Nautical knowledge questions

Marine Legislation

Question 1.
The master of a ship involved in a collision with another ship must:
a) render assistance to the other ship if possible
b) transmit a radio warning to other ships
c) take the other vessel in tow
Answer:
a) National Law

Question: 2.
A marine incident must be reported:
a) within 48 hours
b) at the earliest opportunity
c) on entering a port
Answer:
b) National Law

Question 3.
The period of validity of a Master Class 5 Certificate is:
a) 3 years
b) no limit
c) 5 years
Answer:
c) NSCV

Question 4.
One of your deckhands paints over the load line with hull paint. What are the implications and what action should you take?
Answer:
National Law Offence punishable by fine for person and/or corporate body.

Question 5.
Small craft can participate in AUSREP provided they:
a) are less than 24 metres LOA, submit a small craft particulars form, and carry suitable radio equipment
b) carry suitable radio equipment, is a commercial vessel and submit a small craft particulars form
c) are proceeding on a voyage in excess of 200 NM, submit a small craft particulars form and carry suitable radio equipment
Answer:
c) N to M No 4B paragraph 3

Question 6.
An MASTREP Final Report must be sent:
a) immediately on arrival
b) no later than 1 hour after arrival
c) no later than 2 hours after arrival
Answer:
c) AMSA

Question 7.
In what circumstances should automatic steering NOT be engaged?
Answer:
Areas of high traffic density. Restricted visibility other hazardous navigation situations. USL Section 15 paragraph 14.

Question 8.
MARPOL 73/78 contains five annexes. Three of them are Oil, Noxious Liquids, and Harmful Substance in Packaged Form. The other two are:
a) Sewage and Plastics
b) Garbage and Sewage
c) Garbage and Radioactive Waste
Answer.
b)

Question 9.
What documents relating to operational safety matters must be kept on board vessels over 6 metres LOA?
Answer.
Stability Documents (Marine Safety Regulations Paragraph 88). Various Manuals and Safety Management Plan (Marine Safety Regulations Paragraph

Question 10.
What obligation has the Master of a ship in his response to a distress signal?
Answer.
Legal obligation to assist, Fine or jail for failing. National Law

Question 11.
What restrictions must be observed in the dumping at sea of:
a) Food waste
b) Items contained in plastic bags
Answer.
a) 12 miles (3 if ground to less than 25mm diameter)
b) None to be dumped (N to M No 32)

Question 12 .
By definition, a ship is seaworthy if its hull, machinery and equipment are in a fit state to encounter the ordinary perils of voyages undertaken. What is the remaining condition to be met in order for a ship to be seaworthy?
Answer.
Not overloaded. National Law

Meteorology

Question 1.
a) In which direction do winds travel around a high pressure system in the southern hemisphere?
b) Use a diagram to explain what is a 'pressure gradient' in a pressure system?
Answer.
a) anti-clock
b) Rate of change of barometric pressure. At right-angles to direction of isobars, expressed in hPc/mile.

Question 2.
Explain the daily phenomenon of a sea breeze (ANABATIC BREEZE)
Answer.

Question 3.
a) If there is a high pressure system of 1035 Hectopascals in the Great Australian Bight, what direction and strength of winds would you expect on the North Queensland Coast?
b) What else might you expect with a ridge forming on the North Queensland Coast?
Answer.
a) North (Charts. No ref in text books)
b) See Meteorology for Text book

Question 4.
Explain the difference between a rapidly falling barometer versus a slowly falling barometer at the approach of a cold front?
Answer.

Question 5
What sort of weather might you expect with:
a) rising air in a low pressure system
b) descending air in a high pressure system
Answer.
a) Approaching cold front. Barometer falling, wind freshening and increasing rain. Onset of rough seas.
b) Settled weather, clear visibility and light winds. Calm seas.

Question 6.
List three ways by which you might gain weather information.
Answer.
a) Weather forecasts from Coast Radio Stations
b) Weatherfax transmissions
c) Local observations of barometer, thermometer, humidity, wind and sea, cloud state.

Question 7.
How would a strong sea breeze affect the SE Trade Winds on the Queensland Coast?
Answer.
It would accelerate windspeed and cause backing towards the East.
Question 9.List the signs of a T.R.S. in your area.

