

APPENDIX I

GLOSSARY

IMO GLOSSARY

A. The master calls out _____ when he wants to evacuate his vessel from crew and passengers following a distress.

Give the nouns of the following :

Capsize ⇒

Brief ⇒

What do these initials stand for?

C.O.W. =

C.P.A. =

C.S.S. =

B. Find the words:

Floating not controlled ⇒ A _____ t

Case of death, serious injury, or shipping disaster. ⇒ C _____ y

A group of vessels which sail together in one hold ⇒ C _____ y

Goods a vessel abandoned at sea. ⇒ D _____ t

A vessel incapable of proceeding its voyage. ⇒ D _____ d.

A sound signal made with the whistle of a vessel. ⇒ B _____ t

To run a vessel upon a beach to prevent its sinking. ⇒ B _____ h

Opposite of veering. The wind blows round (anticlockwise). ⇒ B _____ g

The speed of a vessel adjusted to that of a pilot boat at which the pilot can safely embark. ⇒ B _____ g S _____ d

All gear necessary for a safe transfer of the pilot. ⇒ B _____ g A _____ t



C. Match the words on the right with the definitions on the left.
Put the correct letter in the empty box.

Place where the crew has to meet according to the muster list when it's necessary.

Areas which cannot be scanned by the radar because they are shielded.

Method of towing vessels through polar ice by means of icebreaking tugs with a special stern notch.

It states whether different goods can be stowed in one hold.

The most probable position of a search target at a given time.

Port which a vessel is bound for.

A group of crewmembers trained for fighting flooding.

A seamark indicating the north/east south/west from a fixed point.

↓

a) Datum

b) Destination

c) Damage Control Team

d) Assembly Station

e) Close couple towing

f) Compatibility of goods

g) Cardinal buoy

h) Blind Sectors

D. Circle the most appropriate answer a, b, c, or d.

1. The term used to describe the moving of the anchor over the sea bottom so that to control the movement of the vessel is called:

- a. Dragging (of anchor)
- b. Dredging (of anchor)
- c. Drifting (of anchor)
- d. Drooping (of anchor)

2. The term used to describe the moving of anchor over the sea bottom involuntarily because it is no longer preventing the movement of the vessel is called:

- a. Dragging (of anchor)
- b. Dredging (of anchor)
- c. Drifting of anchor)
- d. Drooping (of anchor)

3. The approximate time a vessel arrives at her destination is the :

- a. ATA
- b. ATD
- c. ETA
- d. ETD

4. The approximate time a vessel leaves port is the :

- a. ATP
- b. ATA
- c. ETA
- d. ETD

5. When a ship enters a navigable part of a waterway she enters a/an :

- a. Hatchrail
- b. GPS
- c. Fairway
- d. Escape route

6. The mandatory speed in a navigable part of a waterway is the :

- a. Full speed
- b. Fairway speed
- c. Drop back speed
- d. Escape route speed

7. The highest possible speed of a vessel is the vessel's:

- a. Full speed
- b. Fairway speed
- c. Droop back speed
- d. Beam speed

8. To reduce the vessel's speed so that to increase the distance to another vessel ahead is termed to:

- a. Escort
- b. Fall of
- c. Drag
- d. Drop back

9. To embark means:

- a. To board a vessel
- b. To load a vessel
- c. To unload a vessel
- d. To go from board a vessel

10 To disembark means:

- a. To board a vessel
- b. To load a vessel
- c. To unload a vessel
- d. To go from board a vessel

11. The initials GMDSS stand for:

- a. General Maritime Distress and Safety System
- b. Global Maritime Distress and Safety System
- c. Global Maritime Distribution and Sanitary System
- d. General Maritime Distribution and Sanitary System

12. The initials GPS stand for:

- a. General Port Tack Signal
- b. Global Port Tack Signal
- c. Global Positioning System
- d. Global (Satellite) Positioning System

13. A sound signal of seven short blasts and one long blast given with the vessel's sound system is called:

- a. Distress Alert
- b. General Emergency Alarm
- c. Distress Emergency Alarm
- d. General Alert

14. Which of the following is a radio signal from a distressed vessel automatically directed to a RCC giving position, identification, course and speed of the vessel as well as the nature of distress?

- a. Distress Alert (GMDSS)
- b. General Maritime Distress and Safety System
- c. Global Maritime Distribution and Sanitary System
- d. Global Positioning System

15. A vessel is said to follow a clearly marked way in case of an emergency when she follows a/an :

- a. Escort
- b. Escape route
- c. Fairway
- d. Drift

16. When attending a vessel in case of need we are:

- a. Following a vessel
- b. Tailgating a vessel
- c. Escorting a vessel
- d. Rescuing a vessel

17. When a vessel floats in a determinable direction due to winds and current is said to be :

- a. Drifting
- b. Dragging
- c. Floating
- d. Hampering

18. A hampered vessel is a vessel:

- a. Pushed away by current and winds.
- b. Restricted by its ability to manoeuvre by the nature of its work.
- c. Pushed away due to its deep draft.
- d. Restricted by its ability to increase speed due to its deep draft.

19. Major uncontrolled flow of seawater into the vessel is termed:

- a. Flooding
- b. Foaming
- c. Hampering
- d. Watering

20. The term used for an anchor, which has its own cable, twisted around it is:

- a. Wound Anchor
- b. Twisted Anchor
- c. Defect of anchor
- d. Foul of Anchor

21. The term used for a line, wire or net, which is wound round the propeller, is:

- a. Wound propeller
- b. Twisted Propeller
- c. Defect of Propeller
- d. Foul of Propeller

22. A round through the vessel carried out by a crewmember of the watch at certain intervals so that an outbreak of fire may be promptly detected is called:

- a. Fire Fighting
- b. Fire Patrol
- c. Fire Control
- d. Fire Detection

23. Ropes supported by stanchions around an open hatch to prevent persons from falling into a hold are termed:

- a. Hatchrails
- b. Hatchropes
- c. Hatch stanchions
- d. Hold ropes

24. Course directed by the OSC or CSS to be steered at the beginning of a search.
- Initial course
 - Inoperative course
 - Ordnance exercise
 - Escape route
25. To lower, e.g. lifeboats to the water
- Jettison
 - Launch
 - Leaking
 - Abandon vessel
26. Throwing overboard of goods in order to lighten the vessel or improve its stability in case of emergency.
- Flooding
 - Drifting
 - Jettison
 - Dragging
27. Escape of liquids such as water, oil, etc, out of pipes, boilers, tanks, etc, or minor inflow of seawater into the vessel due to a damage to the hull.
- Overflow
 - Drifting
 - Spilling
 - Leaking
28. To assemble crew, passengers or both in a place for purposes of checking.
- Moor (to)
 - Stand by (to)
 - Muster (to)
 - Stand on (to)

E. Choose the term or acronym from the box that best describe each definition.

- | | | |
|-------------------------|------|------|
| OSC | Moor | List |
| IMO – class | | |
| NUC (Not Under Command) | | |

1. Group of dangerous goods, harmful substances or marine pollutants in sea transport as classified in the International Maritime Dangerous Goods Code (IMDG – Code).

2. Inclination of the vessel to port side or starboard side.

3. To secure a vessel in a particular place by means of chains or ropes made fast to the shore, to anchors, or to anchored mooring buoys, or to ride with both anchors down.

4. A vessel, which through exceptional circumstances is unable to manoeuvre as, required by the COLREGS.

5. On scene commander: the commanders of a rescue unit designated to coordinate search and rescue operations within a specified area.

Guess the missing letters in the following terms.

A cable used by helicopters for lifting or lowering persons in a pick – up operation.

H _ _ _ t

Not functioning.

I _ _ _ _ _ e

Lateral movement of the vessel to leeward of its course.

L _ _ _ _ y

An object such as a wreck, net, etc, which blocks a fairway, route, etc.

O _ _ _ _ _ n

Ready for immediate use. O _ _ _ _ _ l

F. Add a noun to the following words so as to form the term that corresponds to the definition:

1. Seawater to flow into the vessel due to damage to its hull, or hatches awash and not properly closed.
Make _____ (to)
2. An illness preferably of an infectious nature seizing more than two persons on board at the same time.
Mass _____
3. Place assigned to crew passengers where they have to meet before they will be ordered to enter the lifeboats.
Lifeboat _____
4. An operation to remove oil from the water surface.
Oil _____
5. Naval firing practice.
Ordnance _____

G. Match the terms with their definitions.

- A. To set free, let loose, or cast off (of anchors, lines, etc.)
 - B. A vessel's reduced speed in circumstances where it may be required to use the engines t short notice.
 - C. When the transmissions a radio station or a Decca chain, etc.have broken down switched off or suspended.
 - D. Not at the position charted.
1. Manoeuvring speed.
 2. Off station (of buoys)
 3. Let go (to)
 4. Off air

H. Match the terms in the box with the definitions.

Overflow	PA system	Rendez-vous
SAR	safe working pressure	
Rig move	segregation (of goods)	

1. An appointment between vessels normally made on radio to meet in a retain area or position.

2. Escape of oil or liquid from a tank because of a twofold condition as a result of overflowing, thermal expansion, change in vessel trim or vessel movement.

