

**CHECK YOUR PROGRESS
SEAWORTHINESS**

NAME:
(answers)

Structure & Seaworthiness

Stability

Question 1 (1 Mark) Validates to TDMMB4507A element 1a

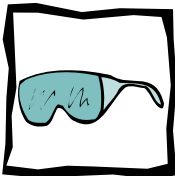
Routine inspections and maintenance enable timely _____ to be made before a major failure occurs.

Question 2 (1 Mark) Validates to TDMMB4507A element 1a

In deciding to repair or replace a component it must be considered if it is _____ repairing.

Question 3 (5 Marks) Validates to TDMMB4507A element 1a

Name the routine maintenance jobs where OH&S regulations would require the use of each item of personal protective equipment shown below.



Job 1	Job 2	Job 3	Job 4	Job 5

Question 4 (4 Marks) Validates to TDMMB4507A element 1a

The extract from a small commercial vessel's maintenance checklist below lists a single item for each of the periodic inspections. Add another item relevant to your vessel that should be checked.

Implementation date 01/07/08		Review date 01/07/09	
ENGINEERING MAINTENANCE CHECKLIST			
Weekly			
Yes		Raw water screens.	
Yes		?	
Monthly			
Yes		Open sea-water suction and discharge valves.	
Yes		?	
Three monthly			
Yes		Check helm pump hydraulic reservoir level.	
Yes		?	
Six monthly			
Yes		Servicing of fire extinguishers.	
Yes		?	

Question 5 (1 Mark) Validates to TDMMB4507A element 1b

The survey of a vessel is a:

- a. running test
- b. detailed check
- c. visual inspection
- d. thorough examination

Question 6 (1 Mark) Validates to TDMMB4507A element 1b

The annual survey schedule of vessel's less than 35 metres does not include:

- a. safety equipment
- b. inspection of all pipe arrangements.
- c. chain locker internally.
- d. general examination of machinery installation and electrical installation.

Question 7 (1 Mark) Validates to TDMMB4507A element 1b

Before slipping a vessel a list of all _____ should be drawn up.

Question 8 (1 Mark) Validates to TDMMB4507A element 1b

When placing the lifting straps of a travel lift under a vessel that is to be removed from the water, they must be:

- a. positioned at the vessel's extreme ends
- b. positioned under the vessel's shoulders
- c. positioned under the vessel's bulkheads
- d. positioned under the vessel's mid section

Question 9 (1 Mark) Validates to TDMMB4507A element 1b

Careening means that a vessel is:

- a. sailing along very fast
- b. beached and heeled over for repairs or bottom scrubbing
- c. gone aground through lack of care
- d. entered and raided by thieves

Question 10 (1 Mark) Validates to TDMMB4507A element 1b

When a vessel is slipped its weight is supported at a few points, rather than over the entire underwater section of the hull when it is _____.

Question 11 (1 Mark) Validates to TDMMB4507A element 1b

When antifouling a slipped vessel the transducers and anodes should be _____.

Question 12 (1 Mark) Validates to TDMMB4507A element 1c

An out of water survey is required on a commercial timber vessel:

- a. every six months
- b. annually
- c. at two year intervals
- d. at four year intervals

Question 13 (1 Mark) Validates to TDMMB4507A element 1c

At survey of a commercial vessel, an inspection of all pipe arrangements is required:

- a. every six months
- b. at four year intervals
- c. at every annual survey
- d. at eight year intervals

Question 14 (1 Mark) Validates to TDMMB4507A element 1c

At survey of fuel tanks internally are required:

- a. every six months
- b. at four year intervals
- c. at eight year intervals
- d. at two year intervals

Question 15 (1 Mark) Validates to TDMMB4507A element 1c

An out of water survey is required on a commercial steel vessel:

- a. every six months
- b. annually
- c. at two year intervals
- d. at four year intervals

Question 16 (1 Mark) Validates to TDMMB4507A element 1c

Safety equipment should be checked:

- a. every six months
- b. annually
- c. daily
- d. at every emergency drill

Question 17 (1 Mark) Validates to TDMMB4507A element 1d

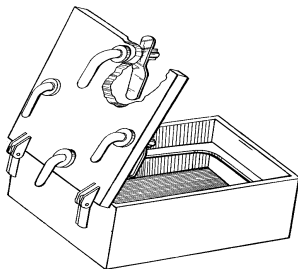
Sliding wheelhouse doors are:

- a. waterproof
- b. airtight
- c. weathertight
- d. watertight

Question 18 (1 Mark) Validates to TDMMB4507A element 1d

The hatch drawn below is designed to be: *(drawing courtesy of ANTA)*

- a. waterproof
- b. airtight
- c. weathertight
- d. watertight



Question 19 (1 Mark) Validates to TDMMB4507A element 1d

Side or bow loading doors in the hull must have an _____ fitted.

