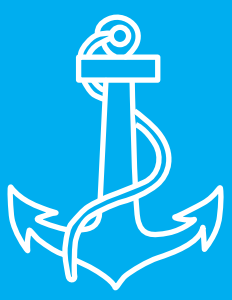
MINISTRY OF MARITIME AFFAIRS
AND INSULAR POLICY
SEAFARERS TRAINING DIRECTORATE

ON BOARD TRAINING RECORD BOOK FOR DECK CADETS

(SECOND SEAGOING TRAINING PERIOD)

O.T.R.B. 2

DECK DEPARTMENT



PIRAEUS 2021

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INSTRUCTIONS

FOR THE DECK OR ENGINEER OFFICER IN CHARGE OF TRAINING

The present book contains the English translation of all the texts and tasks contained in the Greek on board training record book for deck/engineer cadets of the second seagoing training period and its purpose is to inform the deck or engineer officer in charge of training on board the vessel of the duties and tasks that the trainee has to carry out during his/her second mandatory seagoing service. The content of the book is laid out per page and task, just like it is presented in the corresponding Greek training record book. Any tasks in the Greek training record book that contain terms or information already written in English, have not been included in this book. Instead of them, a note has been written that refers to the information already included in the Greek training record book.

ΙΔΡΥΜΑ ΕΥΓΕΝΙΔΟΥ
1954

Pages 9-10

TRAINING REGULATION OF THE MERCHANT MARINE ACADEMIES (M.M.A.) FOR DECK AND ENGINE OFFICERS

ARTICLE 22

ON BOARD TRAINING SEAGOING SERVICE

1. (a) During the first seagoing training period the student is obliged to perform a seagoing service of 5-6 months and during the second seagoing training period a seagoing service of 6-7 months, provided that the overall length of both seagoing periods is not less than twelve (12) months.

(b) A student who, for whatever reason, has not completed the aforementioned designated seagoing service during the first or the second seagoing training period, may register for the 2nd or the 4th semester respectively, as long as the seagoing service s/he has completed is short of the minimum allowed limit of the first seagoing training period or the total of the minimum limits of both the first and the second seagoing training periods respectively, proportionate to the percentage (15%) of the absences mentioned in paragraph 1 of article 21 of the current Regulation (s/he should have completed a minimum seagoing service of at least four (4) months and seven (7) days and nine (9) months and ten (10) days respectively), provided that before graduating from the Academy and within the time limits determined in paragraph 9 of article 19 of the current Regulation, s/he shall have completed the mandatory overall twelve-month seagoing service.

(c) If the first and the overall (first + second) seagoing services have a shorter length than the limits mentioned in the previous case (b), it is possible for the student to exceptionally register for the 2nd or the 4th semester respectively, via a ministerial decision and under the following conditions:

1. The first seagoing service must have a minimum length of three (3) months or the first and the second seagoing services must have an overall minimum length of eight (8) months and have been assessed as successful by the bilateral assessment committee.
2. There is enough evidence for an Act of God or other reasons that justify the exceptional registration of the student.
3. The view of the Merchant Marine Academy Council is positive and
4. Before graduating from the Academy and within the time limits determined in paragraph 9 of article 19 of the current Regulation, the student shall complete the mandatory overall twelve-month seagoing service.

2. During each seagoing service the student has to complete:

(a) An on board training record book and

(b) A personal work logbook.

3. The ship's navigational or engineer officer in charge of training writes down an appropriate account regarding the trainee's general progress, which shall then be signed by the master and handed inside a sealed envelope to the trainee who has to deliver it to the Academy.

4. The student who has completed the first or the second seagoing service submits an application for his/her registration for the 2nd or the 4th semester respectively, attaching to it the on board training record book fully completed, the personal work logbook and the training officer's account enclosed in the sealed envelope. Then, s/he verbally supports the practical training s/he has had on board in the form of an interview, before a committee that consists of two instructors of maritime subjects of his/her specialty.

In the condition that an adequate number of instructors of maritime subjects of the student's specialty are not permanently employed in the Academy, casual associate instructors of maritime subjects may be members of the assessment committee.

5. After the student's interview has been completed and after taking into consideration the

navigational or engineer training officer's account, the above-mentioned committee decides whether the student's seagoing service was successful or not by writing a relevant report.

6. The committee's meetings, as well as the relevant reports, must be completed, in any case, before the beginning of the corresponding semester. In the case of a student's exceptional late registration as per article 3 of the current Regulation, the committee holds a meeting whenever it is required, after the beginning of the 2nd or the 4th semester until the date that the student is to be rejected due to absences.

7. If the seagoing service is ruled as unsuccessful, the student is obliged to perform it again and is excluded from attending the next semester at the Academy. The seagoing service is to be performed within the time limits determined in paragraph 5 of article 2 of the current Regulation.

8. The student who does not successfully complete the seagoing service for the second time until the beginning of the next semester, is permanently rejected from the Academy.

The student is also permanently rejected from the Academy when, although s/he had the right to perform the first or the second mandatory seagoing service:

(a) s/he does not show up at his/her Academy to register for the 2nd or the 4th semester respectively, within the limits determined in paragraphs 1 and 3 of article 3 of the current Regulation, during the current as well as the next academic year, or

(b) s/he does not show up at his/her Academy to register for the 2nd or the 4th semester respectively, within the limits determined in paragraphs 1 and 3 of article 3 of the current Regulation, during the current as well as the next academic year and if during the next academic year the seagoing service s/he has completed is ruled as unsuccessful, or

(c) if during the current academic year the seagoing service s/he has completed is ruled as unsuccessful and during the next academic year s/he does not show up at his/her Academy to register for the 2nd or the 4th semester respectively, within the limits determined in paragraphs 1 and 3 of article 3 of the current Regulation.

9. After the assessment of each mandatory seagoing service, the students' on board training record books (O.T.R.B) and personal work logbooks are kept in the Academy's secretariat for six (6) months and afterwards they are destroyed.

Page 11

STUDENT'S PERSONAL DETAILS

FULL NAME:……..... FATHER'S NAME:……
SEAMAN'S BOOK No.:…… DATE OF REGISTRATION:…… REGISTRATION No.:…….
STUDENT'S ORIGIN (1):…..……..
……

VESSEL'S DETAILS

Vessel's s/n	Name and type of vessel (2)	Ship's register	Date	
			Sign on	Sign off

(1) Specify the name of the student's Academy.
(2) M/V = Cargo vessel, M/T = Tanker, P/S = Passenger vessel, F/B = Ferry Boat, LNG or LPG = Gas Carrier, Ro/Ro = Roll on/Roll off, OBO = Oil Bulk Ore Carrier, etc.

SPECIMEN

SPECIAL ACCOUNT

For the student ……... (1)
The undersigned …… (2)
…….. (3) of the M/V …… (4) flying the …… flag, registered in ……., GRT ……
with …….. main engines, horsepower ……,
hereby report the following:

1. The student of the Merchant Marine Academy of …….. (5) …… (1) father's name …… (6) Seaman's Book No. …… signed on the vessel on …../…../20….. and signed off on …../…../20….. (7).

2. During his/her seagoing service s/he was occupied under my supervision and instructions as training officer in charge of practical training according to what is determined in the on board training record book of the Merchant Marine Academies (O.T.R.B. 2).

3. Further remarks:……
……
……
……
……

Date ……

The officer in charge

…… (8)

ATTESTED
Date ……
THE MASTER
Vessel's stamp – Signature

NOTE

This account is filled in after the completion of the second training seagoing service.
In case the training officer or the trainee sign off before the completion of the training seagoing service an account is written for the period of service until the day of discharge.
The new training officer writes a supplementary account.
(1) Student's full name.
(2) Training officer's full name.
(3) Master or Engineer.
(4) Vessel's name.
(5) Student's Academy.
(6) Father's name.
(7) The dates should be written in two digits (e.g. 07/02/2000).
(8) A signature and the ship's stamp are printed. If the training officer is not the Master, the Special Account is attested by the Master with his signature and the vessel's stamp.

Page 13

TASK PROGRESS GUIDE

You may follow the progress of your tasks by crossing out the numbers of the tasks you have undertaken in the following table.

	"PARTICULARS OF THE VESSEL" completed	"FAMILIARISATION WITH THE VESSEL" carried out
First vessel		
Second vessel		
Third vessel		

NUMBERS OF TASKS (N/T)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

…… The table goes up to number 204.

Page 14

PORTS OF CALL

GUIDELINES

Complete the following table at every port, where your vessel loads or discharges her cargo. If your vessel calls at more than one port per week, it will be sufficient to mention one port per week.

Voyage No.	Date		Port	L=Loading D=Discharging	Kind of cargo (English and Greek name)
	Arrival	Departure			

Pages 15-19

WEEK	NUMBER OF TASKS (N/T) CARRIED OUT EVERY WEEK (1)					TOTAL OF TASKS	TRAINING OFFICER'S CERTIFICATION (2)
1st FROM:..... TO:.....						(in full)	..... (place) ..... (date) ..... (signature) (stamp)

In the rest of the table, up to page 19, only the serial number that refers to the weeks on board is changing (2nd to 30th week).

At the bottom of each page the following notes are included:

(1) Only one N/T is filled in each square. The blanks are crossed out with two diagonal lines.
(2) The training officer certifies that the tasks mentioned have been undertaken on board during the corresponding week.