Answer.
Cirrus Cloud, Swell, Barometer, Significant Wind Shift, Lurid sunrise/sunset. Clear atmosphere day before, High Humidity. 57-001

Instruments

Question 1.
Name the controls you would expect to find on an auto pilot to keep your vessel on course and describe briefly the function of each one.
Answer.
Rudder, Weather, Permanent helm & Course selector

Question 2.
Under what conditions would you NOT engage the auto pilot?
Answer.
In fog, in heavy traffic, close to navigational hazards (in heavy following seas)

Question 3.
What is the difference between the GAIN and SENSITIVITY controls on and echo sounder?
Answer.

Gain adjusts amplification of the received pulse.
Sensitivity adjusts the transmitter power.

Question 4.
List two causes of 'multiple echoes' on an echo sounder display and explain how they could be removed.
Answer.
Double-echo response from a hard (rocky) bottom in shallow water. Reduce gain.
Temp or salinity layering

Question 5:
how would you determine the location of a fire when you first hear the fire alarm sound? What actions would you take?
Answer.
Zone indicator in the Alarm Panel

Question 6.
What is meant by the following terms in relation to GPS?
a) Selective Availability
b) Geometric Dilution of Precision
Answer.
a) USN deliberately degrading accuracy
b) Poor fix quality due to low altitude satellites dispersed at poor "angles of cut"

Question 7.
Why is it necessary t continue to plot your position on an appropriate chart when using GPS?
Answer.
GPS does not indicate proximity to navigational dangers

Question 8.
Briefly explain how the following types of logs operate and what they measure:
a) Impellor Type
b) Doppler Type
Answer.
a) Impellor - speed through the water
b) Doppler (bottom locked) speed over ground
Doppler (sea layer locked) speed through the water

Vessel Handling

Question 1.
You require to come alongside a jetty that lies North/South. There is a current of 2 knots from the south and a 25 knot SW wind. Your vessel is 20m single screw aluminium mono hull and you have two crew. Describe fully how you would accomplish the manoeuvre and the reasons for your actions.
Answer.
Approach about SSW heading, 1 crew starboard bow with fender and spring line, 1 crew jump ashore to take line. Keep the power on until late, fender over, ford spring ashore. Keep coming slow and against spring, wheel hard to port to swing stern in.

Question 2.
You are the Master of a 17m vessel and wish to overtake a large tanker in the channel going out of Cairns. Outline the steps you will take and discuss the dangers that such a manoeuvre presents
Answer.
Give appropriate sound signal. Check for inbound traffic. Watch for interaction, i.e. keep as far away as possible from the tanker.

Question 3.
You wish to anchor behind Sudbury Cay at dusk with a 15 knot SE wind blowing. Fully describe how you would go about the task including preparation, anchoring and further ongoing considerations.
Answer.
Take lashings and stopper off anchor.
Windlass out of gear (walk back out of fairlead/pipe if required).
Approach form the North, checking soundings.
Buoy the anchor. Let go to 4x depth and anchor light on, navigation lights off.
Wind likely to drop after dark, check how current will run and allow.
Check for dragging (visual, GPS)

Question 4.
Describe how you would handle your vessel in heavy weather with a following sea.
Answer.
If able to progress downwind adjust speed to below that of the seas.
Batten down
If danger of broaching, heave-to
Consider use of sea-anchor and disengaging auto-pilot

Question 5.
List the items that would receive your attention in preparing your vessel for heavy seas if your were caught 80 miles offshore.
Answer.
Batten down hatches, W/T doors and ports.
Secure loose gear. Check cargo for secure stowage.
Rig lifelines on deck.
Secure the galley.
Secure the anchor.
Reduce free-surface in tanks, pump out bilges and leave pump ready for more bilge-pumping.
Set course for sheltered water.

Watchkeeping

Question 1.
You are overtaking a large bulk carrier at night from almost right astern. What lights would you see?
Answer.
Sternlight and possibly decklights.

Question 2.
At night in clear visibility, you sight ahead the two masthead lights of a large vessel. The port and starboard lights are still below the horizon but the lower white light is to the right of the upper one. What is the approximate course of the other vessel relative to your position?
Answer.
Vessel crossing port to starboard.