Question 20 (1 Mark) Validates to TDMMB4507A element 1d

A vessel is required to be watertight:

- a. below the freeboard deck
- b. above the main deck
- c. above the freeboard deck
- d. below the upper deck

Question 21 (1 Mark) Validates to TDMMB4507A element 1e

Under tropical sunshine, without periodic hosing, the seams of deck planking will:

- a. become darker
- b. open up
- c. close up
- d. harden

Question 22 (1 Mark) Validates to TDMMB4507A element 1e

Application of surface coatings must comply with the manufacture's specification of:

- a. hue and atmosphere conditions
- b. temperature and humidity
- c. pressure and atmospheric temperature
- d. humidity and atmospheric pressure

Question 23 (1 Mark) Validates to TDMMB4507A element 1f

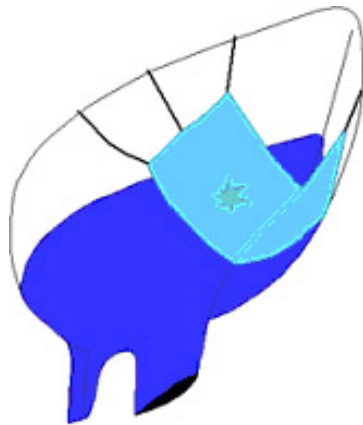
An emergency tiller arrangement is required for vessels with only one

_____ .

Question 24 (1 Mark) Validates to TDMMB4507A element 1f

A canvas as drawn below is deployed in order to:

- a. reinforce the hull when collision seems imminent
- b. mask off the anodes before antifouling the hull
- c. reduce the drift of a vessel in a storm
- d. reduce the inflooding of water after the hull has been holed



Question 25 (1 Mark) Validates to TDMMB4507A element 1f

If slack maintenance allows sea water to enter through watertight doors, the vessel's:

- a. reserve buoyancy would be reduced
- b. reserve buoyancy would be increased
- c. reserve permeability would be increased
- d. reserve permeability would be reduced

Question 26 (1 Mark) Validates to TDMMB4507A element 1g

Lifting gear must be clearly marked with its:

- a. breaking strain
- b. safe working load
- c. safe operating temperature
- d. strain brake

Question 27 (1 Mark) Validates to TDMMB4507A element 1g

Running cargo gear should be checked:

- a. every six months
- b. every time it is used
- c. every three months
- d. all of the above

Question 28 (1 Mark) Validates to TDMMB4507A element 1g

Winch wires are coated with grease to protect them from _____ .

Question 29 (1 Mark) Validates to TDMMB4507A element 1g

When disengaging the gypsy the _____ first needs to be applied.

Question 30 (1 Mark) Validates to TDMMB4507A element 1g

Deck machinery with faults in the brake, clutch or stop controls must be:

- a. operated carefully
- b. used only for small loads
- c. tagged and isolated
- d. only used when needed

Question 31 (1 Mark) Validates to TDMMB4507A element 1g

Six monthly maintenance on deck machinery requires:

- a. examining for wear in clutch, brakes and wire
- b. re-painting
- c. checking the safe working load
- d. stripping down

Question 32 (1 Mark) Validates to TDMMB4507A element 1g

The requirements of Marine Orders Part 32 (Cargo and Cargo Handling – Equipment Safety Measures) apply to all commercial vessels:

- a. greater than 35 metres in length
- b. on interstate or international voyages
- c. greater than 80 metres in length
- d. using cargo handling gear