Page 20

UNIT CONVERSION TABLE

METRIC m, cm, kg, M.T.		IMPERIAL ft, inch, LT, Pounds	ENGLISH ft, inch, LT, Pounds		IMPERIAL m, cm, kg, M.T.
millimetres	× 0,03937 →	inches	inches	× 25,4 →	millimetres
centimetres	× 0,3937 →	inches	inches	× 2,54 →	centimetres
metres	× 3,2808 →	feet	feet	× 0,3048 →	metres
square metres	× 10,764 →	square feet	square feet	× 0,0929 →	square metres
cubic metres	× 35,316 →	cubic feet	cubic feet	× 0,0283 →	cubic metres
kilograms	× 2,2046 →	libres [1]	libres	× 0,45359 →	kilograms
kilograms	× 0,0009842 →	long ton [2]	long ton	× 1016,047 →	kilograms
metric tons [3]	× 0,9842 →	long ton	long ton	× 1,016 →	metric tons
TPC [4]	× 2,4998 →	TP1" [5]	TP1"	× 0,4 →	TPC
MTC [6]	× 8,2014 →	MT1" [7]	MT1"	× 0,122 →	MTC
m.rad	× 187,9767 →	ft x deg	ft x deg	× 0,0053 →	m.rad
specific gravity (MT/m³)	× 0,0279 →	sp.grav (LT/f³)	specific gravity (LT/f³)	× 35,88 →	sp.grav (MT/m³)
stowage factor (m³/MT)	× 35,88 →	st.fac. (f³/LT)	stowage factor (f³/LT)	× 0,0279 →	st.fac. (m³/MT)
metric tons [8]	× 3,229 →	long tons [9]	long tons	× 0,3097 →	metric tons

RELATION BETWEEN VOLUME AND WEIGHT OF WATER

1 cubic metre of fresh water (specific gravity = 1) = 1 metric ton (1000 kg)
1 cubic metre of seawater (specific gravity = 1,025) = 1,025 metric tons (1025 kg)
1 cubic metre of seawater = 0,975 cubic metres

[1] Pounds or libres
[2] 1 Long ton = 2240 LBS
[3] 1 Metric ton = 1000 kg = 1 ton
[4] Metric tons per cm
[5] Long tons per inch
[6] Metric tons per cm
[7] Long tons per inch
[8] Metric tons
[9] Long tons

TRAINEE'S TASKS

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PARTICULARS OF THE VESSEL

Having full knowledge of the vessel is a basic characteristic of a good officer. The completion of the table below will help you systematise and supplement your knowledge on this matter.
Instructions: It is essential that you complete both columns, SI (Metric system) and Imperial (English system). If the particulars of the vessel are provided in one unit system only, use the table on page 20 for the conversion. In the last column write the Greek translation of the terms mentioned in the first column.

FIRST VESSEL

VESSEL'S NAME			Call Sign
	S.I.	IMPERIAL	GREEK TRANSLATION OF THE FIRST COLUMN

Page 25

SECOND VESSEL

VESSEL'S NAME			Call Sign
	S.I.	IMPERIAL	GREEK TRANSLATION OF THE FIRST COLUMN

Page 27

THIRD VESSEL

VESSEL'S NAME			Call Sign
	S.I.	IMPERIAL	GREEK TRANSLATION OF THE FIRST COLUMN

Page 29

FAMILIARISATION WITH THE VESSEL

FIRST VESSEL: ……

Complete the following items:

WHAT IS THE DISTRESS SIGNAL	
WHAT IS THE ABANDON SHIP ALARM SIGNAL	
WHAT IS THE FIRE ALARM SIGNAL	
WHAT IS THE FLOODING ALARM SIGNAL	
WHAT IS YOUR STATION WHEN ABANDONING THE VESSEL	
WHAT ARE YOUR DUTIES IN CASE OF FIRE	
WHAT ARE YOUR DUTIES IN CASE OF FLOODING	

TASKS OF FIRST PRIORITY	Training Officer's signature	Date
Bridge layout and equipment understood (instruments, equipment, switches, fuses etc.).		
First aid equipment and its keys located on board vessel.		
Fire fighting equipment (alarm activating points, alarm bells, extinguishers, hydrants, fire axes and hoses) located on vessel.		
Line throwing apparatus located on vessel.		
Distress rockets, flares and other pyrotechnics, breathing apparatus, fire-fighter's outfit and equipment located on vessel.		
Emergency stops for main engine located on deck and safety valves located on vessel.		
Watertight doors located on vessel and their operation comprehended (mechanic and manual).		
CO_2 bottle room located on vessel and system operation comprehended.		
Valves of smothering apparatus located in pump room, cargo tanks and cargo holds.		
Emergency fire pump located.		
Change of rudder from automatic/manual to emergency or auxiliary comprehended.		
Load lines (for a tanker) or cargo space layout (for a cargo vessel) comprehended.		

Page 30

FAMILIARISATION WITH THE VESSEL

SECOND VESSEL: ……

Complete the following items:

The table is similar to that of page 29.

Page 31

FAMILIARISATION WITH THE VESSEL

THIRD VESSEL: ……

Complete the following items:

The table is similar to that of page 29.

Page 32

LIFESAVING EQUIPMENT

N/T	TASK
1	As per Regulation …… (mention chapter and number of regulation) of SOLAS 1974/78, complete, both in Greek and English, the following table with the equipment an inflatable liferaft should have. **Greek** **English** **Quantity**
2	Complete the following information regarding the liferaft in N/T 1. a) Lifeboat No. ……. b) Construction material …….. c) Length …… d) Breadth …… e) Lateral height …… f) Capacity in cubic metres …… g) Number of persons …… h) Floatation tanks: Material ……..... Volume ……. Which of the above-mentioned items must be marked on the liferaft and where? What other items should be marked on the liferaft and where? …… ……

Page 33

N/T	TASK
3	Complete the following table regarding the liferaft in N/T 1. (Write the Greek translation in the brackets provided). Maker & Type ( ) Manufacturing Date ( ) Expiry Date ( ) Hand flares Smoke signals Parachute signals If the expiry date is not marked, how can it be calculated? What are the manufacturer's instructions for using the above-mentioned emergency pyrotechnics? (If written in a foreign language, copy them in that language and provide a Greek translation next to them). …… ……

Page 34

N/T	TASK
4	Describe the system through which the tackles of the lifeboat are freed. Also describe the relevant instructions and conditions for its proper operation. What kind of hazards might arise due to bad operation or wrong handling of the system? …… ……

Page 35

N/T	TASK
5	Describe in detail an abandon ship drill on your vessel. …… ……

Page 36

N/T	TASK
6	How many liferafts are there on your vessel? What is their capacity? Which regulation states their number and capacity, and what exactly is required for your vessel? Where is each liferaft located? …… ……

Page 37

N/T	TASK
7	Find out when the lifeboat launching system is examined and maintained. Describe in detail the maintenance work carried out and the safety measures taken to prevent any accidents for the crew. …… ……

Page 38

It is certified that the trainee has participated in the following abandon ship drills, during which the lifeboats were launched and the crew practised.

Date	Signature	Port	Number of lifeboat	Type of practice (rowing, etc.)

N/T	TASK
8	Answer the following questions regarding lifebuoys. Write down what can be found on your vessel in the first column and what is required by SOLAS regulation no. (……)* in the second column. Lifebuoys 1 2 Total number Construction material “ “ Colour Number of lifebuoys equipped with: a) Line …….. b) Automatic light …… c) Length of line …….. d) Construction material of line …… e) Smoke signal …… …… …… …… …… …… …… …… …… …… …… How can the good condition of lifebuoys be checked and what kind of maintenance is required? …… …… **Note:** * To be completed by the trainee.

Page 39

N/T	TASK
9	Your vessel is sailing in the open sea when suddenly a sailor falls overboard. Mention all the things that the Officer of the watch on the bridge should do, in the proper chronological order. …… ……
10	What is the proper way of getting rid of pyrotechnics that have been replaced due to their expiry date? Mention at least two reasons why they should not be used for testing or training purposes. …… ……

Page 40

FIRE SAFETY

N/T	TASK
11	Draw a graph of the fixed fire-extinguishing system in the cargo space of your vessel. It is sufficient to draw the branch in a hold or tank, but all the valves necessary for the operation of the system should be displayed. Consulting the graph and referring to it, write a detailed description of the system's operation, as well as specify the valves which should open or close. If the vessel is not fitted with a fixed fire-extinguishing system for the cargo holds, do the same task for the corresponding system that can be found in the engine room.