3. Search and rescue. _____
4. Public address system: Loudspeakers in a vessel's cabins, mess rooms etc. and on deck via which important information can be broadcast from a central point, mostly from the navigation bridge. _____
5. The maximum permissible pressure in cargo hoses. _____
6. The movement of an oil rig, drilling platform etc. from one position to another. _____
7. Separation of goods which for different reasons must not be stowed together. _____

I. Put the letters of the terms in order to form the term for each definitions.

1. A vessel emitting harmful substances into the air or spilling oil into the sea.
(l u e t r p l o) _____
2. To sail or head for a certain position or to continue the voyage.
(r e p e o c d) _____
3. To pull a vessel off after grounding; to set afloat again.
(f r e l o a t) _____
4. The area where the event e.g. an accident has happened.
(n s e c e) _____
5. A pattern according to which vessels and/or aircraft may conduct a co-ordinated search. (the IMO SAR offers seven search patterns.)
(a e c h r s t e a t r p n) _____
6. Ropes, nets and any other means for handling general cargoes.
(i g s n l s) _____
7. The act of checking who of the passengers and crew members are present e.g. at assembly stations, by reading aloud a list of their names.
(l o r l l a l c) _____
8. A mark or place, at which a vessel comes under obligatory entry, transmit or escort procedure.
(e v i n c i g r n o p i t) _____

J. Choose the word in the box that goes with the word out of it to form the term for the definition.

1. A fictive line displayed on the radar screen separating the fairway for inbound and outbound vessels so that they can safely pass each other.

Harbour	line
Coast	
Reference	

2. A deck, space, area etc. not permitted to be entered for safety reasons.

Restricted	Area
Seasonal	
Rain	

4. Sound, visual or other signal to a team ordering it to return to its base.

Distress	Signal
Sailing	
Retreat	

5. The maximum permissible load of deck etc.

Proof	Working Load
Safe	
Dead	

6. That speed of a vessel allowing the maximum possible time for effective action to be taken to avoid a collision and to be stopped within an appropriate distance.

Safe	Speed
Economical	
Moderate	

7. The speed of searching vessels directed by the OSC or CSS.

Acquired	Speed
Search	
Trial	

8. Transverse movement of cargo, especially bulk, caused by rolling or a heavy list.

Perishable	Cargo
Shifting	
Damage	

K. Match the words on the left with the definitions on the right. Write the correct letter in the empty box.

Speed of Advance		a. To start with the helicopter from a vessel's deck.
Spill (to)		b. The allotted place or the duties of each person on board.
Spill control gear		c. To maintain course and speed.
Elongated spreader		d. Orders of the master to the officers of the watch which s/he must comply with.
Stand by (to)		e. To keep a boat away from a vessel
Stand clear (to)		f. To be in readiness or prepared to execute an order.
Standing orders		g. Here: step of a pilot ladder which prevents the ladder from twisting.
Stand on (to)		h. Special equipment for lighting accidental oil spills at early stages.
Station		i. To accidentally escape, e.g. oil, etc. from a vessel, container, etc., into the sea.
Take off (to)		j. The speed at which a storm centre moves.
Target		k. A one way route which vessels have to comply with within a traffic separation scheme.
Traffic lane		l. Here: The transfer of goods from one vessel to another outside harbours.
Transshipment (of cargo)		m. The echo generated e.g. by a vessel on a radar screen.
Transit		n. Speed of a vessel required for the passage through a canal fairway, etc.
Transit speed		o. When the light characteristics of a buoy or a lighthouse are inoperative.
Underway		p. When a wind blows round clockwise; opposite of backing.
Unlit		q. Vessel traffic service: A service, designated to improve safety, efficiency and easiness of vessel traffic and to protect the environment.
UTC		r. The passage of a vessel through a canal, fairway, etc.
Variable (of winds)		s. A vessel which is not at anchor, or made fast to the shore, or aground.
Veering (of winds)		t. Universal time co-ordinated. (ex. GMT)
VTS		u. Area controlled by a VTS – Centre or VTS – Station.
VTS - area		v. When a wind is permanently changing the direction from which it blows.
Way point		w. The general direction from which the wind blows; opposite of leeward.
Windward		x. A vessel which has been destroyed or sunk or abandoned at sea.
Wreck		y. A position a vessel has to pass or at which she has to alter course according to her voyage plan.

L. Provide the appropriate term to the following definitions.

Air draft	course made good	close up	bob-cat	check (to)
Cable	vessel constrained by her draft	crash stop	course	
Accommodation ladder				

1. Ladder attached to platform at vessel's side with flat steps and enabling persons to embark / disembark from water or shore.

2. The height from the waterline to the highest point of the vessel.

3. A mini caterpillar with push blade used for the careful distribution of loose goods in cargo holds of bulk carriers.

4.
 - a. Chain connecting a vessel to the anchor.
 - b. Wire or rope primarily used for mooring a ship.
 - c. (Measurement) one hundred fathoms or one tenth of a nautical mile.
5.
 - a. To make sure that equipment etc. is in proper condition or that everything is correct or safe.
 - b. To regulate motion of a cable, rope or wire when it is running out too fast.
6. To decrease the distance to the vessel ahead by increasing one's own speed.

7. A vessel severely restricted by her draft in her ability to deviate from the course followed in relation to the available depth and width of navigable water.

8. The intended direction of movement of a vessel through the water.

9. That course which a vessel makes good over ground after allowing for the effect of currents, tidal streams, and leeway caused by wind and sea.

10. An emergency reversal operation of the main engine(s) to avoid a collision.

M. What do these initials stand for?

MMSI=

MRCC=

SWL=

SAR=

SART=

TEU=

VHF=

ITZ=

TSS=

N. Guess the missing letters in the following terms.

1. Vessel still afloat, abandoned at sea.

D _ _ _ _ t

2. A measure of 6 feet.

F _ _ _ m

3. Often harmful gas produced by fires, chemicals, fuel, etc.

F _ _ s

4. The horizontal direction of the vessel's bows at given moment measured in degrees clockwise from north.

H _ _ _ _ g

5. A cable used by helicopters for lifting or lowering persons in a pick up operation.

H _ _ _ t

6. Coating of ice on an object, e.g. the mast or superstructure of a vessel.

I _ _ _ g

7. To reduce the oxygen in a tank by inert gas to avoid an explosive atmosphere.

I _ _ _ t

8. On or towards the sheltered side of a ship: opposite of windward.

L _ _ _ _ d

9. In navigational warnings: Position of object confirmed.

L _ _ _ _ d

10. To assemble crew, passengers or both in a special place for purposes of checking.

M _ _ _ _ r

O. Match the words on the left with the definitions on the right.

Write the correct letter in the empty box.

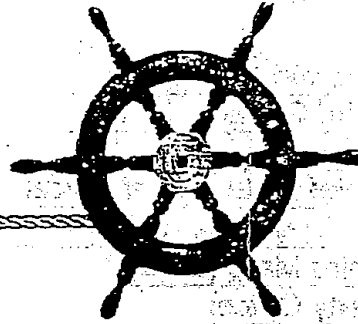
Distress / urgency traffic		a. To restart a voyage, service or search.
Fire monitor		b. The four main points lying between the cardinal points: north east, south east, south west and north west.
General emergency alarm		c. To keep out of the way of another vessel.
Give way		d. Ropes and wires attached to derricks to prevent them from swinging during cargo handling operations.
Half cardinal points		

Muster list	f. A method of cargo handling by combining two derricks, one of which is fixed over the hatch, the other over the ships side.
Preventers	g. A mark or position at which a vessel is required to report to the local VTS Station to establish its position.
Recover	h. To let out a greater length of cable
Resume	i. The path followed or to be followed between one position and another.
Seamark	j. To reserve the action of a windlass to ease the cable (of anchors).
Shackle	k. To reverse the action of a windlass to lower the anchor until it is clear of the hawse pipe and ready for dropping.
Stripping	l. A zone or line separating the traffic lanes in which vessels are proceeding in opposite or nearly opposite directions; or separating a traffic lane from the adjacent sea area; or separating traffic lanes designated for particular classes of vessels proceeding in the same direction.
Survivor	m. A winch which applies tension to mooring lines to keep them tight.
Tension winch	n. Length of chain cable measuring 15 fathoms or U-shaped link closed with a pin used for connecting purposes
Track	o. A person who continues to live in spite of being in an extremely dangerous situation, e.g. a shipping disaster.
Union purchase	p. List of crew, passengers and others on board and their functions in a distress or drill.
Veer out (to) (of anchors)	q. To pick up shipwrecked persons.
Walk out (to) (of anchors)	r. A sound signal of seven short blasts and one prolonged blast given with the vessel's sound system.
Walk back (to)	s. The verbal exchange of information on radio from ship to shore and/or ship to ship /aircraft about a distress / urgency situation as defined in the relevant ITU Radio Regulations.
Reporting point	t. Fixed foam/powder/water cannon shooting fire-extinguishing agents on tank deck, manifold etc.
Separation zone/line	u. Final pumping of tank's residues.