Question 33 (1 Mark) Validates to TDMMB4507A element 1g

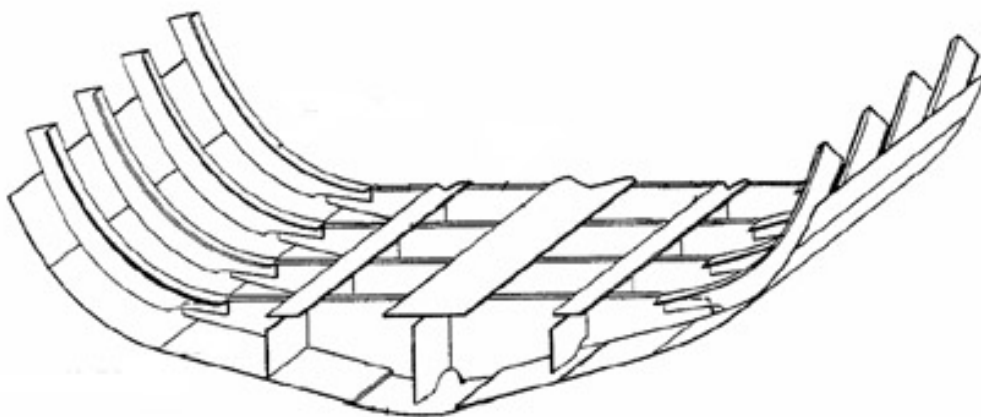
Portable 240 volt power tools should only be used with:

- a. overload protection
- b. fused protection
- c. waterproof leads
- d. the vessels battery banks

Question 34 (4 Marks) Validates to TDMMB4507A element 2a

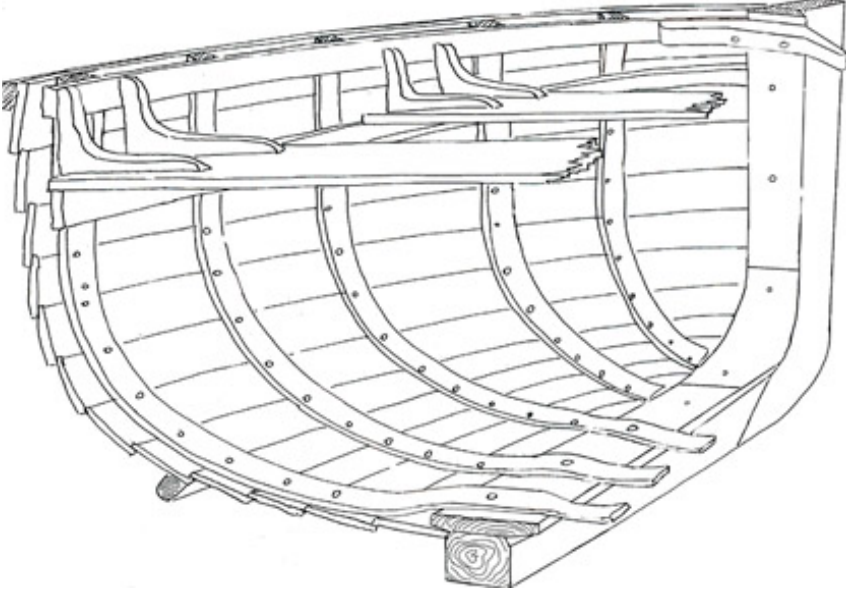
On the drawing below mark the plate keel, shell plate, side frames and floor:

(drawing courtesy of ANTA)



Question 35 (4 Marks) Validates to TDMMB4507A element 2a

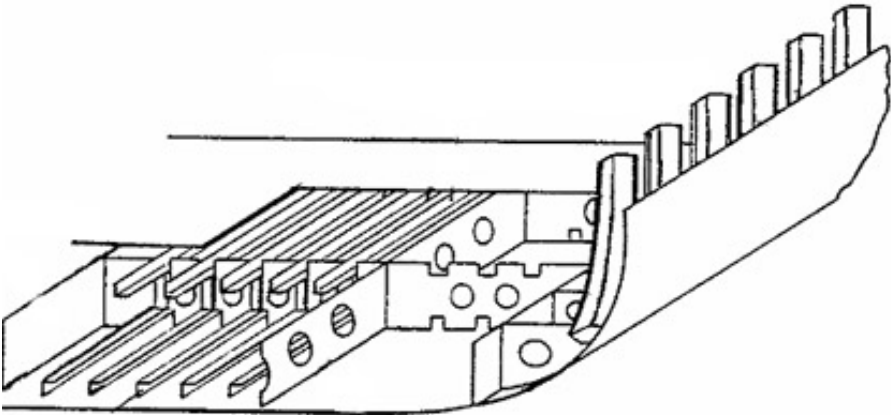
On the drawing below mark the hog, apron, ribs and breast hook:



Question 36 (4 Marks) Validates to TDMMB4507A element 2a

On the drawing below mark the tank top, longitudinals, margin and lightening holes:

(drawing courtesy of ANTA)



Question 37 (4 Marks) Validates to TDMMB4507A element 2a

On the drawing below mark the stern post, after deadwood, stem and rabet:



Question 38 (4 Marks) Validates to TDMMB4507A element 2b

The picture below shows two permanently longitudinally damaged vessels. What is the name given to each condition?