Page 42

FIRE SAFETY

N/T	TASK
12	Describe briefly the operation of the fire-detecting system on your vessel, referring also to the areas this system monitors, the manufacturer's name and its type. ……

Page 43

OCCUPATIONAL SAFETY

N/T	TASK
13	Every time the vessel is about to arrive at a port, a lot of arrangements must be made and certain things have to be checked, to ensure complete readiness (e.g. pilot ladder, power at the mooring winches and the windlass, signals and flags, etc.). The same issues apply to departure. Write down two checklists, one for arrival and another one for departure, which should include all the arrangements and all the things that should be checked. …… ……

Page 44

OCCUPATIONAL SAFETY

N/T	TASK
14	A mooring plan of a vessel is given below. Draw a sketch of a similar mooring operation during your seagoing service on board the vessel and describe all mooring procedures (mooring equipment and communications check), without any reference to engine manoeuvres, rudder position, use of tugs, etc. If you didn't experience any such operation, discuss the plan below with the master or another officer on your vessel and describe the procedures followed during this particular mooring operation. …… ……

Page 45

OCCUPATIONAL SAFETY

N/T	TASK
15	At what pressure does the warning whistle of the self-contained breathing apparatus of your vessel begin to sound? How many minutes is there adequate oxygen available for after the warning whistle has sounded? …… ……
16	You are about to enter a dangerous enclosed space using the self-contained breathing apparatus of your vessel. Write down a checklist of all the parts that should be examined, to ensure that the apparatus is operational. …… ……
17	Using the indication on the pressure gauge of the self-contained breathing apparatus of your vessel, how can you calculate the time for which there is adequate air still available in the cylindrical tank? …… ……
18	How is the fit and air-tightness of the mask checked? Why is this check important? …… ……

Page 46

OCCUPATIONAL SAFETY

N/T	TASK
19	Provide two examples of enclosed spaces on your vessel, the entry to which could be dangerous. Mention the particular hazards you might encounter inside each one of these spaces and the safety measures that should be taken before entry is permitted. …… ……
20	Write down a checklist that includes all those points that should be checked before entry to one of the two spaces of N/T 19 is permitted. …… ……

Page 47

OCCUPATIONAL SAFETY

N/T	TASK		
21	Complete the orders used on the bridge relevant to the vessel's manoeuvres (steering – engine controls – mooring lines – tugs, etc.) in the table below.		
	Greek term	**English term**	**Definition**

Page 48

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA

Learning each regulation is separately certified by the Master by writing the date and signing.

N/T	Regulation	Date	Signature
22	Annex IV		
	1		
	2		
	3		

N/T	Regulation	Date	Signature
31	Annex I, par. 1		
	Annex I, par. 2		
	Annex I, par. 3		
	Annex I, par. 5		
	Annex I, par. 6		
	Annex I, par. 9		
	Annex I, par. 10		
	Annex I, par. 11		
	Annex II		

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INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA

N/T	TASK
32	Write a complete list of spare navigation lights available on your vessel, or what is used on your vessel in case of a BLACK OUT. …… ……
33	Which regulation imposes the supply of every vessel with the lights mentioned in N/T 32? If your vessel is not provided with these lights, what means are available for dealing with damage to the main electrical power supply and which regulation permits this arrangement? …… ……

Page 50

CARGO HANDLING EQUIPMENT

N/T	TASK
34	Draw sketches of the equipment (slings, pallets, etc.) used for handling (loading-discharging) three cargoes transported by your vessel. Write the English and Greek name, their dimensions, as well as a brief description of them.

Page 51

CARGO HANDLING EQUIPMENT

<table>
<tr><th>N/T</th><th colspan="3">TASK</th></tr>
<tr><td>35</td><td colspan="3">Learn the signals made by the people in charge to the winch operators during cargo handling operations and describe them.
……
……</td></tr>
<tr><td rowspan="4">36</td><td colspan="3">Write, both in Greek and in English, the orders used when handling lifts and ropes, as well as their corresponding definitions.</td></tr>
<tr><td>Greek</td><td>English</td><td>Definition</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>37</td><td colspan="3">Write how often the winches of your vessel are lubricated, which parts and what kind of lubricant is used for each part.
……
……</td></tr>
</table>

Page 52

CARGO HANDLING EQUIPMENT

N/T	TASK
38	Draw a sketch of a cargo block of your vessel, mention at least six parts you should examine during its inspection and use numbers to indicate each one of them accordingly.
39	Mention at least four things you need to pay attention to, relative to the use of each cargo block. …… ……
40	Describe how a thorough examination of a cargo block is carried out, referring to all the parts that shall be examined. …… ……

Page 53

CARGO HANDLING EQUIPMENT

N/T	TASK
41	Describe in detail the safety measures taken on your vessel, when the cargo holds are opened, regarding the hatch covers (cargo ports, hatch beams, pontoons, Mac Gregor, etc.) and how the crew members and any other workers should move around them.
42	Describe how cargo stowage should be carried out around the hatch of the 'tween deck, when the cargo on the lower deck is the first to be unloaded. …… ……

Page 54

CARGO HANDLING EQUIPMENT

N/T	TASK
43	If your vessel is fitted with cranes, explain the following terms: (a) Limit switch: …… (b) Automatic overload cut-out: …… (c) Indicator of safe working load: ……
44	If the crane on your vessel has a limit switch, when is it activated? …… ……
45	Describe how the edge of the runner is secured on the crane's drum and mention how many passes of the runner still remain on the drum when the hook reaches the tank top. …… ……

Page 55

CARGO HANDLING EQUIPMENT

N/T	TASK
46	If the cranes have a variable radius, locate the point where this radius is measured and write it down. Moreover, write down the SWL that corresponds to the maximum radius, to the half (½) and to a quarter (¼) of the maximum radius. What is your conclusion? …… ……
47	If the wind speed exceeds that which is permitted for the cranes of your vessel to operate, what do you have to do? …… ……
48	How many levers does a crane on your vessel have and what does each one do? …… ……
49	Describe how the cranes of your vessel are secured for the open sea. …… ……

Page 56

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
50	Sketch a detailed longitudinal section of the fore part of your vessel, from the stem to the fore peak tank and indicate the following: (a) the fore peak tank, (b) the bosun's store, (c) the chain locker, the spurling pipes, the hawse pipes, the cofferdam which is under the chain locker, (d) the manholes of the fore peak tank, (e) all decks and floors, (f) the bulwarks, (g) the windlass.

Page 57

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK	
51	Sketch a detailed longitudinal section of the aft part of your vessel, up to the after peak tank, indicating the items in the table below. Write the Greek translation in column (2) of the table.	
	English terminology (1)	**Greek translation (2)**
	(1) After peak tank with floors and stringers	
	(2) Steering engine room	
	(3) Storerooms	
	(4) Shaft alley escape trunk	
	(5) Access to tanks and other compartments	
	(6) Decks and flats	
	(7) Companionways	

Page 58

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
52	At the aft part of the tunnel, the propeller shaft goes through the after peak tank. Draw a sketch of this arrangement including the stern tube, the stern tube bearings, the stern gland, etc. Also, describe how the propeller shaft is lubricated and maintained. …… ……

Page 59

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
53	Complete the following details regarding the propeller(s) of your vessel: Main Spare (a) Construction material: _____ (b) Pitch: _____ (c) Right-hand or left-hand:_____ (d) Diameter:_____ (e) Weight: _____ (f) Revolutions per minute at full ahead:_____
54	Where is the spare propeller located and how is it lashed? …… ……

Page 60

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
55	Several openings on deck decrease its strength significantly. For this purpose, the construction of the vessel is particularly reinforced in the area of these openings. However, as constructional damage often occurs in these areas, they must be taken special care of when maintenance work is carried out on the vessel. Sketch a section of a cargo hatch (or tank hatch) and indicate the reinforcements mentioned above.

Page 61

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
56	Sketch the plan view of a 'tween deck, divide it into sections and indicate the capacity of each section in cubic metres or cubic feet, which you shall calculate based on the dimensions you shall measure in the 'tween deck, not on a sketch. Indicate all these calculations and state the purpose this sketch serves.

Page 62

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
57	After the completion of an unloading operation, follow the Chief Officer to the cargo hold inspection in order to detect any damage that might have occurred during cargo handling operations and dictate the damage report of at least one cargo hold. Also, write the translation of this report from English into Greek or vice-versa, depending on the language the report was originally written in. …… ……

Page 63

CONSTRUCTIONAL ELEMENTS OF THE VESSEL

N/T	TASK
58	How can you check whether the ceiling of a double bottom ballast tank (tank top) is watertight? What is the pressure that the tank top shall undergo during testing and how have you figured it out? (Mention the calculation in detail). …… ……
59	Draw the base of a mast on deck, in such a way as to clearly point out the means of support and any reinforcements in that area. Mention the dimensions of constructional elements (plating thickness, etc.) on the sketch.

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VESSEL MAINTENANCE

N/T	TASK
	Regarding your vessel's space mentioned in N/T 60 to 65, answer the following questions: (a) what kind of coating is used in these spaces? (e.g. cement, epoxy, etc.). (b) What kind of maintenance is required and how often is it carried out? (c) How are those spots/places – where the coating has been destroyed – recoated? (d) What particular protective measures must be taken when tasks (a) and (b) are carried out, regarding the space and materials used? Write the appropriate English term for each space in the brackets provided.
60	Chain locker ( ) …… ……
61	After peak tank ( ) …… ……
62	The interior of a cargo hold ( ) …… ……

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VESSEL MAINTENANCE

N/T	TASK
63	Bilge ( ) …… ……
64	Double bottom tanks (intended for ballast) ( ) …… ……
65	Forecastle deck ( ) …… ……

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VESSEL MAINTENANCE

N/T	TASK
66	Suppose that the fore peak tank is in bad condition in terms of maintenance and needs to be chipped and covered with an appropriate coating. Write a detailed description of the aforesaid task and, among other things, mention the following details regarding each stage (cleaning, chipping, first coating, second coating, etc.): a) The number of people and the total of man-hours required. b) Any tools to be used (types and number). c) Materials (quantities). d) Potential hazards and corresponding safety measures. (If, during your seagoing service on board the vessel, a similar task is carried out in the fore peak tank or another similar space, e.g. double bottom tank, cofferdam, cargo hold, etc., for the completion of the current task, you should take that space into consideration and mention (a) the percentage of the space surface regarding each stage of work, e.g. 40% chipping, (b) the number of people and man-hours you estimated for each stage and the actual number required). …… ……