APPENDIX II

ADDITIONAL TEXTS & EXERCISES

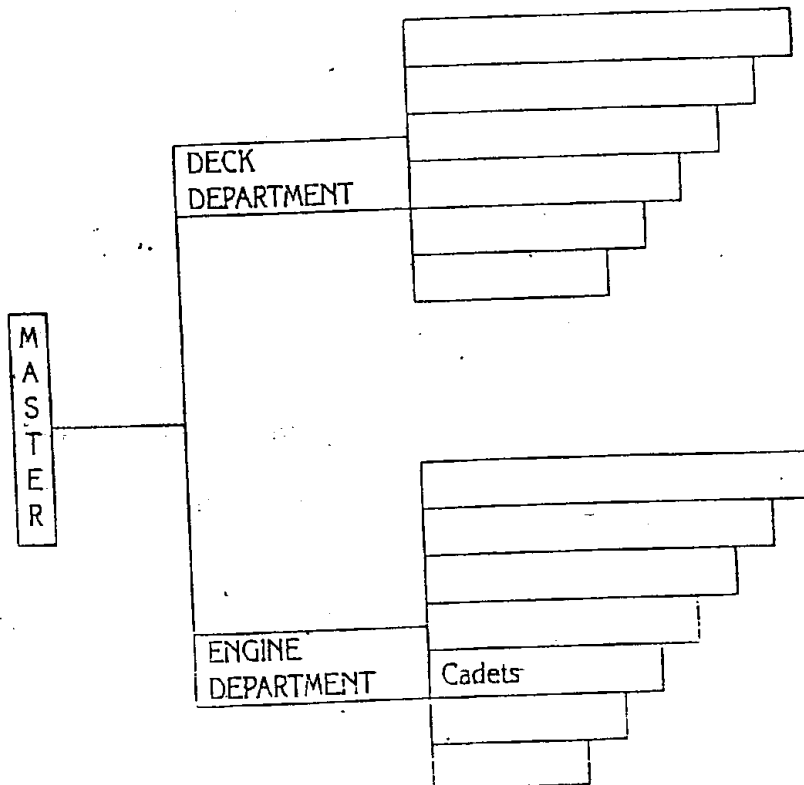
UNIT 1



CAREERS AT SEA (1)

TASK 1

- Complete the diagram and then discuss your answers with your classmates.



THE SHIP'S CREW: ΤΟ ΠΛΗΡΩΜΑ ΤΟΥ ΠΛΟΙΟΥ

" Matching "

1	Captain / Master	Ανθυποπλοίαρχος (2 ^{ος})
2	Staff Captain	Ψηφισματικός
3	Skipper	Δόκιμος / Μαθητευόμενος
4	Chief Mate / Chief Officer	Υποπλοίαρχος / Γραμματικός
5	Second Mate (Officer)	Πλοίαρχος
6	Third Mate (Officer)	Πρακτικός Δόκιμος
7	Petty Officer	Υπαρχος
8	Cadet	Καραβοκύρης
9	Apprentice	Ανθυποπλοίαρχος (3 ^{ος})
10	Chief Radio Officer	Αρχιλογιστής
11	Second Radio Officer	Τρίτος Μηχανικός
12	Assist. Radio Officer	Δεύτερος Τηλεγραφήτης
13	Chief Purser	Αρχιτηλεγραφήτης
14	Assist. Purser	Πρακτικός Μηχανικός
15	Clerk	Βοηθός Λογιστή
16	Chief Engineer	Δόκιμος Μηχανικός
17	Second Engineer	Βοηθός Μηχανικού
18	Third Engineer	Βοηθός Τηλεγραφήτη
19	Assist. Engineer	Δεύτερος Μηχανικός
20	(Cadet Engineer)	Αρχιμηχανικός
21	(Apprentice Engineer)	Γραφιάς
22	Boatswain / Bosun	Ναυτόπαιδο
23	A.B. Sailor	Θερμαστής
24	Ordinary Sailor (O.S.)	Ξυλουργός / Μαραγκός
25	Deck-hand (D.H.)	Αρχικαμαρότος
26	Green-hand (G.H.)	Ηλεκτρολόγος
27	Deck boy	Λιπαντής/ Γρυσασδόρος
28	Donkeyman	Απλός Ναύτης
29	Stoker	Καμαρότος
30	Pumpman	Λοστρόμος
31	Greasers	Βοηθός Καμαρότου
32	Trimmer	Μέλος του Πληρώματος
33	Wiper	Στοιβαδόρος / Χαπιαριστής
34	Carpenter	Καμαροτάκι
35	Electrician	Διπλωματούχος Ναύτης
36	Plumber	Πηδαλιούχος
37	Chief Steward	Απειρος Ναυτικός
38	Steward / Stewardess	Υδραυλικός
39	Assist. Steward	Καθαριστής
40	Mess boy	Αρχιθερμαστής
41	Quarter Master / Helmsman / Steersman	Αντλιοχειριστής

• Now read the text and check your choices.

17

Ships of a reasonable size are divided into four basic departments. The Deck, Engine, Radio and Catering departments.

The person in absolute charge of the vessel is the master, addressed as captain. He has full responsibility of the ship, her passengers, crew, cargo as well as handling the required paperwork for all activities and transactions of the ship.

Deck department

In the Deck department, the person in command is the chief officer or the chief mate. He is a qualified officer next in rank to the master upon whom the command of the ship will fall in the event that the master is incapacitated.

He is generally assisted by a Second and Third officer (sometimes a Fourth), by cadets as well as by petty officers, one of whom being the boatswain or bosun. Finally, the crew is complemented by the sailors.

The master as well as the chief mate should have thorough knowledge of navigation and position determination, navigational instruments, ship manoeuvring and handling and cargo stowage.

They should also understand fundamental principles of ship construction and the factors affecting trim and stability.

They should be well informed of emergency procedures, medical care, maritime law, personnel management and, particularly, of all the regulations pertaining to safe navigation.

Engine department

In the Engine department, the chief engineer officer is the senior officer responsible for the mechanical propulsion of the ship. He is assisted by a Second engineer, next in rank to the chief engineer, and by a Third and Fourth engineer.

These officers should have theoretical and practical knowledge in subjects such as mechanics, marine electrotechnology, properties of fuels and lubricants as well as knowledge in operation and maintenance of marine engines, detection of machinery malfunctions, location of faults and repairing procedures. In this department, there are petty officers, including a donkeyman and a pumpman (on tankers only) as well as sailors, some of whom are greasers or firemen. There may also be cadets.

TASK 3

• Refer back to the text and find words that mean the same as the following.

- | | |
|-------------------------|-----------|
| 1. full | (line 3) |
| 2. responsibility | (line 3) |
| 3. called, greeted as | (line 3) |
| 4. control | (line 7) |
| 5. position | (line 8) |
| 6. disabled, unfit | (line 9) |
| 7. complete, total | (line 13) |
| 8. basic | (line 16) |
| 9. elements | (line 16) |
| 10. concerning | (line 19) |
| 11. first, high-ranking | (line 21) |
| 12. discovery | (line 26) |

TASK 4

• Which term in bold print in the text means the same as the following?

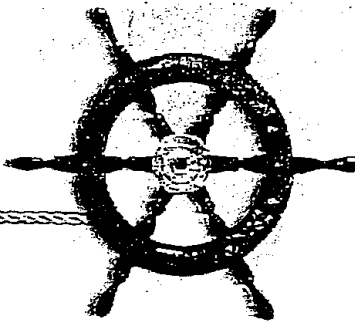
- 1. certified
- 2. a person under training to become an officer
- 3. loading
- 4. proper condition
- 5. the force that propels the ship
- 6. a type of oil used for making the parts of the engine run smoothly
- 7. crew, employees
- 8. rules, law
- 9. energy source, oil, petrol
- 10. a member of the ship's crew other than the master or an officer
- 11. regular work or writing reports, letters, keeping records, lists

TASK 5

A. Read the text again and answer the following questions.

- 1. Refer to the responsibilities the master has.
- 2. Who is next to the master?
- 3. When does the chief officer take command of the ship?
- 4. Define the word cadet.
- 5. What are the most important subjects an experienced master should know?
- 6. What elements should he have a good understanding of?
- 7. What matters should he be well informed of?
- 8. Who is next to the captain in the engine department?
- 9. Refer to the subjects an efficient engineer should know.
- 10. Refer to some petty officers and sailors in the engine department.