Question 3.
Your vessel is 60 metres in length and you are towing another vessel, the overall length of the tow being about 250 metres.
a) What lights would be seen by a vessel overtaking the tow from astern?
b) You are finding the tow difficult to manage. How would you indicate to other vessels approaching you in daylight that you are unable to deviate from your course, and how would they know your tow was over 200 metres in length?
Answer.
a) O W
O W

O W
Ø Y
O W
b) Exhibit ball-diamond-ball
Exhibit diamond. V/L towed exhibits diamond

Question 4.
Proceeding up harbour you see a small vessel anchored in the fairway with code flag A.
a) What does it indicate and what should you do about it?
b) What would the same vessel show if she continued her present operation after dark?
Answer.
a) Vessel operating with diver (s) down. Keep clear.
b) Red-white-red and anchor light. Rule 27 (e) and (g)

Question 5.
You sight a vessel displaying her fore and aft anchor lights and two vertical red lights in the rigging. A vessel at anchor can hardly claim to be 'not under command'. What is she indicating?
Answer.
Aground

Question 6.
On leaving Fremantle harbour in daylight you decide to pass under the bows of one of the ships lying out in Gage Roads. How could you confirm if she was at anchor and not, in fact, moving slowly ahead to enter harbour?
Answer.
If at anchor she would show anchor ball.

Question 7.
You find yourself overtaking two vessels ahead of you at night. The nearer on has a single white stern light. The farthest one has a yellow light above his stern light. What does this indicate to you and what special precaution should you take?
Answer.
Approaching a vessel towing. Keep well clear.

Question 8.
Your course is north. Another vessel's green light sighted on a bearing of 340o range about 6 miles. Five minutes later the bearing is 350o and the range is 5 miles. Is there a risk of collision? What is the relative movement of the other vessel to your own?
Answer.
No collision risk as bearing is changing reasonably quickly. She is crossing port to starboard and should clear to the starboard bow at 4 miles range in another 5 minutes.

Question 9.
You are a vessel under power on course 005o and sight another vessel ahead, proceeding almost directly towards you on mile distant.
a) Who has the right of way?
b) What action would you take and would you expect the other vessel to take any action?
c) If this occurred at night, how would the other vessel's lights appear to you? (She is a large steamer 150 metres in length)
d) How could you tell at night, that the appropriate avoiding action had been taken?
Answer.
a) Both are give-way
b) Both alter to starboard
c) O W, O W, GO, OR
d) Green would shut out, and masthead lights would open to port.

Question 10.
The following sound signals are all for use in clear visibility. Give their meanings.
a) Five or more short blasts
b) Three short blasts
c) Two long and two short blasts
d) One prolonged blast
e) One short blast
f) Long-short-long-short
g) Two short blasts
h) Two long and one short blast
Answer.
a) Uncertainty about another vessel's intentions
b) Vessel going astern
c) Vessel intending to overtake on another's port side
d) Signal from a vessel nearing a "blind" bend
e) Signal from a vessel altering to starboard
f) Signal from a vessel agreeing to be overtaken
g) Altering to Port
h) Intending to overtake on a vessel's starboard side

Question 11.
Your course 090o, ship on bearing 045o on apparent collision course.
a) Who gives way?
b) What course alteration would the give way vessel make?
c) What action should you take?
Answer.
a) Other
b) Alter to starboard
c) First, 5 shorts, then if necessary alter to starboard, or stop.

Question 12.
Another vessel is overtaking you from astern and passes you safely on your starboard side. At what point of the manoeuvre do you become the give way vessel?
Answer.
Other vessel deeps responsibility to keep clear.

Question 13.
Give the sound signals made by the following vessels in fog.
a) Vessel underway but not u
b) A dredge at anchor and working in the fairway
c) A tug towing a large vessel astern
d) A passenger liner underway but stopped in the water
e) A diving vessel with divers working below
f) A 40 metre coaster at anchor
g) A coaster proceeding at slow speed
h) A 200 metre bulk carrier aground
Answer.
a) Long-short-short every 2 minutes
b) Long-short-short every 2 minutes
c) Long-short-short every 2 minutes
d) Two longs every 2 minutes
e) Long-short-short every 2 minutes
f) Rapid ringing of the bell for 5 seconds every minute
g) One long every 2 minutes
h) Bell for 5 seconds every minute followed by gong aft (same intervals) preceded and followed by 3 separate and distinct strokes of bell

Question 14.
Why would it be illegal to use a continuous sounding of your siren to attract the attention of another vessel you wished to communicate with?
Answer.
Because it is a distress signal.