Page 67

VESSEL MAINTENANCE

N/T	TASK
67	Paintwork is being carried out on your vessel. After the completion of paintwork, the bosun has to tidy up the store where various pieces of equipment are stored, e.g. half-full buckets, used paint-brushes, etc. Suppose you are the Chief Officer and you are inspecting the space to ensure everything is in order. Mention in detail the places you will pay special attention to and the consequences if these places are not in the way you think they should be. Take all relevant factors, such as safety, maintenance, economy and convenience into consideration. …… ……

PAINTS
GUIDELINES FOR CARRYING OUT N/T 68

1) Complete all paints stored in the vessel's store in column (1).
2) In order to complete column (2), you shall have to keep a record of the amount consumed and the surface coated every time paintwork is carried out. You shall find the required number by dividing the surface by the amount.
3) Mention, in general, the spaces or areas on the vessel where the paint is used and its purpose in column (3). To mention the purpose of the paint, use the Greek terms corresponding to the following English ones: a) Pre-treatment of surface, b) Anti-rust primer, c) Antifouling, d) Undercoating, e) Finishing coat, including the English term in brackets.
4) Mention any special paint requirements (e.g. temperature, time margin after mixing epoxy paints, etc.) in column (4).
5) Mention any hazards that might be caused by the use of paint (e.g. poisonous fumes) and the necessary precautions (e.g. use of mask) in column (5).
6) Write the Greek translation of the headings in the brackets provided.

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VESSEL MAINTENANCE

See guidelines page.

N/T **68**

Trade name ( ) (1)	Covering power ft^2 per gal or m^2 per lit (2)	Use ( ) (3)	Special application requirements ( ) (4)	Special hazards and respective precautions ( ) (5)

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NAVIGATION

N/T	TASK
69	Complete in order of use the following tables with the charts and the nautical publications (e.g. list of lights, pilot books, radio signal lists, tide tables, etc.) used throughout a complete voyage. Port of departure ..... Date ..... Port of arrival ..... Date ..... CHARTS

Chart No.	Title	Scale	Date of latest update

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NAVIGATION

N/T	TASK
69 (cont.)	CHARTS

Chart No.	Title	Scale	Date of latest update

NAUTICAL PUBLICATIONS

Title	Date of issue	Purpose of use

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NAVIGATION

N/T	TASK
69 (cont.)	Describe how you selected the charts and nautical publications entered in the previous tables. …… ……

Page 72

NAVIGATION

N/T	TASK
	The use of gyrocompasses, radar and electronic instruments in general, has limited significantly the use of traditional navigational methods and, as a result, today's candidate navigational officers do not have many opportunities to practise them. However, the knowledge of these methods and the ability to implement them is still necessary for every navigational officer for two main reasons: (a) because, a lot of times, it is only with these methods that checking the good operation of electronic instruments may be possible and (b) because, in case of electronic instruments failure, the traditional methods are the only ones that can be implemented. ***During the previous two semesters, you were taught all methods of coastal navigation. During the current semester you must carry on practising both modern and traditional navigational methods. For this purpose, try to determine position using two methods (e.g. with two or three radar distances and with two or three bearings) whenever this is possible and compare your results. If possible, do not forget to calculate your distance from a certain point using your bare eyes, before calculating it with the use of a specific instrument or your position. In this way, you will practise calculating distances and avoid making serious mistakes in the future. Your practice shall include the implementation of the methods mentioned in N/T 70 to 77 for at least five times.***

N/T	TASK	MASTER'S SIGNATURE	DATE
70	With 2 and 3 bearings.		
71	With a visual bearing and radar distance.		
72	With 2 and 3 radar distances.		
73	With a visual bearing and distance on a vertical angle.		
74	With two bearings of the same object while the vessel is sailing.		
75	With an alignment and a bearing of another object.		
76	With an alignment and a distance.		
77	With a bearing of a lighthouse at the moment it appears in the horizon.		

NAVIGATION

N/T	TASK
	Choose three long voyages (at least 2,000 nautical miles in the open sea). In tasks N/T 78 to 80, calculate the rhumb line and the great circle distances, as well as their difference, from the point where coastal navigation is terminated (initial position of great circle sailing) to the point where coastal navigation starts over (final position of great circle sailing). If your vessel does not perform such voyages, use hypothetical ones. Measure carefully the rhumb line course and distance on the Mercator map and compare these measurements to the results of the calculation.
	Final position: Lat_F ..... Lon_F ..... M_F .....
	Initial position: Lat_I ..... Lon_I ..... M_I .....
	D.Lat D.Lon m'
	D.Lat' 360° 00'
	D.Lon .....
	D.Lon' .....
78	Rhumb line distance calculation:
	D.Lon' ..... log .....
	m' ..... log ..... D.Lat ..... log .....
	D_I ..... log tanD_I ..... log sec .....
	D_I (circ.) .... R/L.d ..... log R/L.d .....
	Great circle distance calculation:
	Lat_I ..... log cos .....
	Lat_F ..... log cos ..... R/L.d .....
	D.Lon ..... log hav ..... G/C.d' .....
	log havθ ..... R/L.d- G/C.d' .....
	havθ .....
	D.Lat ..... hav ..... R/L.d (chart) .....
	G/C.d ..... hav G/C.d ..... R/L.d (calc.) .....
	G/C.d' ..... Difference .....

Legend for tasks N/T 78-80 * ***(see note on page 65)***

Abbreviation	**Full term**
Lat_F	Final latitude
Lat_I	Initial latitude
Lon_F	Final longitude
Lon_I	Initial longitude
M_F	Meridional parts of the Latitude of the final position
M_I	Meridional parts of the Latitude of the initial position
D.Lat	Difference of Latitude
D.Lat'	Difference of Latitude in minutes
D.Lon	Difference of Longitude
D.Lon'	Difference of Longitude in minutes
m'	Meridional Difference in minutes
log	Logarithm
log tanD_I	Logarithm Tangent of Initial Direction
log sec	Logarithm Secant
log cos	Logarithm Cosine
log hav	Logarithm Haversine
hav	Haversine
log havθ	Logarithm Haversine θ
havθ	Haversine θ
D_I	Initial Direction
D_I (circ.)	Initial longitude (circular)
R/L.d	Rhumb line distance
log R/L.d	Logarithm of rhumb line distance
R/L.d (calc.)	Rhumb line distance (calculated)
G/C.d	Great circle distance
G/C.d'	Great circle distance in minutes
hav G/C.d	Haversine of great circle distance

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NAVIGATION

N/T	TASK
79	***This task is the same as N/T 78.***

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NAVIGATION

N/T	TASK
80	***This task is the same as N/T 78.***
	Mark the great circle sailings of N/T 78-80 on a gnomonic chart. Determine the latitudes where the great circle sailing intersects all meridians – between the initial and the final position – that have an integer length divisible by 5° (e.g. longitude 15°, 20°, 25°, etc.) and complete the tables of N/T 81-83. Prick the great circle sailings on a proper Mercator map.
81	Great circle sailing from initial position Lat= …… Long= …… to final position Lat= …… Long= …… Intermediate position coordinates Position Longitude Latitude Position Longitude Latitude The coordinates of the vertex is Lat=…… Long=…….. (Answer only in case the great circle sailing passes from this position).

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NAVIGATION

N/T	TASK
82	***This task is the same as N/T 81.***
83	***This task is the same as N/T 81.***

NAVIGATION

N/T	TASK
	Guidelines for doing tasks N/T 84 to 94 ***The compasses, gyro or magnetic compasses, are the only instruments for finding the direction of a vessel and good seamanship requires their examination, if possible, at least once during each watch and after every significant alteration of course. During your training, you must do at least 30 observations in order to calculate compass errors and complete your findings in the table of N/T 105.*** ***You shall have to complete only the details and findings of at least 30 observations in the corresponding columns. More specifically:*** ***(a) In column (5), after the azimuth, write the letter G or M, depending on whether it concerns an observation by means of the gyrocompass or the magnetic compass, e.g. 237,5 G or 312,0 M.*** ***(b) All gyrocompasses are subject to errors in relation to course / speed / latitude. In some gyrocompass types, this error is automatically corrected and the variation observed is due to defects. In other types, the course / speed / latitude errors are not corrected, but the correction of the compass indications is calculated based on the following type:*** ***correction (in degrees) = 0,0635 · u · cosZ · secφ*** ***where u is the vessel's speed in knots, Z is the vessel's course and φ is the latitude. The correction is negative (West) for courses ranging from 000° to 090° or 270° to 360° and positive (East) for courses ranging from 090° to 270°. This is also solved using the board that comes along with the compass. The variation observed in these compasses is a combination of course / speed / latitude error and instrument error.*** ***If your vessel's compass does not come with an automatic course / speed / latitude error correction system, you shall have to complete columns (8) and (9) as follows: (1) In column (8), complete the course / speed / latitude error taken from the manufacturer's board or by solving the type. (2) In column (9), complete the instrument error correction calculated with the type:***
	Instrument error correction = Error - course / speed / latitude error (algebraic) ***Example: On a vessel fitted with a gyrocompass without an automatic course / speed / latitude error correction system, an error 1°-/W was observed as the vessel was sailing a course 020°, speed 18 knots in latitude 63°N. Find the instrument error correction.*** ***course / speed / latitude error = 0,0635x18x0,94x2,20 = 2°,4-/W [column (8)]*** ***instrument error correction = (-1°) – (-2°,4) = -1° + 2°,4 = 1°,4+/E [column (9)]*** ***(c) If your vessel is not fitted with a gyrocompass, or if the gyrocompass is inoperative, the observations will be carried out by means of the magnetic bearing compass and columns (9) and (10) will remain blank.*** ***(d) In column (16), Remarks, you shall mention the following:*** ***1) The celestial body observed, e.g. the Sun (sunset) or Venus. Among your observations, at least 5 of them must be at sunrise or sunset and 20 observations of compass errors must be carried out with the time mentioned (4 observations of the sun, 4 observations of the moon, 4 observations of fixed stars (except for the North Star), 4 observations of the North Star and 4 observations of planets).*** ***2) The approximate altitude of the celestial body.*** ***3) The effect of the surge of the sea on the vessel, e.g. idle rolling.*** ***In tasks N/T 85 to 92, you shall have to complete details from calculations of 8 observations of compass errors with the time mentioned (2 of the sun, 2 of the moon, 2 of planets and 2 of fixed stars). You may use the ABC tables from NORRIE'S, NAFTILOS, etc. or tables of estimated azimuths (e.g. H.O. 229, BURDWOOD'S etc.) as long as they provide it in approximation of at least a tenth of a degree (e.g. the H.O. 249 tables are not suitable) and you shall carry out the required corrections regarding hour angle differences, declination differences and latitude differences. It is not necessary to use both methods.*** ***In tasks N/T 92 and 94, you shall complete details of the calculations of 2 compass error observations at sunrise or sunset.***

