability.
- d. the centre of buoyancy to move down.

Question 41 (2 Marks)

Explain briefly why it is dangerous to allow too many passengers on the upper deck or flying bridge of a vessel.

Question 42 (2 Marks)

Outline the action you would take if you discovered that your vessel had developed a major leak in the engine room whilst passengers were embarked.

Question 43 (1 Mark)

To remedy the problems associated with a stiff ship it is necessary to:

- a. Lower weights within the vessel.
- b. Raise weights within the vessel.
- c. Load weights low down in the vessel.
- d. Discharge any weights on deck

Question 44 (2 Marks)

Describe the term “unstable” with regard to a small vessel’s stability.

Question 45 (2 Marks)

Outline the action you would take if you collided with another vessel.

Question 46 (1 Mark) Describe the coxswain's obligation towards passengers and crew

Question 47 (1 Mark)

A signal of seven short blasts and one long blast is heard, you would

- a. prepare to launch the liferafts.
- b. don your lifejacket and prepare to abandon ship
- c. run to the bridge to assist the master.
- d. report to your emergency station.

Question 48 (2 Marks)

Assume that you are master of a single screw vessel that is 7 miles offshore, and you have just finished clearing a fouled propeller. State the actions you would now take, and the precautions you would observe.

Question 49 (2 Marks)

You are master of an 11.5 metre dive charter vessel and lose a passenger over the port side whilst proceeding at 18 knots. List the actions you would take to recover this person from the water. The victim appears to be unconscious in the water.

Question 50 (2 Marks)

Assume that your vessel has been in collision, and is taking water through a hole near the waterline midships. State what action you could take to minimise the entry of water into the hull.

Question 51 (2 Marks)

Assume that you are master of a twin screw vessel that is 3 miles offshore and has lost its rudder. Briefly describe how you could control the direction of the vessel.

Question 52 (1 Mark)

A crew member falls overboard, so you drop a lifebuoy and alter course toward the person. What is your next action?

- a. Turn on the deck lights so you can see what you are doing.
- b. Go forward to get a heaving line ready for pick up.
- c. Keep your eyes on the person and shout for the crew to come and help.
- d. Go below and call the rest of the crew to come and help.

Question 53 (2 Marks)

Whilst at sea, your fishing charter vessel with 10 passengers onboard, suffers a severe LP gas leak below due to a fractured connection. As master, list four actions you would take immediately in order to ensure the safety of passengers and crew.

Question 54 (1 Mark)

If a collision is unavoidable, you should:

- a. drop both anchors immediately.
- b. reduce damage to sensitive areas of the hull.
- c. attempt to hit the other vessel at right angles.
- d. sound your whistle continuously.

Question 55 (2 Marks)

Assume that your vessel has been in collision, and is taking water through a hole near the waterline midships. State what action you could take to minimise the entry of water into the hull

Question 56 (2 Marks)

After a day out with a fishing party, you are returning to port at 17 knots with your fuel tanks one quarter full and a 1.5 metre swell on the starboard bow. An object is sighted in the water, and when several of the fishing party quickly move up to the flying bridge for a better view the vessel suddenly heels over to port. Describe the likely cause for the sudden heel, and state what your immediate actions would be.

Question 57 (2 Marks)

Assume that your vessel has been in collision, and is taking water through a hole near the waterline midships. State what action you could take to minimise the entry of water into the hull.

Question 58 (2 Marks)

Assume that you are the master of a vessel that been in collision and has pierced the hull of another vessel. State what immediate action you would take.

Question 59 (2 Marks)

As master of a vessel, what are your primary responsibilities in the event of a collision?

Question 60 (2 Marks)

You are manoeuvring at night in a port area where there are a number of large vessels at anchor. What visual indications would there be if one of these vessels weighed anchor.

Question 61 (1 Mark)

Make appropriate sound signals and interpret sound signals made by vessels in sight of one another and in poor visibility to determine the correct action in accordance with the regulations

Question 62 (4 Marks)

List the actions you would take as master of a vessel that is returning to harbour in reduced visibility.

Question 63 (1 Mark) Describe distress signals listed in the International regulations for Preventing Collision at Sea

Question 64 (1 Mark)

The fire emergency signal is:

- a. 1 short and 1 long blast sounded at least 3 times.
- b. a continuous ringing of the alarm bell.
- c. at least 5 short blasts followed by 1 long blast.
- d. at least 7 short blasts followed by 1 long blast.