Question 15.
In thick fog, steering 270o, you hear the fog siren of a vessel approximately 300o. What action would you take?
Answer.
Reduce speed to minimum and navigate with extreme caution until clear. Rule 19c.

Question 16.
Show the course alteration a vessel may take under the following conditions. State the type of marker and use a rough sketch to illustrate your answers.
a) Course 300o in the approaches to a harbour you observe a white light Gp. QF1. (3) 10s bearing 15 degrees on your port bow
b) At sea, course 135o, a spar buoy with horizontal red and black stripes appears right ahead.
c) Steaming down river, a red can buoy is observed 5 degrees on our starboard bow.
Answer.
a) East cardinal. Continue.
b) Isolated danger, alter to keep clear on either side.
c) Port hard channel mark. Continue to pass at a safe distance clearing the buoy to starboard.

Question 17.
Identify the following markers of the IALA system and indicate what action you should take when approaching them from seaward.
a) Qk. F1 (9) 15s
b) F1.R
c) Iso G 6s
d) F1. Y4s
e) Gp. F1 (2) 6s
f) LF1. 10s
g) Q
h) F1.G5s

Practical Seamanship

Question 1.
Use diagrams to help explain the items below. What are the advantages of each of these moors?
a) an open moor
b) a standing moor
c) a running moor
d) a Baltic moor
e) a Mediterranean moor
Answer.
a) Lying to a single anchor. Large swinging area used for changes of wind/tide.
b) Steam past anchor position. Drop first anchor and fall back on slack cable. Drop second anchor. Then heave on first, slack on second, to midway point. Reduces swing room.
c) Drop first anchor while steaming slow and slack away. pass the anchor position, then drop second anchor. Heave on first, slack second until midway between them. Reduces swing area and allows for more precise positioning.

d) A mooring rope is led from the stern and lashed to the (single) anchor cable about 1/2 ship-length from the hawse. If rope is heaved, ship lies across the wind. Providing a lee on one side. Moderate weather only and has to be altered if wind/tide changes.
e) Stern-on to a berth, with sternlines out and lying to one or both anchor. Big reduction on amount of wharf used-good for working with barges (use both sides).

Question 2.
List the checks you would carry out when checking a hatch for watertight integrity.
Answer.
a) Check gasket condition
b) Secure cleats/dogs evenly
c) Look upwards from inside the space for signs of daylight
d) Carry out hose-test and check for leaks

Question 3.
Describe with the use of diagrams two types of anchors and discuss their advantages and disadvantages.
Answer.
Admiralty - Good holding but hard to stow, requires dismantling or folding to stow.
Danforth/CQR - Efficient for small craft and easy to stow.
Stockless - Efficient for large vessels, used with chain cable. Easily stowed in hawse recesses.

Question 4.
List the checks you would carry out prior to entering a river bar in heavy weather.
Answer.
Checks for heavy weather precautions. Plus - avoid wind against tide timing. Look for area of least broken waters. Adjust speed to avoid pooping/broaching.

Question 5.
Calculate the “breaking strain” and “safe working load” of the following:
a) 10mm Manila rope
b) 10mm Polypropylene rope
c) 18mm Polyester rope (terylene)
d) 8mm Polyamide rope (nylon)
e) 6mm strand/24 wire

Answer.		BS	SWL
a)	$\frac{2D^2}{300}$	0.67	0.11
b)	$\frac{3D^2}{300}$	1.00	0.17
c)	$\frac{4D^2}{300}$	4.32	0.72
d)	$\frac{5D^2}{300}$	1.07	0.18
e)	$\frac{20D^2}{500}$	1.44	0.24

Question 6.
Explain what type of rope (cordage) you would use for the following purposes. Why?
a) Anchoring
b) Mooring lines
c) Dinghy painter
d) Lashing heavy cargo
e) Towing
Answer.

a) Chain tail to add to anchor weight and cope with chafe on bottom. Terylene warp.
b) Polyprop. Not damaged by immersion. Floats while running out and recovering. Not expensive.
c) Nylon. Good SWL/size, stretches to absorb shock-loads.
d) Chains with lever tensioners.
e) Nylon. Strong and can stretch to absorb shock-loads.