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NAVIGATION

N/T **84**

Date (1)	ZT (2)	Latitude (3)	Longitude (4)	Compass bearing (Gyro/ Magnetic) (5)	True bearing (6)	Gyrocompass			
						Error (7)	Course / speed / latitude error correction (8)	Instrument correction (9)	Course (10)

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NAVIGATION

True course (11)	Magnetic bearing compass				Remarks (16)
	Course (12)	Error (13)	Variation (14)	Deviation (15)	

NAVIGATION

N/T	TASK
85	Compass error …… Date …… ZT …… …… Lat_{DR} …….. Lon_{DR} …… Chron. …… CB (Gyro/Magn) …….. Chron. Corr. …… TB …… GMT …….. date GMT …… Error (Gyro/Magn) …….. Tab. GHA …….. u …… Tab. Dec. …….. d ..... Crs/spd/lat corr. …….. Incr ……... d_{corr} …… Instr. corr. …… Ucorr./SHA …….. Dec. …….. Course (gyro) …….. GHA …… Error (gyro) …….. Lon_{DR} …… Var(chart) …….. …… True course …….. LHA …….. Ann. ch… x…years= …. Course (magn) …… Var(synchr.) …… Error (magn) …… Var. …… Dev. …….. ABC Tables Estimated Azimuth Tables A …… Integer Lat …… LHA ……. Dec. …… B …… Z …… Corrections C …… Total Corr. …… Dec. Corr. …… LHA Corr. …….. TB (card.) …… TB (sem.) …… D.Lat …… TB (circ.) …….... TB (circ.) …….. Total Corr. …….....

Legend for tasks N/T 85-92 * *(see note on page 65)*

Abbreviation	Full term
ZT	Zone Time
Lat_{DR}	Latitude (Dead Reckoning)
Lon_{DR}	Longitude (Dead Reckoning)
CB	Compass Bearing
TB	True Bearing
Chron.	Chronometer
Chron. Corr.	Chronometer Correction
GMT	Greenwich Mean Time
Tab. GHA	Tabular Greenwich Hour Angle (Almanac)
Tab. Dec.	Tabular Declination
Crs/spd/lat corr.	Course/speed/latitude correction
Incr	Increment
Instr. corr.	Instrument correction
SHA	Sidereal Hour Angle
Dec.	Declination
Var(chart)	Variation (chart)
Ann. ch.	Annual change
Var(synchr.)	Variation (synchronous)
Var.	Variation
Dev.	Deviation
LHA	Local Hour Angle
Total Corr.	Total correction
Dec. Corr.	Declination Correction
TB (card.)	True Bearing (cardinal)
TB (circ.)	True Bearing (circular)
TB (sem.)	True Bearing (semicircular)
D.Lat	Difference of Latitude

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NAVIGATION

The tables included in tasks N/T 86-92 are similar to that of N/T 85.

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NAVIGATION

N/T	TASK
93	Compass error at Sunrise/Sunset. Date …….…….. ZT ……. Lat_{DR} …….. Lon_{DR} …… ZT…….. CB (Gyro/Magn) …… ZD…… TB …… GMT…… Date GMT……. Error (Gyro/Magn) ……. Tab. Dec. …… d…… Crs/spd/lat corr. …… d_{corr}…… Instr. corr. …….. Dec. ..…… Var(chart) ……. …… Ann. ch… x…years= …… Course (gyro) …… Var(synchr.)…… Error (gyro) …… True Amplitudes Tables or True course …… Estimated Azimuth Tables Integer Lat ……..... Dec. …….. Course (magn) …….. Ampl. or Z ……..... Corrections Error (magn) …….. Total Corr. …… Dec. Corr. …….. Var. …….. Ampl. or Z (sem.) Lat Corr. …… Dev. …… TB (circ.) ……..... Total Corr. …….....
94	***The table is similar to that of N/T 93.***

Legend for tasks N/T 93-94 * *(see note on page 65)*

Abbreviation	**Full term**
ZT	Zone Time
Lat_{DR}	Latitude (Dead Reckoning)
Lon_{DR}	Longitude (Dead Reckoning)
CB	Compass Bearing
TB	True Bearing
ZD	Zone Description
GMT	Greenwich Mean Time
Tab. Dec.	Tabular Declination
Crs/spd/lat corr.	Course/speed/latitude correction
Incr	Increment
Instr. corr.	Instrument correction
Dec.	Declination
Var(chart)	Variation (chart)
Ann. ch.	Annual change
Var(synchr.)	Variation (synchronous)
Var.	Variation
Dev.	Deviation
Ampl.	Amplitude
Total Corr.	Total correction
Dec. Corr.	Declination Correction
TB (circ.)	True Bearing (circular)
Z (sem.)	Azimuth angle (semicircular)

NAVIGATION

N/T	TASK
95	***During your training, practise on observations of altitudes of all celestial bodies and on calculation and plotting lines of position. Choose 8 of your observations (2 of the sun, 2 of the moon, 2 of a planet and 2 of a fixed star) and complete their details in the tables of tasks N/T 95 to N/T 102.*** Line of position with ……. Date …….…… ZT …….. Lat_{DR} …… Lon_{DR} …… Chron. ..…… Sext. Alt. …….. corr. …….. Sext. Corr. …… GMT …… date …… Obs. Alt. …….. Tab. GHA …… υ …. Tab. Dec. ….. d…….. HP…… dip …… Incr. …… $d_{corr.}$ …… App. Alt. …… U_{corr}/SHA …… Dec. …….. corr.(1) …… GHA …… corr.(2) …… …….. …….. Lon_{DR} …… (Moon's Upper Limb) corr.(3) …….. LHA …… log. hav …… True Alt. …… Lat_{DR} …… log. cos …….. Tab. Alt. …… Dec. ..…….. log. cos …… Alt. Diff. …… log. havθ …… A …… havθ …… B …….. Lat±Dec …….. hav …… C …….. ZA …… hav ZA …… TB (card.) …….. 90° 00,0 TB (circ.) ……. Tab. Alt. ……..
96	***The table is similar to that of N/T 95.***

Legend for tasks N/T 95-102 * *(see note on page 65)*

Abbreviation	Full term
ZT	Zone Time
Lat_{DR}	Latitude (Dead Reckoning)
Lon_{DR}	Longitude (Dead Reckoning)
Chron.	Chronometer
corr.	Correction
Sext. Alt.	Sextant Altitude
Sext. Corr.	Sextant Correction
Obs. Alt.	Observed Altitude
GMT	Greenwich Mean Time
Tab. GHA	Tabular Greenwich Hour Angle (Almanac)
Tab. Dec.	Tabular Declination
Incr	Increment
App. Alt.	Apparent Altitude
SHA	Sidereal Hour Angle
Instr. corr.	Instrument correction
Dec.	Declination
True Alt.	True Altitude
Alt. Diff.	Altitude Difference
log cos	Logarithm Cosine
log hav	Logarithm Haversine
hav	Haversine
log havθ	Logarithm Haversine θ
havθ	Haversine θ
ZA	Zenith distance
hav ZA	Haversine Zenith distance
LHA	Local Hour Angle
TB (card.)	True Bearing (cardinal)
TB (circ.)	True Bearing (circular)
Tab. Alt.	Tabular Altitude

Pages 90-92

NAVIGATION

The tables included in tasks N/T 97-102 are similar to that of N/T 95.

Page 93

NAVIGATION

N/T	TASK		
103	Translate and explain what the following terms (used in the lists of lights) mean. (The British Admiralty Lists of Lights contain a short English-Greek glossary).		
	English term	**Greek term**	**Definition**
	Elevation		
	Nominal range		
	Structure		
	Intensity		
	Candela		
	Luminus range		
	Geographical range		
104	Look up in the list of lights and find 10 consecutive lights that were visible (day or night) during one of your vessel's voyages and complete the light's details translated in Greek in the columns of the table that follows. If this is not possible due to the nature of the voyages, use 2 or even 3 voyages. Do not mention any lights having a range of less than 8 nautical miles.		