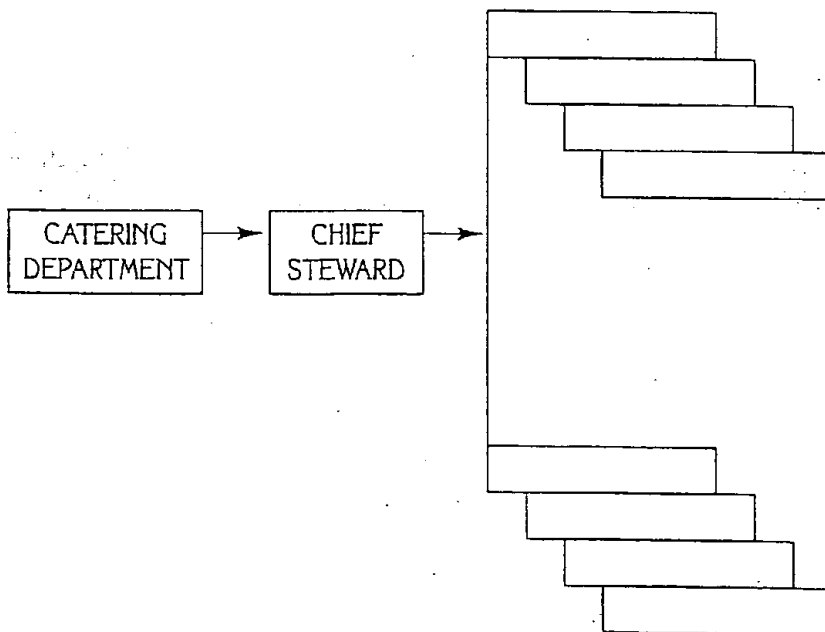
B. Discuss the states of emergency the master might have to deal with.



CAREERS AT SEA (2)

TASK 1

- Complete this diagram.



TASK 2

- Form groups of 4. Compare your diagrams and reconsider your answers.

TASK 3

- Now read the text and check your choices.

Radio Department

In the radio department, every radio officer should carry out his radio duties responsibly and efficiently. The chief radio officer may be assisted by a Second and Third officer, depending on the number of continuous radio watches taken on the ship. Radio officers should have theoretical knowledge and practical training specifically in the operation and maintenance of radio equipment, the provision of radio services in emergency, the ship-position-reporting systems and procedures as well as in the use of the International Code of Signals and the IMO* Standard Marine Navigational Vocabulary.

Catering Department

In the catering department, the Chief Steward is in charge, assisted by petty officers who are the Ship's cook, in the Galley section and the Second steward, in the Saloon section.

In passenger ships and cruise ships, there are also a number of cooks, stewards and sailors working in this department. Personnel of additional specialities are also employed, namely pursers, shop assistants, doctors, entertainers, etc.

All the officers and crew of the ship should be physically fit particularly regarding eyesight and hearing. Radio officers should be additionally fit regarding speech.

Finally, all the personnel on the ship should be aware of the serious effects of operational or accidental pollution of the marine environment and take all possible precautions to prevent it.

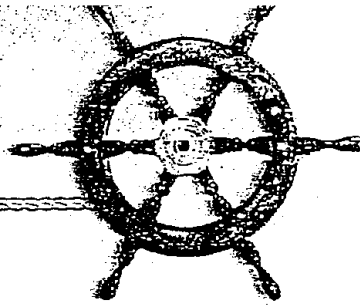
* International Maritime Organisation

TASK 4

- Read the text again and answer the following questions. :

- What do the radio officer's duties basically include?
- Why do you think that the radio officer's job is important for the safe and efficient running of a ship?
- What subjects should a radio officer have theoretical knowledge and practical training in?
4. Who is in charge of the catering department and in each of its sections?
5. Refer to the personnel of additional specialities employed in certain ships.
6. Specify the physical fitness officers and crew should have.
7. What danger should the personnel be sensible of?
What should they do?

UNIT 3



21

TASK 1

- Number the sentences to show the steps taken to build a ship.

	The portions of the hull are welded together and placed on the building berth
	The vessel is ordered
	The hull is painted
	The plans are drawn
	The ship is launched
	The master takes charge and the crew is taken on
	The ship is classed
	The equipment is hoisted into position
	The hull is laid
	The ship is tested

TASK 2

- Discuss your answers with your classmates and make any changes which you think are necessary.

TASK 3

- Now read the text and check your choices.

CONSTRUCTION OF SHIPS

In a shipbuilding yard, all kinds of ships are built on a slipway or in a dry dock. After a vessel has been ordered, the plans are drawn up. The most important factors in the design of a ship are buoyancy, stability, manoeuvrability and resistance to movement.

Next, the plans must be approved by a classification society which exists with the purpose of surveying and classifying vessels of any nationality.

First of all, the principal part of the ship, the hull, is laid. Hulls are now made from mild or high-strength steel, stainless steel and aluminium. In fact, the use of aluminium in very large quantities to construct superstructures saves weight. In modern vessels, large portions of the hull are welded together in prefabricating sheds and erected on the building berth by giant cranes.

The hull consists basically of the keel which extends from stern to bow along the bottom of the hull. The hull of a ship is divided horizontally by decks extending from bow to stern. Ships are also divided into compartments by transverse watertight bulkheads. If any of these compartments becomes flooded because of damage, flooding is confined only to that compartment.

Later, the boiler, the heavy machinery and the rudder are hoisted into position by travelling cranes.

After that, the hull is painted and when she is completed, the ship is launched. Before being delivered to her owners, the ship is carefully tested during sea trials.

Finally, the master takes charge, a crew is taken on and she is ready to start on her maiden voyage.

TASK 4

- Decide whether the following sentences are true or false. Correct the false ones.

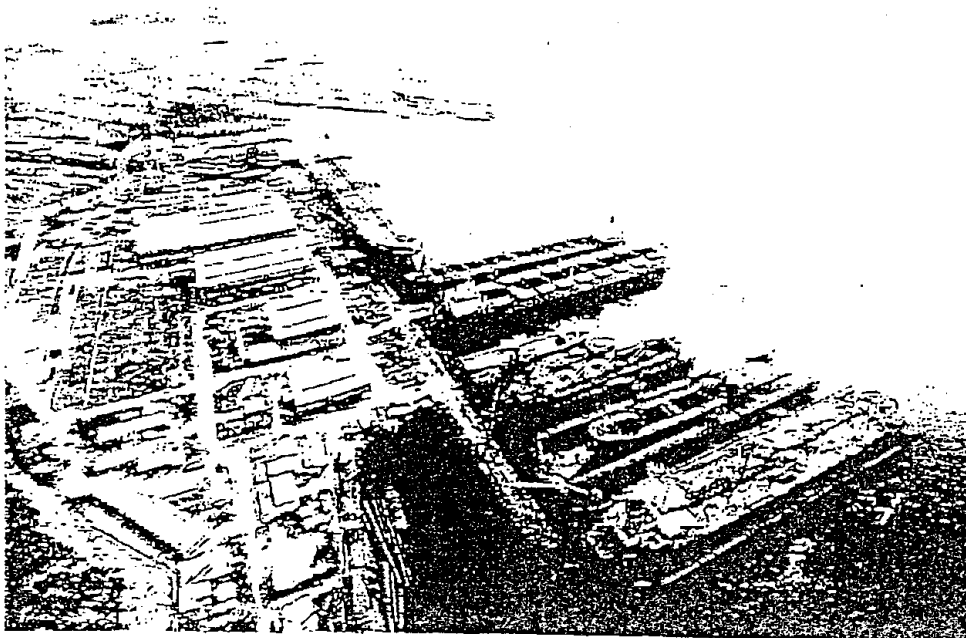
1. After being launched, the ship is delivered to her owners.
2. A ship must be built according to the standards of the classification society.
3. The bulkheads must be completely watertight.
4. The use of high-strength steel allows extra cargo to be carried in the same size of ship.
5. Bulkheads are horizontal walls going across the ship.
6. Decks divide the hull vertically.
7. The crew is taken on before she is ready to receive cargo and passengers.
8. The amount of cargo a ship can carry depends on the material she is made from.

TASK 5

23

● Read the text again and answer the following questions.

1. Where are ships built?
2. What factors must the naval architect take into account when designing a ship?
3. What is the role of a classification society?
4. Describe the hull of a ship.
5. What are hulls made from?
6. Why is aluminium extensively used for the construction of ships?
7. What is the use of bulkheads?
8. How are the parts of the ship joined together in prefabricating sheds?
9. What is the last preparation before the ship is ready to start on her maiden voyage?
10. Match the features of design with the definitions.



Elefsis Shipyards.