Question 7.
List the precautions you would take when loading or discharging heavy loads on a small vessel alongside a wharf.
Answer.
a) Sufficient GM (load transfers t derrick-head)
b) Take up slack on moorings
c) Plumb the load accurately before lifting
d) Second man to signal winch operator

Further Questions

Question 1.
You are master of a vessel which is about to encounter bad weather on a sea passage.
a) List 9 of the hazards or risks you should take into account with regard to the safety of your vessel and the safety of persons and goods onboard
b) State the preventative actions you will take to reduce the risks to the ship, persons onboard and cargo from the hazards listed at Part (a) above.
Answer.
a) Risks
- Hull stresses due to excessive rolling, pitching and pounding
- Lack of stability under these conditions
- Risk of falling overboard
- Risk of fire or burns from gas leak or cooking
- Loss or radio contact
- Cargo, cargo gear and other goods coming loose.
- Movable equipment on deck falling overboard or causing damage to vessel
- Water entry into vessel
- Collision due to poor visibility and possibly reduced lookout capability

b) Preventative Actions
- Slow down, alter course and heave to minimise rolling, pitching and pounding
- If vessel lacks stability, increase bottom weights by adding to or shifting down from higher places
- Rig lifelines on deck and wear safety harness. When bad weather sets in don't send anyone on deck unless absolute necessary
- Make sandwiches and coffee etc. to last the duration of bad weather. Switch off gas and don't light any fires after bad weather sets in
- Give your position and other details to the nearest Coast Radio Station. Set up a regular calling schedule. Ensure that the distress signals, EPIRB, emergency survival equipment and the grab bag are in readiness. Take seasickness pills.
- Check and strengthen cargo lashings and secure all movable equipment on board
- Remove all movable equipment from deck and stow and secure it below deck
- Turn vessel into a watertight cocoon, so that water can not enter even if she capsizes. Shore hatches and entrances from inside, if necessary. Pump out bilges if necessary
- Ensure radar reflector is securely rigged, switch on navigation lights and give fog signals.

Question 2.
Rule 10 of the International Regulations for preventing Collision at Sea applies to Traffic Separation Schemes. It provides the regulations and guidance for vessels using traffic separation schemes and operating in the vicinity of such schemes. What does this rule state concerning:

a) a vessel joining or leaving a traffic lane?
b) a vessel crossing a traffic lane?
c) the use by vessels of inshore traffic zones?
d) vessels engaged in fishing using the traffic separation scheme?
e) vessels of less than 20 metres operating in a traffic separation scheme?

Answer.

a) Answer as per International Collision Regulations, Rule 10

Question 3.

a) What is the function of a Register of Material Handling Equipment (Cargo Register) or Chain Register onboard a vessel?
b) What information is contained in the Register at above?
c) Who is responsible for the upkeep of the Register at (a) above
d) How frequently and by whom is the ship's materials handling equipment tested?
e) What regular maintenance would you carry out onboard on blocks, shackles, derrick heel (goose neck) and wires?

Answer.

a) The Register of Materials Handling Equipment, the Cargo Gear Register or the Chain Register is a register in which the master enters particulars of all tests, inspections and heat treatment carried out on cargo gear. All cargo lifting gear, including ropes and wires are supplied by manufacturers with test certificates. The ship's master must countersign the certificates when issued and retain them in the Register. All on-board maintenance of cargo gear is also recorded in the register. The master is responsible to ensure that correct entries are made and that it is kept up-to-date.
b) AMSA is responsible for the inspection and regulation of cargo handling equipment on vessels. They follow a uniform set of rules as contained in the Commonwealth "Navigation (Loading and Unloading Safety Measures) Regulations", also known as the L.U.S.M. Regulations. A number of manufacturers and testing establishments are licensed to supply and test the equipment.