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NAVIGATION

N/T **104** (cont.)

No (1)	Name-Position (2)	Lat Long (3)	Characteristics Intensity (4)	Elevation meters (5)	Range (6)	Structure Height in metres (7)	Remarks (8)

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NAVIGATION

N/T	TASK
105	Note down below the position of two lights of N/T 104 that have sections and prick correctly the limits of the sections by writing their characteristics (e.g. invisible, red, etc.). If there are no suitable lights, choose two others with at least 4 sections. Name of light ……... Name of light ……...

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NAVIGATION

N/T	TASK
106	Complete the following table regarding the lights you have entered in N/T 104. For the calculation of geographical range, the actual eye level from the vessel's bridge, which is …… metres, will be used. ***The table included in the task is already written in English.***
107	Choose one of the countries your vessel called during your training seagoing service and answer the following questions, according to the buoyage system used in that country. Country …… The buoyage system is …… and the following buoys are used: (Complete the following table).

Purpose	Shape	Colour	Illumination (colour and characteristics)	Topmark
Fairway starboard side				
Hazard North of the buoy				
Isolated hazard				
Wreck West of the buoy				

The above-mentioned information has been found in the nautical publication ……
……
page ……

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NAVIGATION

<table>
<tr><th>N/T</th><th>TASK</th></tr>
<tr><td>108</td><td>Complete the following table each time your vessel calls at a port for only one day. If possible, make sure you observe whether the actual measurements are consistent with predictions.
<table>
<tr><th rowspan="2">Port</th><th rowspan="2">Date</th><th colspan="2">High water</th><th colspan="2">Low water</th><th rowspan="2">Tables used</th></tr>
<tr><th>Time</th><th>Height</th><th>Time</th><th>Height</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
</table>

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NAVIGATION

<table>
<tr><th>N/T</th><th>TASK</th></tr>
<tr><td>109</td><td>The tasks N/T 109 to 111 shall be carried out in areas where there are tidal streams and shall correspond with the time the vessel is in a certain position and the course it is sailing on. If your vessel does not sail to areas with tidal streams, use a hypothetical voyage in such an area. Using the chart and the tide tables, (a) complete the stream calculation table and (b) in the blank space below, draw the stream triangle regarding the course your vessel is sailing on and the data of the stream prevailing in the area, the date and the time your vessel is in that area.

Calculation of tidal stream data
Date …… ZT …… ZD …….
Tidal stream reference port ……
ZT of high water at the reference port …… ZD ……
Rhomb position of tidal stream Lat …… Long ……..
The vessel’s ZT is …….. hours prior to/after (delete appropriately) high water at the reference port and the stream that corresponds with this time is:
<table>
<tr><th></th><th>Set</th><th>Drift</th></tr>
<tr><td>In spring tides
In neap tides
The vessel’s date</td><td>……..
……..
……..</td><td>……..
……..
……..</td></tr>
</table>
Stream triangle results:
Over ground: Course …….. Speed ……..
Through water: Course …….. Speed ……..
Leeway due to stream …… degrees.

Stream triangle results:
Over ground: Course …….. Speed ……..
Through water: Course …….. Speed ……..
Leeway due to stream …… degrees.</td></tr>
</table>

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NAVIGATION

N/T	TASK
110	***The table is similar to that of N/T 109.***

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NAVIGATION

N/T	TASK
111	***The table is similar to that of N/T 109.***
112	The binoculars are marked with two numbers, e.g. 8x30. What are the characteristics of your vessel's binoculars? What do these numbers mean? If there are binoculars with different characteristics on your vessel, use them day and night and try to detect whether there is a difference. (Attention: your conclusions might be completely wrong if the binoculars are not in good condition). …… ……

Page 101

METEOROLOGY

N/T	TASK
	Complete the tables in N/T 113 to 115 regarding the instruments used on your vessel for measuring and recording meteorological data.
113	Barometric pressure: …… Instrument it is measured with: …… Its location on board the vessel: …….. Unit of measurement: …… Corrections (numbered): ……... Reasons for corrections: ……... …… Measures for ensuring accuracy of measurements: …… …… When and how was the instrument error of the above-mentioned instrument lately checked? …… ……
114	Air temperature: …….. Instrument it is measured with: …… Its location on board the vessel: …….. Unit of measurement: …… Measures for ensuring accuracy of measurements: …… ……
115	Relevant humidity: …… Instrument it is measured with: …… Its location on board the vessel: …….. Unit of measurement: …… Measures for ensuring accuracy of measurements: …… …… Which tables do you use to calculate relevant humidity and dew point in N/T 116? …… ……
	Complete the details required in the following table. The observations must be carried out at sea, once daily and always at the same vessel time (ZT). 15 of the days listed in the table must be successive, if permitted by the duration of the voyages.

Pages 102-103

METEOROLOGY

N/T	TASK
116	***The table included in the task is already written in English.***

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METEOROLOGY

N/T	TASK
117	***Choose three days from N/T 116 during which the weather in the area where your vessel is sailing, is affected by a depression. Using the day's weather report (or the map received via FACSIMILE, if any), plot in the blank space provided in N/T 117 up to N/T 119 the relevant position of your vessel and the most significant barometric systems affecting the weather (this sketch may be plotted first on a pilot chart, or other low scale map, or using the Facsimile map). Complete the data of the weather you forecast will prevail in the area where your vessel is according to the weather report. Try to explain any differences between the forecast and actual data (without writing anything).***
	…… Date: …….. ZT: …….. GMT: …… Vessel's position: Lat = …… Long = …….. Anticipated weather: …….. Wind: …….. Direction: …… Force: ……. Atmospheric pressure: …….. Sea state: …….. Direction: …….. Wave height: …….. General weather description: ……..

Pages 105-106

METEOROLOGY

The tables included in tasks N/T 118-119 are similar to that of N/T 117.

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METEOROLOGY

N/T	TASK			
120	***Complete the details required in the table below. The observations must be carried out at sea, once daily and always at the same time (ZT). 15 of the days listed in the table must be successive, if that is permitted by the duration of the voyages.***			
	Front (type)	Position of front	Movement of front (direction, speed)	Position of vessel in relation to front

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METEOROLOGY

N/T	TASK			
121				
	Barometric system (type)	Position of barometric system	Movement of barometric system (direction, speed)	Position of vessel in relation to barometric system

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METEOROLOGY

N/T	TASK
122	Sea temperature ..... Instrument it is measured with: ..... Its location on board the vessel: ..... Unit of measurement: ..... Measures for ensuring accuracy of measurements: ....
123	Swell ..... Origin ..... Wave height ..... Period ..... Distance covered within 24 hours (use of tables) ....

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METEOROLOGY

N/T	TASK
124	Using the Pilot Chart section on the left for the North Atlantic Ocean in January, answer the following questions. (It is essential to use a full chart in order to find explanations of the symbols). a) What do the terms “Full-powered ship” and “Low-powered ship” mean? When is a vessel considered to be full-powered and when is it considered to be low-powered? (see the Admiralty Ocean Passages for the World for relevant information). .... b) The prevailing winds for the month of January in the square between the parallels 35° N and 40° N and the meridians 20° W and 25° W are: Direction Force Percentage % Direction Force Percentage % c) What do the arrow on Lat= 35° N, Long= 20° W and the figure 0.4 next to it mean? (Read carefully the explanations on the full chart). What would the difference be if that arrow was broken? ....

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METEOROLOGY

N/T	TASK
124 cont.	d) What do the dotted lines indicate? (the lines are red on the chart) …… …… e) What do the figures in the centre of the circles mean? …… ……

Page 112

MARINE ENGINES

N/T	TASK
125	It is widely known that some machinery or tools on decks (e.g. winches, chipping hammers, etc.) require power to operate (e.g. steam, electricity, compressed air, etc.) which is supplied or cut off from the engine room. Assuming you are an officer of the watch and regarding all situations such power supply would be required on your vessel, describe the preparations, safety measures, communications and generally all the necessary arrangements for this purpose. …… ……
126	Write a short description of the steering gear of your vessel and the way that the steering wheel on the bridge activates this machinery. Also, mention how the good operation of this machinery is checked at sea and in port before departure. …… ……

Page 113

MARINE ENGINES

N/T	TASK
127	Write in brief what the horsepower of your vessel's engine is at service speed and how it is measured by the engineers. …… ……
128	In case of emergency the engine controls (levers) are moved from FULL AHEAD to FULL ASTERN position (CRASH ASTERN). Sketch the maximum distance at which the vessel will stop, as well as the time required to do so (use the vessel's relative graphs). …… ……

MARINE ENGINES

N/T	TASK
129	While manoeuvring, count how many seconds it takes for the following manoeuvres to be carried out from the moment the order is given: - From “Stop engines” to “Astern” (when the last manoeuvre was “Ahead”) …… seconds. - From “Stop engines” to “Astern” (when the last manoeuvre was “Astern”) …… seconds. - From “Slow ahead” to “Astern” …… seconds.
130	Complete the following table regarding your vessel: Full ahead Full astern Horsepower Revolutions per minute (R.P.M.)
131	Draw a sketch and indicate how the movement gets across from the engine to the propeller. Indicate the position of the thrust block and explain its purpose. What are the thrust pads, where are they located and how many types are there on every vessel? Ask for the thrust pad spares in the engine room to see them.