TASK 6

24

Match the terms in list A with the definitions in list B.

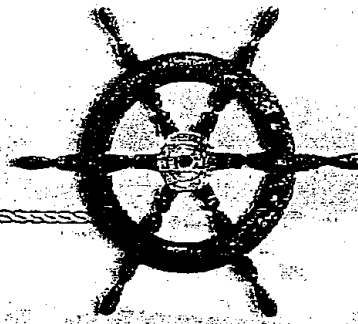
A	B
1. berth	a. being at the stern, it is used for steering with
2. bulkheads	b. the first journey of a ship
3. dry dock	c. vertical steel walls going across the ship and along
4. launching	d. captain
5. maiden voyage	e. the structured part of a ship above the main deck
6. master	f. testing speed and other qualities of a new vessel
7. rudder	g. the place where a ship can stop and be tied up
8. sea trials	h. dock from which water can be pumped out leaving vessel free for repairs etc.
9. slipway	i. the process of moving the hull of a ship into the water from the ground upon which she has been built or repaired
10. superstructure	j. inclined way for moving ships in or out of water

3

A	B
Features of design	Definitions
1. buoyancy	a. the ability of a vessel to change direction rapidly when required
2. stability	b. depends on the shape of the hull
3. manoeuvrability	c. the tendency of a ship to return to an upright position
4. resistance to movement	d. the tendency of a vessel to float when submerged

97

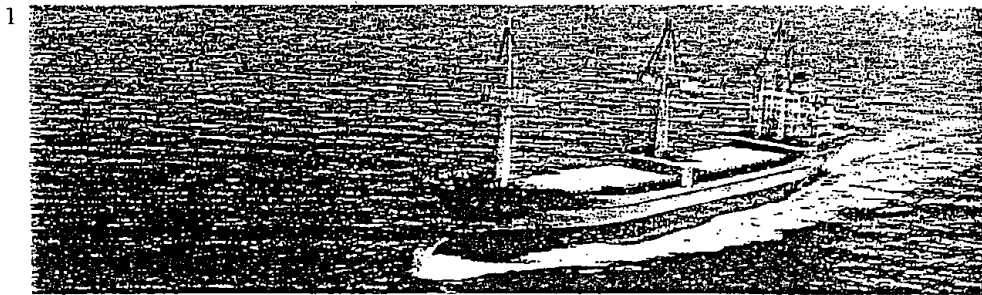
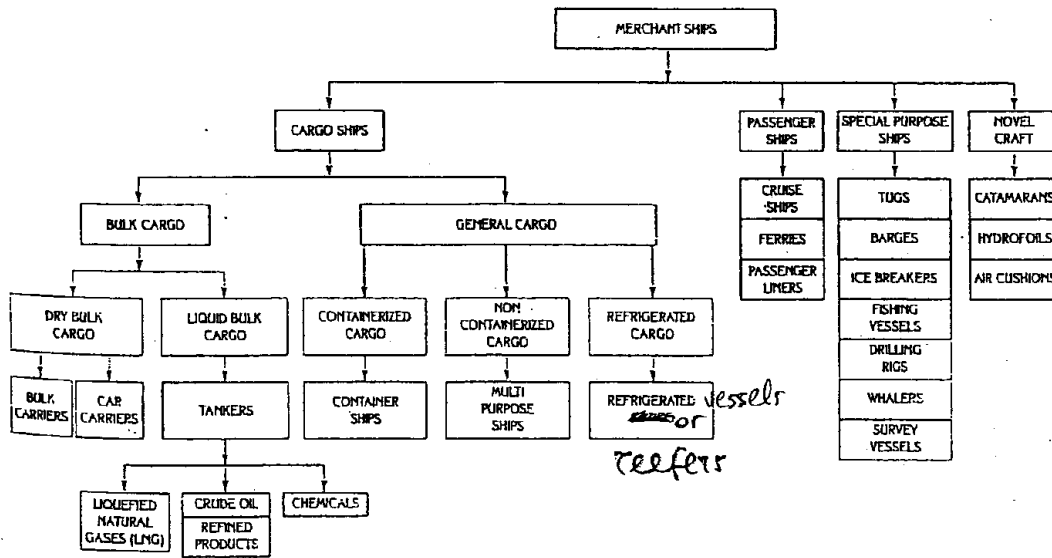
UNIT 4



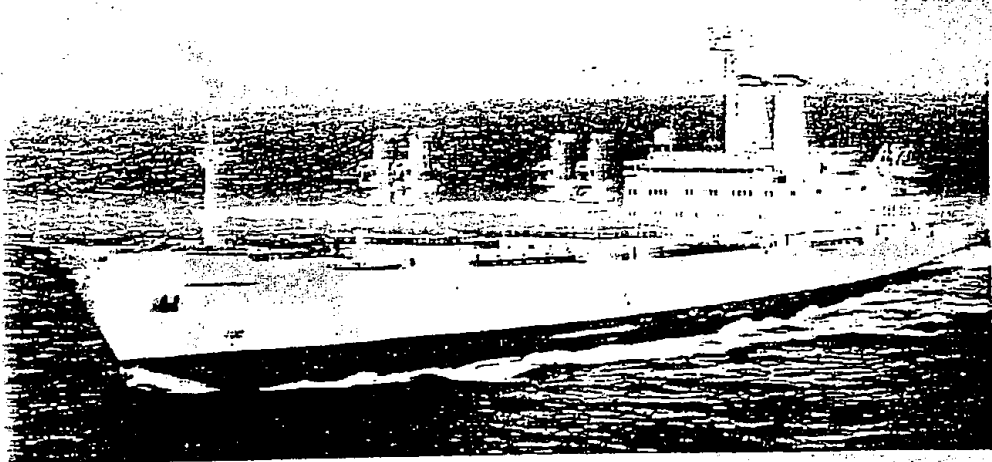
TYPES OF SHIPS AND CARGO

TASK 1

Study the diagram and complete the text.



2



- 1. A 5,900 DWT multipurpose vessel.
- 2. A bulk carrier.

TYPES OF SHIPS AND CARGO

Merchant ships are classified into _____, _____, _____ and _____.

The cargo ships are designed to carry _____ or _____ cargo.

_____ carry dry bulk cargo including grain, timber, coal, sugar, etc., while car carriers can carry a large number of vehicles of different sizes. On the other hand, tankers are designed to carry _____, such as _____, _____ and _____.

Moreover, general cargo consisting of a great variety of goods, i.e. wine, flour, rubber, cement, fertilizers, etc., is categorized into _____ and _____.

Containerized cargo is carried by _____ which are designed to carry and stow many types of general cargo in containers of standard dimensions.

In addition, non containerized cargo, i.e. rubber, maize, tea, etc., is carried in _____ which can also carry various kinds of cargo including dry bulk cargo and containers. _____ is loaded in refrigerated ships. Their holds are designed to keep food frozen, chilled or fresh. As a result, they carry cargo such as meat, fish, fruit and dairy produce.

The cargo ships equipped with a roll-on/ roll-off cargo handling system are called RO/RO cargo ships.

In comparison with cargo ships, _____ ensure a pleasant voyage for passengers. They include _____ and _____. _____ vary considerably in shape, performance, characteristics and equipment according to the specific purposes for which they are intended. Among them are numbered _____, _____, _____, _____, etc.

Finally, _____, _____ and _____ are categorized as _____. These embody a developed technology, providing better sailing performance particularly with regard to pitch and roll at high speed.

Special duty ships

27

There are several types of ships designed for performing special functions to help ships and shipping. To these belong: pilot launches, tugs, icebreakers, dredgers, lifeboats and rescue boats, lightvessels, cable-laying ships and surveying vessels.

Pilot launches are motor boats for transporting pilots to and from vessels approaching and leaving ports, locks and canals. They must be seaworthy as pilots go out to sea in all weather conditions.

Tugs are special duty vessels which can be divided into four basic groups. Some tugs are designed to push convoys of barges along the rivers. They may be called river tugs. Others are designed as harbour tugs to help ships in and out of ports and narrow channels. Most of them have fire-fighting equipment. Coastal tugs and ocean-going tugs are the two other types which help vessels in difficulties at sea. They may tow sections of ships, floating docks and floating cranes along the coasts or across the seas and oceans. They must have powerful engines to move ships or sections of ships of far greater size. They must also be stable and manoeuvrable in all weathers.

Icebreakers are another type of special duty vessels. They are very important to shipping in winter, helping to keep the ports and channels open for the ships to use them. Their hulls are specially strengthened and they have very powerful engines.

Dredgers are used to remove the sand and mud from the beds of channels and harbours. They can be either bucket dredgers or suction dredgers or grab dredgers which operate like cranes.