All "fixed" cargo handling gear (derricks and cranes, etc.) on Australian ships is proof tested in-situ every 4 years by an authorised establishment. (The International Labour Organisation regulations require it every 5 years). This is done by either using a spring balance or hanging the designed weight plus a small percentage.
After each test, the master must make sure that the gear is opened up and examined for any deformity or failure.
The "removable" gear, such as blocks, shackles, chains, crates, tubs, cradles and trays, usually do not require re-testing as long as the original markings of SWL and the certificate number are clearly legible. They do however need to be regularly inspected and maintained by the ship's crew.
c) Masters are required to open up and examine items such as blocks, shackles and derrick heels once a year. All items are to be maintained rust-free, and greased and inspected for wear and tear. Wire ropes should be oiled with a thick oil. Ropes should be oiled with a thick oil. Ropes in constant use must be examined every 6 months.

Question 4.
List the safety precautions and regulations you would follow in loading and transporting a cargo which included drums of petrol

Answer.

Drums are petrol fall in the category of Hazardous Goods. The cargo must therefore be labelled, handled, stored and transported as per the IMDG regulations. In addition, all other precautions relating to cargo work must be observed, as discussed below.

Seaworthiness:

- Vessel in good order and repairs
- All equipment working properly

Fire Precautions:

- Fire detection system tested before loading
- Fire fighting system ready and available
- No Smoking signs displayed

Cargo Gear:

- Ready and of suitable Safe Working Load (SWL)

Safety Alongside the Wharf:

- Vessel properly secured
- Cargo nets and Safety nets in place
- Unwanted personnel kept clear
- Crew to wear safety gear
- Cargo watch established

Stability:

- Adequate at all times

Loading and Carriage of Petrol (Dangerous Cargo):

- Plan before loading: how much cargo and where to stow
- Permission to load and carry: ("A Notice of Intention to Ship Dangerous Goods" is completed and lodged by the shipper and approved by the Port Authority. It contains the vessel's name, details of the shipper, the loading and discharge ports and details of the cargo).
- The drums must be in good condition
- Markings as per IMO classification
- Flag "B" flying

- Suitable Stowage (as per the IMDG Code, also known and the Blue Book):
- Must be carried on deck
- Away from hot bulkheads
- Accessibility to reach or throw overboard in case of fire hazard
- Separation between different classes, etc
- No more than 50% of deck should be loaded with dangerous cargoes
- Cargoes separated as per the "Blue Book" mentioned above
- Suitable crew walkways maintained on deck
- Usually lashed with wire or chain and bottle screws, the lashings maintained tight at all times
- Shielded from heat and flames. Cooled with a water sprinkler in hot weather, if necessary
- Any leakage washed off immediately, and the leaking container disposed off or dealt with as per the instructions in the "Blue Book"
- Smoking restricted to Smoking Room only

Question 5.

a) State briefly why cold fronts are usually more violent and of shorter duration than warm fronts

b) List the weather conditions you would expect to experience during the approach (ahead) of a cold front and at the passage of a cold front

Answer.

a) Cold fronts are steeper than Warm Fronts. The change in weather is therefore "packed" in a distance over land and sea of only about 30 miles. They are thus of shorter duration but more violent than Warm Fronts.

b) A sudden and large drop in barometer is an excellent indication of an approaching Cold Front (or other bad weather). A strong Front will cause the barometer to drop, say, 5 hecto Pascal within an hour. Radio is another good source of early warning. The visual indications of towering high grey (Cumuli-nimbus clouds and shift in wind direction are often too late for safe cover. A Cold Front usually brings a sudden and violent change. Wind

shifts during the front and can increase in speed of up to Force 8. Sea may become choppy, possible thunderstorm activity, poor visibility and a drop in temperature

Question 6.

a) What is the mechanical advantage of the following purchases, when rigged to advantage and disadvantage?

i) a 2-fold purchase

ii) a 3-fold purchase

b) List the signs and causes of deterioration in natural fibre, synthetic and wire ropes.