Page 115

COMMUNICATION

N/T	TASK			
	It is certified that the trainee knows:	Date	Signature	
			Radio Operator (GMDSS)	Master
132	How to rig, put into operation and use the portable wireless set of the vessel.			
132A	Mention the telecommunications category your vessel belongs to. …… ……			
133	How to put the automatic distress alert transmission appliance (if any) into operation.			
133A	Mention the mandatory GMDSS equipment installed on your vessel (type, location of installation). …… ……			
134	The way of keeping the radio log.			
134A	Describe the type of VHF-DSC set that is installed on your vessel and the DSC preparation – distress alert transmission procedure. …… ……			

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COMMUNICATION

N/T	TASK			
	It is certified that the trainee knows:	Date	Signature	
			Radio Operator (GMDSS)	Master
135	How to put the auxiliary and the main wireless transceiver into operation and tune it to 500 KHz.			
135A	Regarding the type of VHF-DSC set installed on your vessel, describe the distress alert relay procedure. …… ……			
136	How to put the auxiliary and the main radiotelephone transceiver into operation and tune it to 2182 KHz.			
136A	Mention where the RADAR transponder (SART) is located and how it is activated. …… ……			
137	The duties and obligations of the radio operator (GMDSS) of your vessel, as well as the use of AUTO ALARM.			
137A	Mention the type of EPIRB your vessel is fitted with and how it is activated. …… ……			

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COMMUNICATION

N/T	TASK			
	It is certified that the trainee knows:	Date	Signature	
			Radio Operator (GMDSS)	Master
138	The operation of VHF and MF sets using the Standard Marine Communication Phrases.			
138A	Mention the expiry date of the EPIRB and the SART batteries. …… ……			
139	He/She has been trained in receiving and transmitting at least 40 letters per minute (international maritime alphabet only) using a key.			
139A	Mention the type of NAVTEX or EGC receiver installed on the vessel and describe the way of selecting NAVTEX or NAVAREA sub-areas respectively. …… ……			
140	He/She has been trained in receiving and transmitting at least 30 letters per minute (international maritime alphabet only) using a light (visual signals).			
140A	Mention the number and type of portable VHF transceivers for lifeboats. Also, mention their power supply mode. …… ……			

Pages 118-119

ELECTRICITY

N/T	TASK
141	Write the following, regarding the emergency generator: (a) A brief description of the location where it is installed. (b) A brief description of the generator and relative systems. (c) A description of the starting procedure. (d) A brief description of the cooling system. (e) The lighting networks and instrument functions it supplies. (f) When it is put into operation. Furthermore, ask for permission, under the supervision of an engineer in charge, to put the emergency generator into operation. …… ……

Page 120

ELECTRICITY

N/T	TASK		
142	Complete the following table regarding the electrical installation of your vessel:		
	English term	**Greek term**	**What your vessel is fitted with**
	A.C.		
	D.C.		
	Generator		Number:
	Generating capacity		
	Fuse		Maximum rate in Amperes
	Circuit breaker		Maximum rate in Amperes
	Current		
143	If there is direct current in use on your vessel, mention any possible situations it is transformed into alternating current and how this is achieved. If there is alternating current in use, mention any possible situations it is transformed into direct current and how this is achieved. …… ……		

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ELECTRICITY

N/T	TASK
144	If there are earth lamps in the electrical distribution room, find out and write how they have been connected and what their purpose is. What will happen to them if there is a leakage in one of the conductors? …… ……
145	In some alternating current distribution networks on vessels, both conductors have a dangerous voltage (two phases) in relation to the grounding, while in other systems only one conductor has a dangerous voltage (phase-neutral) in relation to the grounding. In case your vessel uses alternating current, find out which of the previous situations stands, ask why this is happening and, very briefly, describe it. Also, explain what will happen if: (a) One of the conductors shorts with the grounding. (b) The two conductors short with each other. (c) One of the conductors comes in contact with the grounding, but the point of contact produces some resistance. What kinds of hazards are caused in each situation? …… ……

Page 122

ELECTRICITY

N/T	TASK
146	One of the deck officers' duties is taking some precautionary measures for preventing hazards in relation to what is mentioned in N/T 145. Describe these specific measures taken on your vessel. …… ……

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ELECTRONIC NAVIGATIONAL EQUIPMENT
(Gyrocompass)

N/T	TASK
147	Generally speaking, gyrocompasses may be subject to some of the following errors: a. Latitude, speed and course error. b. Ballistic deflection error. c. Various other errors. …… I. Which of these errors appear in the gyrocompass of your vessel and how are they minimized? …… ……

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ELECTRONIC NAVIGATIONAL EQUIPMENT
(Gyrocompass)

N/T	TASK
147 (cont.)	II. According to which theory is the limitation of ballistic deflection error achieved? …… …… III. What kinds of hazards does the ballistic deflection error carry for very short time intervals and the accuracy of which instruments does it affect? …… ……

Page 125

ELECTRONIC NAVIGATIONAL EQUIPMENT
(Radar)

N/T	TASK
148	You are sailing within an area with heavy traffic and the 10cm Radar is in operation. You find out that there are RAMARKs and RACONs in that specific area, which do not appear on the radar screen: a. What will you do so that the radio beacons will appear on the screen? …… …… b. Justify your actions. …… …… c. Identify at least three RAMARKs and RACONs in that area, using relevant aids available on your vessel and mention their main characteristics. …… ……

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ELECTRONIC NAVIGATIONAL EQUIPMENT
(RADAR/ARPA)

N/T	TASK
149	During one of your vessel's voyages within an area with heavy traffic, plot (on the manoeuvring board below) three targets using the radar with a possible risk of collision and, in detail, write the following regarding each target: a) 1st Target CPA= TCPA= Z/course= S/speed= 2nd Target CPA= TCPA= Z/course= S/speed= 3rd Target CPA= TCPA= Z/course= S/speed=

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ELECTRONIC NAVIGATIONAL EQUIPMENT
(RADAR/ARPA)

N/T	TASK
149 (cont.)	b) Which manoeuvres or action did your vessel do to prevent the risk of collision (alter course / reduce-increase speed or reversal) and why? …… …… c) Compare the details of the same targets to those obtained from the ARPA device and write down the differences you found out. …… ……

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ELECTRONIC NAVIGATIONAL EQUIPMENT

Practise the use and operation of the following instruments under the supervision of the training officer. The task should be repeated at least as many times as the squares on the right.

N/T	TASK	Date	Training officer's signature
150	Radar (Tuning – Positions – Parallel Index techniques)		
151	ARPA [finding of the plotting details, full understanding of the PADs / PPCs, check of the plotting details by directly connecting it with the gyrocompass or the speed log (Auto or Manual), the limitations of the device, etc.].		
152	DECCA (tuning-use of DECCA data sheets, setting positions on DECCA charts, etc.).		

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ELECTRONIC NAVIGATIONAL EQUIPMENT

N/T	TASK	Date	Training officer's signature
153	Radio Direction Finder (full exploitation in combination with ALRS Vol. 2 or the respective volume of other publications).		
154	Echo Sounder (comparison of this instrument's readings with those on the chart, etc.).		
155	Speed Log (full exploitation of the instrument).		
156	Chart Plotter (full exploitation of the instrument – change of paper, etc.).		
157	Repeaters (alignment of all repeaters, including those connected with all navigational instruments).		

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ELECTRONIC NAVIGATIONAL EQUIPMENT

N/T	TASK	Date	Training officer's signature
158	Automatic Movement Recorder of the main engine (chart change – time correction, etc.).		
159	LORAN/OMEGA (Setting positions on corresponding charts, use of tables and comparison with the indications directly obtained in "Lat" and "Long").		
160	Satellite Navigator / NNSS (Make a comparison of its positions with those of other navigational instruments on your vessel and full exploitation of the device).		

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ELECTRONIC NAVIGATIONAL EQUIPMENT

N/T	TASK	Date	Training officer's signature
161	Satellite Navigator / GPS (full exploitation of the device).		
162	Integrated Navigation Systems (full exploitation of the system).		
163	Electronic chart.		

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ELECTRONIC NAVIGATIONAL EQUIPMENT

N/T	TASK	Date	Training officer's signature
164	Satellite Navigator / GPS (full exploitation of the device).		
165	Integrated Navigation Systems (full exploitation of the system).		
166	Electronic chart.		