Lifeboats and rescue boats are used to help ships in distress. There may be many different types of lifeboats but all of them must be strong, stable and manoeuvrable and their crew must be well trained. In Poland they are professional people but in Britain they are manned by volunteers. The traditional open lifeboat has changed very little over the years. But since July 1986 it has not been permitted on new ships with the intention that such lifeboats will also be phased out on existing vessels. Tankers and other ships

which carry inflammable cargoes must be equipped with totally enclosed lifeboats. They can protect the people inside for at least eight minutes when they are subject to a continuous oil fire.

Rescue boats have also been mentioned in the SOLAS amendments. These inflatable fast craft are to be used to retrieve people from the water and, when necessary, to tow liferafts. Further changes in the construction of lifeboats and rescue boats may be expected.

Lightvessels are another type of special duty vessels. They look like ordinary ships but they are specially equipped. Apart from having a powerful light, they have a foghorn, a radio beacon and some meteorological equipment as well. Some lightvessels may be manned. As they generally do not have engines, they are towed into position and anchored to mark a danger to navigation or a river estuary.

Cable-laying vessels deal with laying sub-marine cables to the lighthouses and between the different points on the sea shore. Surveying vessels carry out hydrographic and seismic surveys at sea.

Using the information from the passage on the ship types and your own knowledge, try and answer these questions or ask your classmate for the answers:

- What are special duty vessels?
- What are pilot launches used for?
- What types of tugs do you know?
- Why are icebreakers useful?
- What are dredgers used for?
- Why must lifeboats be stable and manoeuvrable?
- What do lightvessels look like?
- How do they differ from ordinary vessels?
- What are they equipped with?
- What do surveying vessels do?

Complete the following:

- Tugs must have powerful engines because _____
- Tugs are used not only in the harbours but _____
- Icebreakers have their hulls strengthened so that _____
- Dredgers can be of three types: _____
- Rescue boats help _____
- Pilot launches must be seaworthy as _____
- Lightvessels are anchored in a position to mark _____
- Most lightvessels have _____
- Sub-marine cables are laid by _____
- Seismic surveys are carried out by _____

Match the following types of merchant ships with their appropriate definition.

29

1. Bulk carrier, freighter or bulker
 2. container ship
 3. dredgers
 4. ferries
 5. passenger ship
 6. reefer ships
 7. coasters
 8. tanker ship
 9. tug boats
 10. roll-on / roll-off
- a. a type of ship used to transport perishable commodities which require temperature-controlled transport, mostly fruits, meat, fish, vegetables, dairy products and other foodstuff
 - b. ships designed to transport liquid in bulk
 - c. ferries designed to carry wheeled cargo such as automobiles, trucks, semi-trailers, trailers or railroad cars
 - d. a merchant ship specially designed to transport unpackaged bulk cargo such as grains, coal, ore, and cement in its cargo holds
 - e. ships used to carry all of their load in truck-size containers, in a technique called containerization
 - f. ships or boats equipped with a dredge
 - g. a boat used to maneuver, primarily by towing or pushing other vessels in harbors, over the open sea or through rivers and canals. They are also used to tow barges, disabled ships or other equipment like oil platforms
 - h. boat or ship used to carry passengers and their vehicles across a body of water. Also used to carry freight and railroad cars
 - i. a ship that carries passengers
 - j. smaller ships for any category of cargo which are normally not on ocean-going routes but in coastwise trades

CARGO WORK

READING COMPREHENSION

(A) Different types of cargo (version 1)

Read through the following passage on the different types of cargo. Use the techniques that you have practised so far to help you.

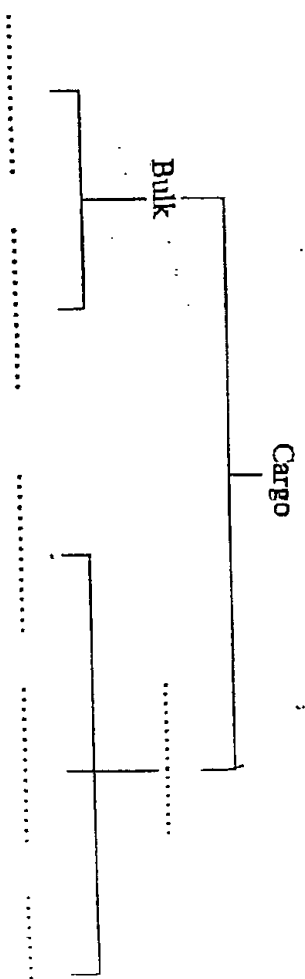
Merchant ships are designed to carry cargo. This cargo may be divided into two basic types: bulk cargo and general cargo. Bulk cargo consists of a single commodity. This commodity is usually carried loose. General cargo consists of a variety of goods. These goods are packed separately. Bulk cargo is carried in specially designed vessels, therefore stowage presents few problems. With general cargo stowage presents many problems, because each item has its own type of packaging and characteristics.

Bulk cargo can be divided into liquid or dry bulk cargo. Liquid bulk cargo is carried in tankers. Most tankers are designed to carry crude oil or its refined products, such as fuel oils. The oil is carried in tanks. These are connected by a system of pipes to a central manifold. The cargo is pumped on board at the loading port by shore pumps. At the discharging port the ship pumps the oil ashore using her own pumps. Dry bulk cargo is carried in bulk carriers. The cargo is carried in self-trimming holds. Dry bulk cargo includes grain, iron-ore, coal and sugar. It is loaded automatically by buckets on a conveyor belt system or through large tubes. Although the cargo stows itself, it is important to maintain the ship's stability and to make sure that the cargo will not move during the voyage. Dry bulk cargo is unloaded by huge grabs on cranes or by giant suction tubes.

General cargo can be divided into containerized, non-containerized and refrigerated cargo. Non-containerized cargo presents most stowage problems, because each commodity has its own type of packaging and characteristics. Goods may be in bags, bales, cases or steel drums. Individual pieces of machinery may not be packaged at all. Some cargoes such as tobacco and rubber have a strong odour and will taint delicate cargoes such as tea and rice. Other cargoes such as cement and fertilizers are dusty and leave a residue behind them. Heavy cargoes must not be

stowed on top of fragile cargoes. This can cause problems if the heavy cargo has to come out first. General cargo is loaded by cranes and the ship's own derricks. Non-containerized cargo is carried in multi-deck vessels. To help with the problem of stowage many types of general cargo are now being put into containers of standard dimensions. A container is 8 feet high and 8 feet wide (2.44m x 2.44m) and is usually 20 feet or 40 feet (6.1m or 12.2m) in length. They are carried in specially designed container ships and loaded and unloaded by special cranes from the quayside. The containers are stowed both above and below deck. Perishable cargoes such as meat, fruit and dairy produce are carried in ships with refrigerated holds. These holds are designed to keep food at the correct temperature. Some food such as fish is frozen solid, other food such as fruit is only chilled. Mutton and lamb are stowed fore and aft, beef when chilled is hung on hooks. Eggs and butter are easily tainted. Fruit needs good ventilation. Refrigerated cargo is loaded by cranes and derricks.

Complete this diagram to form a summary of the basic types of cargo:



Now complete this table to summarize some more information in the passage:

Type of cargo	Examples	Type of ship	How (un)loaded
liquid bulk
dry bulk
containerized
non-containerized

DISTRESS, URGENCY AND SAFETY SIGNALS

Write the appropriate message for the following situations. Give your own MMSI, name of the ship, call-sign and position.

MAYDAY PAN PAN SECURITE

1. Your ship is in distress. You are in position 38° North and 002° East. Your ship is on fire and you have a dangerous cargo on board.

2. You have a lost man overboard in position 80° South and 032° East. You require help with search and rescue from all ships in the area.

3. Tropical storm Sally is reported in position 15° North, 075° West. What would the radio station issuing warning say?

4. A crewman is seriously injured, and you require medical assistance.

5. Newharbour radio beacon service has been discontinued. Warn other ships.

6. You sight a drifting mine 2 miles 330° from St. Nicolas Point. Warn other ships.

7. Your ship is in distress. You have been in a collision and you need help.

8. Your ship is in distress. You are in position 15° South, 150° East. You are on fire in the accommodation.

RESPONSES

The following are some examples of incorrect responses. Give the correct responses using IMO phrases.

a. Utopia: Pilot Station. This is Utopia. Is it clear for me to enter traffic lane?

Pilot Station: Utopia. This is Pilot Station. It's O.K.

b. Utopia: Pilot Station. This is Utopia. May I proceed?

Pilot Station: Utopia. This is Pilot Station. No way.

c. Pilot Station : What is your draught?

Utopia: Hang on a minute.

d. Utopia: Euphoria. This is Utopia. Is there any other traffic?

Euphoria. Utopia. This is Euphoria. I don't know.

e. Utopia: Euphoria, you are steering a dangerous course. There is fishing gear ahead of you.

Euphoria: Utopia. Please repeat your message.