Answer.

a) M.A. of a 2-fold purchase:

Rigged to disadvantage = 4

advantage = 5

M.A. of a 3-fold purchase

Rigged to disadvantage = 6

advantage = 7

b) Signs of Deterioration in Ropes

- Flattened ropes
- Kinked ropes
- Ropes becoming soft
- Partially melted synthetic ropes
- Heavily frayed ropes
- Splices in the ropes deteriorating
- Malting spots on synthetic ropes
- Ropes with reduced diameter
- Corroded wire ropes: inside or outside
- Synthetic ropes with powdery substance inside
- Natural fibre ropes with rot or mildew inside

Note: Wire ropes must also be condemned when more than 10% of wires are broken in any length of its 8 diameters

Causes of Deterioration of Ropes:

- Excessive stress
- Abrasion or cutting on sharp objects
- Stowing away wet
- Inadequate ventilation
- Exposure to chemicals, such as acids
- Unnecessary exposure to UV light
- Kinking
- Passing through wrong size blocks
- Wire ropes deprived of lubrication, etc

Question 7.

You are to re-fuel your vessel. List the necessary precautions to safeguard against fire and pollution.

Answer.

Precautions when Re-Fuelling

- Portable tanks taken out of the boat for filling
- Hoist flag B for refuelling internal tanks
- No Smoking
- No fires and not motors running
- Disconnect the battery
- Turn off gas
- Check for leaks
- Deck scuppers blocked, where possible
- Vessel properly alongside
- Hose earthed or discharged for static electricity

- Prevent static electricity build up by keeping the fuel nozzle in contact with the filler pipe
- Make sure fuel going in correct tank
- Constantly monitor the tank being filled
- Consider stability when filling side tanks
- Boat ventilated
- Any spill cleaned up immediately
- Ventilate for some time before starting engine

Question 8.
State briefly the Australian pollution regulations with regard to discharge of garbage and sewage from vessels.
Answer.
Regulations for Discharge of Garbage
The International Convention for the Prevention of Pollution from Ships 1973/78 (known as MARPOL) is enacted in Australia in the Protection of the Sea (Prevention of pollution from ships) Act. Under the convention, which applies at Commonwealth, the following GARBAGE REGULATIONS apply:
- No discharge of plastics anywhere
- No discharge of any unprocessed garbage within 12 nautical miles of the nearest land.

This means that:
If the vessel is within 12 miles from land she must retain all garbage on board for disposal ashore.
If she is more than 12 miles from the nearest land she may dispose of food scraps, paper, glass, metal or crockery.
If she has a grinder or similar garbage processor on board your vessel, she may discharge processed non-plastic garbage at a distance of greater than 3 miles from the land.
Regulations for Discharge of Sewage:
Toilet waste is not allowed t be pumped out in non-tidal waterways, such as Myall Lakes or within a designated pump-ashore zone, such as Sydney Harbour. Vessels operating in these areas are required to be fitted with holding tanks. These can be emptied into the nearby pump-ashore facilities. Other States have similar regulations.

Question 9.
What information is contained in the vessel's Survey Records?
Answer.
Students' answers should include items from the list below:
- Vessel Certificate of Operation
- Vessel Certificate of Survey
- Change of Ownership/Address Forms
- Survey Instructions & Schedule
- Equipment list
- Manning requirements.
- Deficiency Notices/Extension of Time Letters
- Suspension (Procedure)Suspension (Procedure)
- Emergency Procedures (Details of Drills Carried Out
- Correspondence
- General (i.e. Certificates for Compass, Load Line, Radio

Question 10.
List the certificates and documents required to be carried onboard a small commercial trading vessel.
Answer.
Students answer should include items from the following list:
- Vessel Certificate of Operation
- Ship Station Licence (radio)

- Certificates of Competency of Crew
- Restricted Radio Operator's Licence
- Radio Log Book
- Radio Handbook
- Safety Equipment Certificates
- Compass Deviation Card
- Cargo Gear Register (Register of Materials Handling Equipment)
- Cargo Manifest (if applicable)
- Boat and Fire Drill Station List (Muster List)
- Crew Agreement (if applicable)
- Deck Log Book
- Engine Log Book
- Stability Information
- Chart Outfit for Voyage
- Gas Fittings Certificate
- Other licences which may be required by other authorities such as for Catering of Food and Liquor Licence

Question 11.

a) Describe the interaction effects between two vessels passing close to one another while making way

b) Explain how such interaction may cause a dangerous situation to develop between the two (2) vessels.

Answer.

a) Students answer should indicate an understanding of the pressure areas around a vessel and how these can interact if the vessels are close enough

b) Pressure effects can cause vessels to veer sharply off course and can result in collision.