What may have caused this to have happened?

Question 39 (1 Mark) Validates to TDMMB4507A element 2b

Hatch coamings are designed to:

- a. stress structural deck openings
- b. strengthen structural deck opening
- c. weaken structural deck openings
- d. drain water off a vessel's deck

Question 40 (1 Mark) Validates to TDMMB4507A element 2b

Electrochemical corrosion is a result of:

- a. residual electrical current earthing
- b. spilt battery acid
- c. electrolysis generated by dissimilar metals in an electrolyte
- d. all of the above

Question 41 (1 Mark) Validates to TDMMB4507A element 2c

The top of the steel bar shown experiences the stress of _____.

The bottom of the steel bar shown experiences the stress of _____.



Question 42 (1 Mark) Validates to TDMMB4507A element 2c

Steel is heavy and _____ quickly.

Question 43 (1 Mark) Validates to TDMMB4507A element 2c

Copper based antifouling are most suited to aluminium hulls.

TRUE

FALSE

Question 44 (1 Mark) Validates to TDMMB4507A element 2c

Brass screws are unsuitable for structural fastenings at sea as they become hard and brittle due to de zincification.

TRUE

FALSE

Question 45 (1 Mark) Validates to TDMMB4507A element 2c

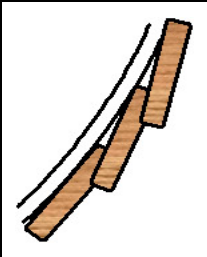
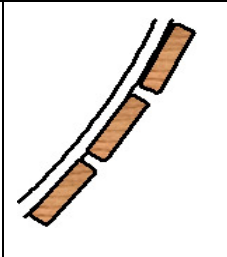
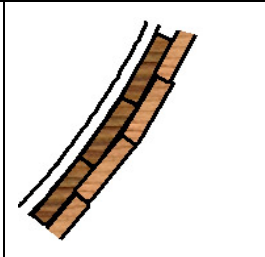
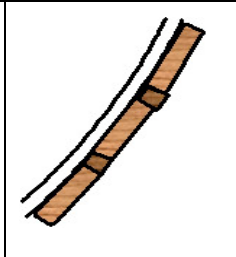

On the galvanic scale, lead is closer to the anodic end and bronze is closer to the cathodic end.

TRUE

FALSE

Question 46 (5 Marks) Validates to TDMMB4507A element 2c

Name the five common planking systems shown in the drawings below

				
System 1	System 2	System 3	System 4	System 5

Question 47 (1 Mark) Validates to TDMMB4507A element 3a

Crevice corrosion usually occurs on:

- a. the threads of nuts and bolts.
- b. the extremities of propeller blades.
- c. exposed areas of propeller shafts.
- d. elbows in skin fittings.

Question 48 (1 Mark) Validates to TDMMB4507A element 3a

If a vessel is taking on more water than is usual, the source of the leak should be found and marked before the next visit to the _____.

Question 49 (1 Mark) Validates to TDMMB4507A element 3a

The deterioration in the GRP hull shown below is called _____.



Question 50 (1 Mark) Validates to TDMMB4507A element 3b

Corrosion can be minimised by applying surface coatings or fitting sacrificial _____.

Question 51 (1 Mark) Validates to TDMMB4507A element 3b

Corrosion around propeller shafts is best minimised by use of:

- a. surface coatings
- b. strip anodes
- c. shaft anodes
- d. lanoline grease

Question 52 (1 Mark) Validates to TDMMB4507A element 3c

Pre-departure checks should be recorded in the _____ log book.

Question 53 (1 Mark) Validates to TDMMB4507A element 3c

Unserviceable equipment should be:

- a. stowed
- b. disposed of
- c. used
- d. tagged

Question 54 (1 Mark) Validates to TDMMB4507A element 3c

In the event of a serious spill or accident that occurs during repair work then an _____ should be notified to the Maritime Authority.

Question 55 (1 Mark) Validates to TDMMB4507A element 3d

Faults and repairs should be recorded in the _____ log book.

Question 56 (1 Mark) Validates to TDMMB4507A element 3d

Before using AC electrical equipment after repairs it must have been approved as _____ by a competent contractor.