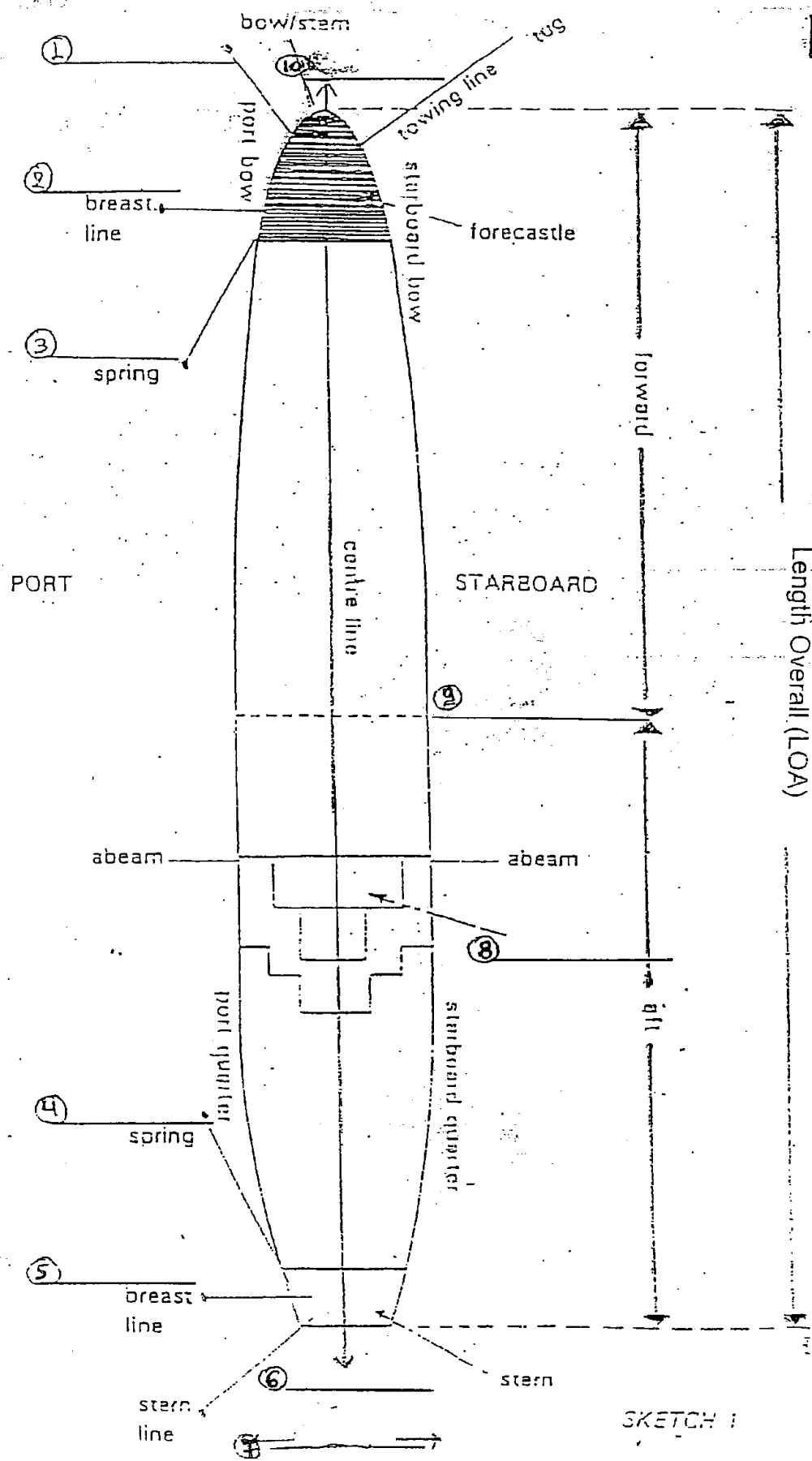
f. Utopia: Euphoria. Vessel ahead of you is on opposite course.

Euphoria: I don't get you.