Question 65 (1 Mark)

Explain the factors to be considered and precautions to be taken when operating in the vicinity of large ships that may have extensive visibility shadow distances and limitations on their ability to manoeuvre

Question 66 (1 Mark)

Interpret and apply any state or local regulations affecting the

operation of small craft.

Question 67 (1 Mark)

Apply the IALA Buoyage System A to the safe navigation of the vessel.

Question 68 (1 Mark)

What shape identifies a starboard channel mark?

- a. A spar.
- b. A can.
- c. A cone.
- d. A pillar.

Question 69 (1 Mark)

What are the characteristics of an ISOPHASE light?

- a. It has special red and green danger sectors.
- b. The periods of darkness are equal to the periods of light.
- c. It is a very quick interrupted flashing white light.
- d. The periods of darkness are longer than the periods of light

Question 70 (1 Mark)

What sort of navigation mark shows a green flashing light?

- a. A starboard hand channel mark.
- b. A safe water mark.
- c. An isolated danger mark.
- d. A port hand channel mark

Question 71 (1 Mark)

What sort of navigation mark shows a red flashing light?

- a. A safe water mark.
- b. A port hand channel mark.
- c. A starboard hand channel mark.
- d. An isolated danger mark.

Question 72 (1 Mark)

Entering port you see a mark that is coloured green with a red horizontal band. This is a:

- a. preferred channel to starboard mark.

- b. preferred outward channel mark.
- c. preferred channel to port mark.
- d. preferred inward channel mark.

Question 73 (1 Mark)

What top mark identifies a west cardinal mark?

- a. Two cones, points together.
- b. Two black balls.
- c. One red cylinder.
- d. Two cones, points outwards.

Question 74(1 Mark)

What top mark identifies a north cardinal mark?

- a. A yellow cross.
- b. Two cones, points up.
- c. Two black balls.
- d. Two cones, points down.

Question 75 (1 Mark)

A yellow buoy with a yellow cross top mark indicates:

- a. there is a diver operating below.
- b. safe water all round.
- c. a special mark requiring further information.
- d. a submarine mooring area.

Question 76 (1 Mark)

Navigating in an unfamiliar harbour you see a buoy coloured black over yellow over black. What is it?

- a. An east cardinal mark.
- b. A special mark.
- c. A west cardinal mark.
- d. A preferred channel mark

Question 77 (1 Mark)

Navigating in an unfamiliar harbour you see a buoy coloured yellow over black over yellow. Which side would you pass?

- a. To the south.
- b. To the east.
- c. To the west.

- d. To the north.

Question 78 (1 Mark)

Navigating in an unfamiliar harbour you see a buoy coloured black over yellow over black. What is it?

- a. A west cardinal mark.
- b. An east cardinal mark.
- c. A preferred channel mark.
- d. A special mark.

Question 79 (1 Mark)

Navigating in an unfamiliar harbour you see a buoy coloured black over yellow over black. Which side would you pass?

- a. To the north.
- b. To the south.
- c. To the east.
- d. To the west.

Question 80 (1 Mark)

Navigating marks are sometimes badly weathered and cannot be identified by their colours. How else can they be identified?

- a. By reference to the Mariner's Handbook.
- b. By their topmarks.
- c. By asking port control.
- d. By their location.

Question 81 (1 Mark)

You are entering a port and steering on a pair of leading lights. If you observe that the rear leading light is to left of the front leading light you should:

- a. alter course to port.
- b. check the transit bearing.
- c. maintain your present course.
- d. alter course to starboard.

Question 82 (1 Mark)

Navigating in a river, you see a pillar coloured black over red over black. On which side of the pillar must you pass?

- a. On the port hand by a safe margin.
- b. As close as possible on the starboard hand.
- c. On either side of it by a safe margin.
- d. As close as possible on either side of it.

Question 83 (4 Marks)

Draw a buoyage chartlet representing the approaches to a port, marked by navigation beacons or buoys. Draw in the most likely track which would be followed by a commercial vessel when proceeding into the port from Point "A" to Point "B" using all buoys of the IALA A system. Also, identify and name the navigation marks on the chartlet.