forward	aft	ahead
midships	breadth	aft
bridge	astern	forward
head line		

Fill in the gaps

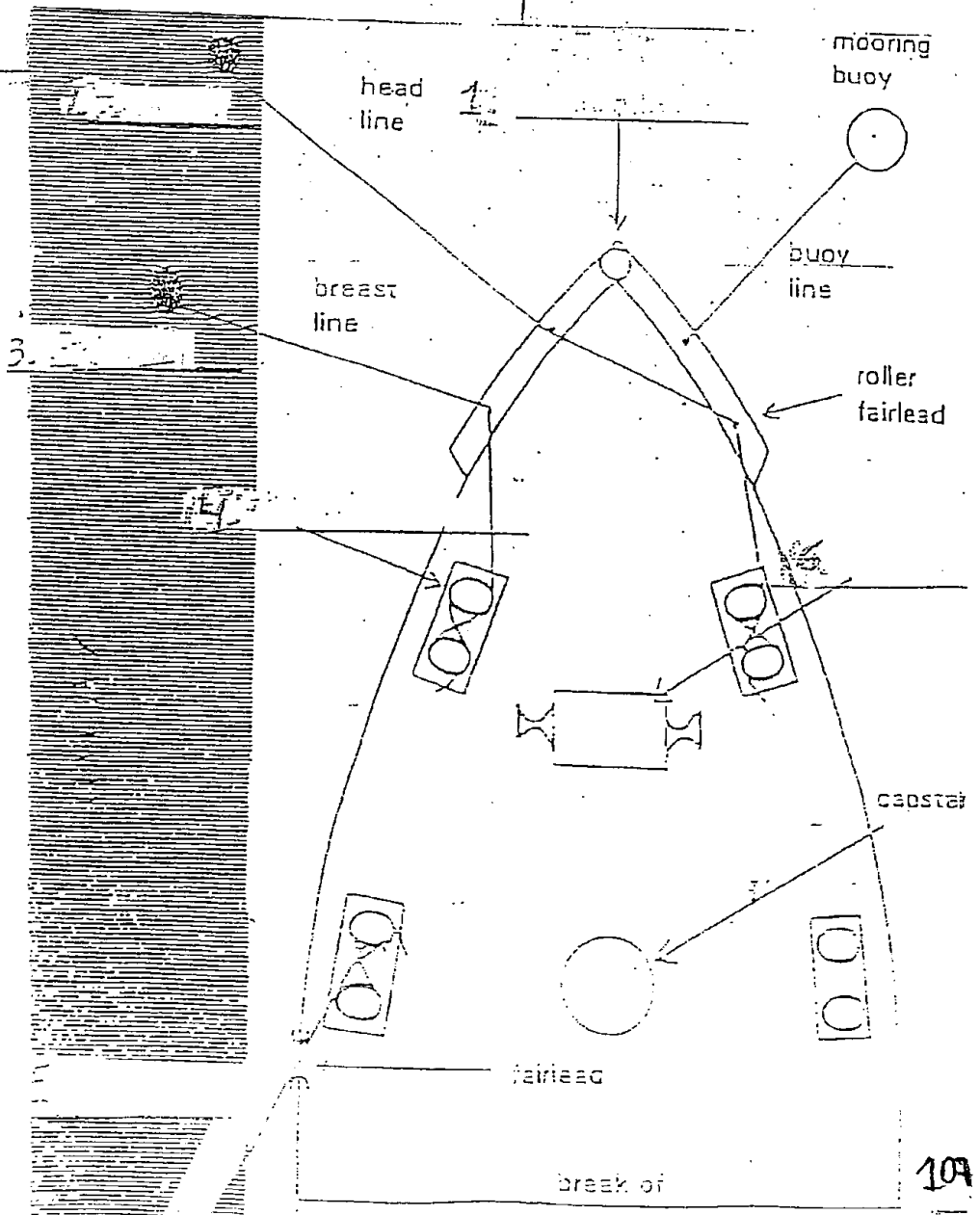
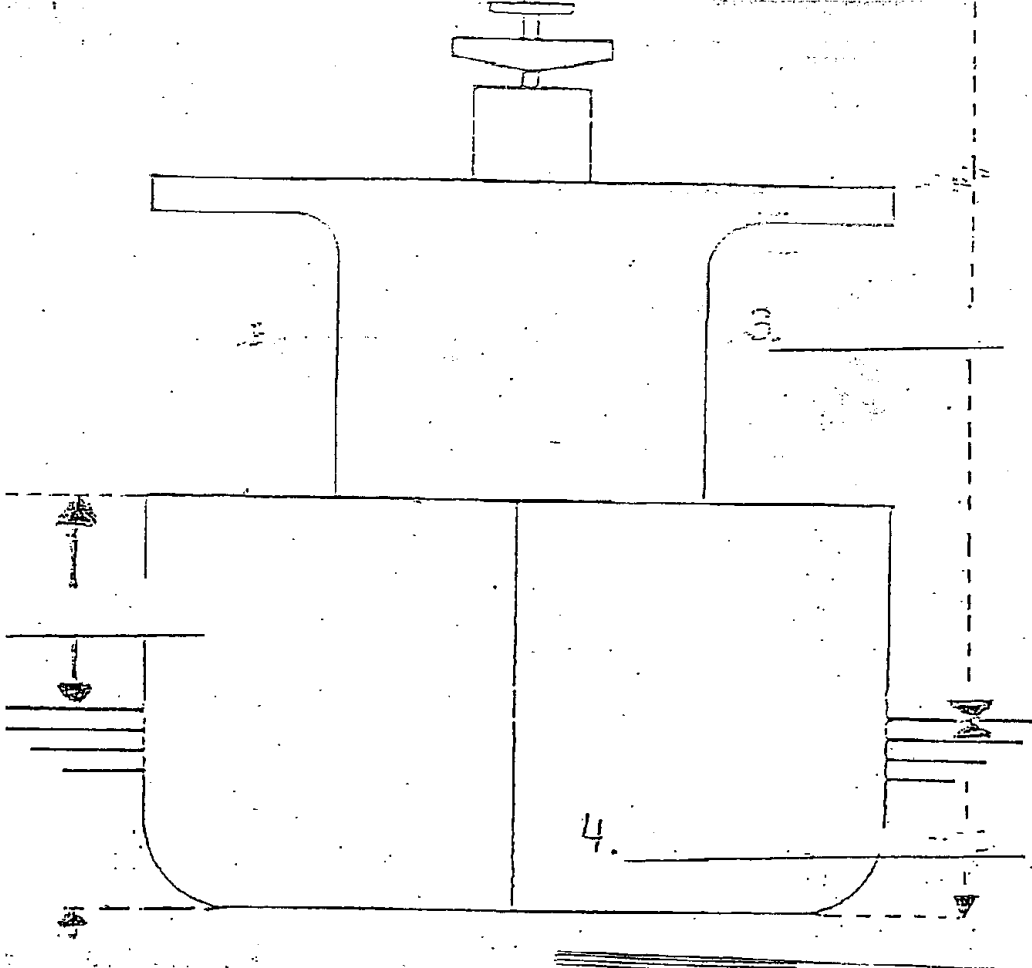
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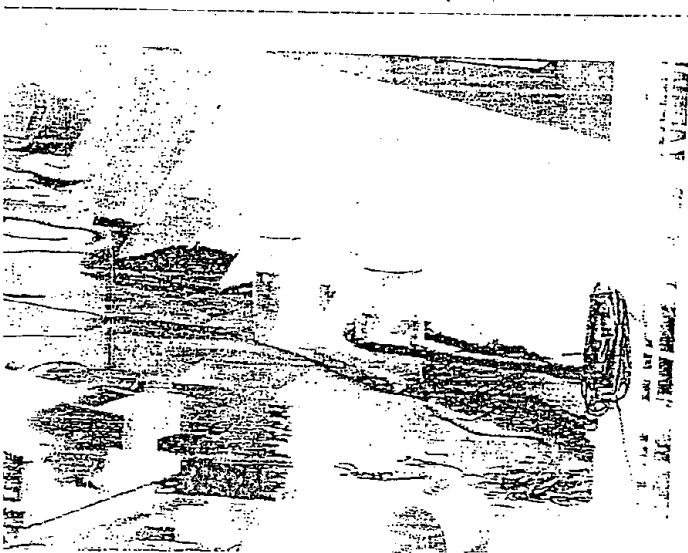
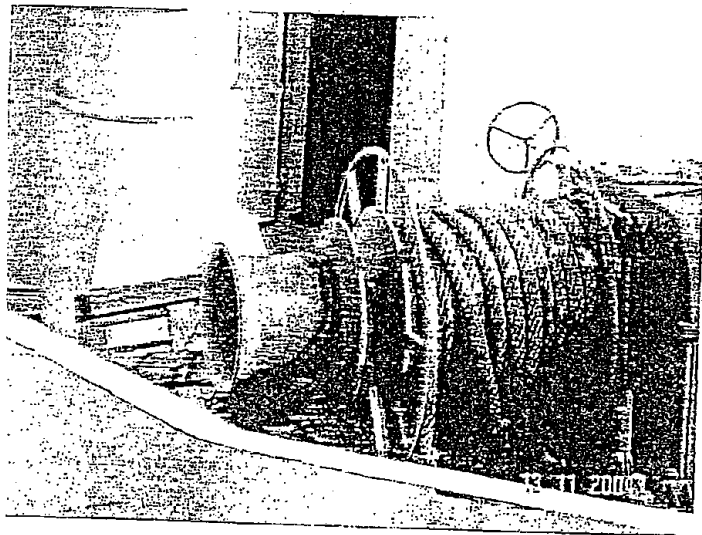
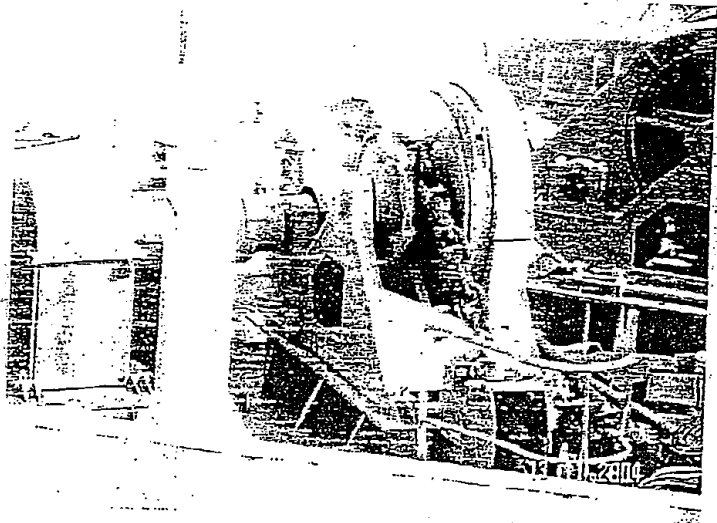
SKETCH 1

Put the following words into the correct place (34)

- under keel clearance
- draft
- air draft
- freeboard



Match the definitions with the words below



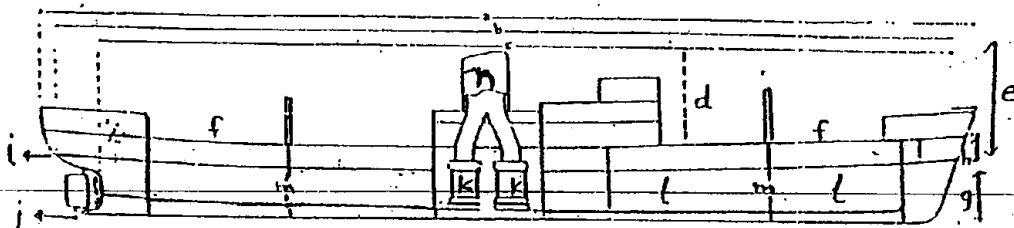
1. On shore, lines and springs are made fast on
2. On a vessel lines and springs are made fast on
3. It is used to heave up the anchor
4. The wire leading aft from the forecastle to the shore is called
5. Circular fairleads at ends of a ship. Necessary when being towed by locomotives in the Panama Canal

- windlass
- bitts/bollards
- bollards
- ~~anchored~~ Panama lead
- forward spring

Matching

A	B
1. bottom	a. αμπάρι
2. bulkhead	b. διάπραγμα
3. engine room	c. έξοδα πλοίου, ψηλά
4. freeboard	d. Ισαλός γραμμή
5. hold	e. κύριο κατάστρωμα
6. length at the waterline	f. μήκος πλοίου κατά την Ισαλο γραμμή
7. length at the perpendiculars	g. μήκος μεταξύ των ορθών
8. main deck	h. συνολικό μήκος
9. overall length	i. χώρος μηχανών
10. superstructure	j. ύψος
11. waterline	k. υπερκατασκευή
12. funnel	l. καπνοδόχος / τσιμινιέρα

B. Study the diagram carefully and find out which term each letter is matched with.



- | | |
|-------------|-----------------------------------|
| bottom | hold |
| bulkheads | length at the waterline |
| draught | length between the perpendiculars |
| engine room | main deck |
| freeboard | overall length |
| funnel | superstructure |
| height | waterline |
| | air draught |

8 What's the time?



Look at the different ways of telling the time on shore and at sea.

On shore	At sea from midnight to noon	At sea from noon to midnight
	0900 0600	2100 1800



Complete the times.

		you write	you say	
1	8.00 am	0800	zero eight hundred hours	
2	7.25 pm	1925	nineteen twenty-five	
3	10.20 am			
4	2.00 pm			
5	5.00 pm			
6	8.30 pm			
7	10.15 pm			
8	11.40 pm			
9	1.55 pm			
10	1.00 am			