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CARGO VESSELS

N/T	TASK
167	Write down what you paid attention to during your voyages regarding the ventilation of the cargo. When did you shut down ventilation and why? Regarding the cargoes you transported, write down what could have happened if you hadn't used ventilation when you should and what could have happened if you had used ventilation when you should not. …… ……

Page 134

CARGO VESSELS

N/T	TASK
168	Describe the entire ballasting operation carried out for a voyage without any cargo. Include the following, but do not restrict yourself to them: (a) Which tanks were loaded with ballast and how many tonnes was each one loaded with? (b) How long did ballasting take? (c) Who was monitoring the ballasting operation? (d) Which hazards are connected with ballasting? (e) Was ballasting carried out with a pump or by gravity? …… ……
169	Describe the entire de-ballasting operation. Include the following, but do not restrict yourself to them: (a) How far from the port of destination did de-ballasting commence? (b) What was the weather like? (c) How long did de-ballasting take? (d) Who was in charge of monitoring the de-ballasting operation? …… ……

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CARGO VESSELS

N/T	TASK
170	Describe in detail the process of measuring the bilges, the double bottom tanks, etc. on board your vessel. Include the following, but do not restrict yourself to them: a. Which crewmember is responsible for this task and how often? b. Which tool is used for these measurements? c. Where is this information recorded and who has to know the condition of the bilges, the double bottom tanks, etc.? d. What are the purpose and the significance of this task? …… ……
171	Describe the discharging arrangements for a specific voyage (mention cargo and port of discharge), prior to and after arrival. …… ……

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CARGO VESSELS

N/T	TASK
172	How are the containers described by the International Standards Organization (ISO) and the International Convention for Safe Containers (CSC) of the IMO (International Maritime Organization)? …… ……
173	Which are the main categories of containers (type-company-dimensions) and what is the maximum gross allowable cargo weight that can be loaded into a container depending on its dimensions? …… ……

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CARGO VESSELS

N/T	TASK
174	All containers have the following safety plate permanently affixed to them. Identify it and provide all explanations, starting with the CSC SAFETY APPROVAL, followed by numbers 1-6. For numbers 7, 8 and 9 provide an appropriate explanation if the International Convention for Safe Containers is available on board. …… ……

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CARGO VESSELS

N/T	TASK
175	Make up a table that contains the garbage allowed to be disposed of from vessels when travelling within and outside a special area in relation to the distance from shore, as it is determined by Annex V of the MARPOL 73/78 Convention (Sea Pollution by Garbage from Ships). …… ……
176	Study the guidelines for keeping the Oil Record Book Part I for all ships, as well as the operations for a voyage in cooperation with the appropriate officer on board. …… ……

Pages 139-141

GUIDELINES

Keeping the Oil Record Book, **"Part I": machinery space operations**.

I. GENERAL

1. Keeping the new oil record book is provided by MARPOL 1973/78 International Convention "prevention of pollution from ships", which was certified by Greece with law 1269/82 (Governmental Gazette 89 A'/1982). Particularly, the obligation for keeping this book derives from Regulation 20 of Annex I of the said convention. The new oil record book, which is easy to use and uniform in all countries, fully corresponds to the requirements of the convention as a result of a decision made by the Marine Environment Protection Committee (MEPC).

2. An Oil Record Book "Part I" shall be carried on board every oil tanker of 150 gross tons and above and every other ship of 400 gross tons and above to record relevant machinery space operations. In addition, Oil Tankers of 150 gross tons and above shall carry an Oil Record Book "Part II" to record cargo and ballast operations.

II. OBLIGATIONS - RATIFICATIONS

3. The Oil Record Book is completed when one or more than one machinery space operations is performed:
   - ballasting or cleaning of oil fuel tanks,
   - discharge of dirty ballast or cleaning water from oil fuel tanks referred to under the previous section,
   - disposal of oil residues (sludge),
   - discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces,
   - use of a separator,
   - several other similar operations (see below).

4. Keeping the Oil Record Book. The Oil Record Book Part I shall be kept in such a place as to be readily available for inspection at all reasonable times and, except in the case of unmanned ships under tow, shall be kept on board the ship. It shall be preserved for a period of three years after the last entry has been made.

5. According to article 46 of the State Maritime Law Code (Law 187/73, Governmental Gazette 261 A'/73) the oil record book is included among maritime documents which shall be carried aboard every ship. This book is kept by the master in accordance with the provisions of the international convention in force for the prevention of pollution from oil products (article 52 of the SLMC). It is completed by an engineer officer (Chief or Second Engineer) who is appointed by the Master.

6. The oil record book is examined by the Greek port or consular authorities and by the port authorities of the international convention member states.

7. The lack of the oil record book, its improper keeping and its not producing to the competent authorities at the port of destination whenever this is asked for, constitute a violation of article 4 and Annex I Regulation 20 of MARPOL. This shall be punished as per article 9 of Law 1269/82, in combination with articles 13 and 14 of Law 743/77 (Governmental

Gazette 319 A'/1977) and is likely to establish sanctions provided from the national legislation of each member state of the convention.

III. MARPOL 1973/78 REQUIREMENTS

8. General. According to the provisions of MARPOL 73/78 international convention, strict criteria are established, amongst others, regarding the discharge of oil residues (sludge) or mixtures. The purpose of these provisions is the best protection of the marine environment from pollution caused by ships.

9. Special areas. According to Regulation 10 of Annex I of the international convention, certain environmentally sensitive sea areas are characterised as "special areas", within which any discharge into the sea of oil or oily mixture from any oil tanker and any ship of 400 tons gross tonnage and above other than an oil tanker shall be prohibited. Such ships while in a special area shall retain on board all oil drainage and sludge, dirty ballast and tank washing waters and discharge them only to port reception facilities. According to the international convention, the special areas are the Mediterranean Sea area, the Black Sea area, the Red Sea area, the Baltic Sea area and the Persian Gulf area, the boundaries of which are clearly defined in the convention.

10. The aforementioned prohibition shall not apply to the discharge of clean or segregated ballast, which has been loaded in tanks exclusively used for ballast and are not, in any way, connected to the fuel tanks. These are the so-called "water ballast tanks" (WBT). It is prohibited to load these tanks with any kind of oil that has been concentrated on board (remainders, residues, etc.).

11. According to Regulation 9, par. 1(b) of Annex I of the international convention, any discharge into the sea of oil or oily mixtures from a ship of 400 tons gross tonnage and above other than an oil tanker and from an oil tanker of 150 tons gross tonnage and above, obliged to be provided with an oil record book (Part I), shall be prohibited except when all the following conditions are satisfied:
    a) the ship is not within a special area;
    b) the ship is more than 12 nautical miles from the nearest land;
    c) the ship is proceeding en route;
    d) the oil content of the effluent is less than 100 PPM (parts per million), and
    e) the ship has in operation an oil discharge monitoring and control system, oily-water separating equipment, oil filtering system or other installation as required by Regulation 16 of Annex I of the convention.

IV. OPERATIONS

12. Following the guidelines, all the machinery space operations are listed on the initial pages of the book (9 to 12). No entry shall be recorded by the master or the officers on these pages (see below).

13. Encoding of operations. All machinery space operations have been sorted out into 9 groups and are pointed out with the corresponding letters of the alphabet (code letters), as follows:
    (A) Ballasting or cleaning of oil fuel tanks;
    (B) Discharge of dirty ballast or cleaning water from oil fuel tanks referred to under section (A);
    (C) Collection and disposal of oil residues (sludge and other residues);
    (D) Non-automatic discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces;

(E) Automatic discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces;
(F) Condition of the filtering equipment;
(G) Accidental or other exceptional discharges of oil;
(H) Bunkering of fuel or bulk lubricating oil;
(I) Additional operational procedures and general remarks.

Each of these operations includes items which are sorted out with item numbers (1, 2, 3…). For example an entry recorded in the book with the code (B)8 means:

- (B) Discharge of dirty ballast or cleaning water from oil fuel tanks referred to under section (A);
- 8 Ship's speed(s) during discharge.

V. ENTRIES

14. Following the coded operations, the rest of the pages follow (13 to 100) for the entries to be recorded. The pages are properly outlined, so as all relevant details regarding each operation of a certain entry shall be recorded.
These details are:
Voyage, date, code letter of the operation, item number of the operation and description of the operation if necessary.

15. The entries in the oil record book shall be recorded in Greek and English in a chronological order and signed by the officers in charge of the operations concerned (Chief Engineer, Second Engineer, etc.).

16. Example:
On 10th October 1983 from 0600 to 0800 hours the ship was discharging via equipment that could produce effluent containing oil no more that 15 PPM. This shall be recorded in the oil record book as follows:
- 10-10-83 -D- -14- From 0600 to 0800
- -//- -D- -15.2- Officer's signature

17. Master's countersignature. At the bottom right-hand side of the page, the book is countersigned by the master once the page is completed or the voyage has ended.

Pages 142-143

OIL RECORD BOOK (PART I)
OPERATIONS

(A) BALLASTING OR CLEANING OF OIL FUEL TANKS

1. Identity of tank(s) ballasted.
2. Whether cleaned since they last contained oil and, if not, type of oil previously carried.
3. Cleaning process.
  1. Position of ship and time at the start and completion of cleaning.
  2. Identify tank(s) in which one or another method has been employed (rinsing through, steaming, cleaning with chemicals; type and quantity of chemicals used in cubic metres).
  3. Identity of tank(s) into which cleaning water was transferred.
4. Ballasting.
  1. Position of ship and time at start and end of ballasting.
  2. Quantity in cubic metres of ballast if tanks are not cleaned.

(B) DISCHARGE OF DIRTY BALLAST OR CLEANING WATER FROM OIL FUEL TANKS REFERRED TO UNDER SECTION (A)

5. Identity of tank(s).
6. Position of ship at start of discharge.
7. Position of ship on completion of discharge.
8. Ship's speed(s) during discharge.
9. Method of discharge.
  1. Through 15 ppm equipment.
  2. To reception facilities.
10. Quantity discharged in cubic metres.

(C) COLLECTION AND DISPOSAL OF OIL RESIDUES (SLUDGE AND OTHER RESIDUES)

11. Collection of oil residues. (1)
Quantities of oil residues (sludge and other residues) retained on board. The quantity should be recorded weekly:
  1. Identity of tank(s)……
  2. Capacity of tank(s)……m^3
  3. Total quantity of retention……m^3
12. Methods of disposal of residues. State quantity of oil residues disposed of, the tank(s) emptied and the quantity of contents retained in cubic metres.
  1. To reception facilities (identify port). (2)
  2. Transferred to another (other) tank(s) [indicate tank(s) and the total content of tank(s)].
  3. Incinerated (indicate total time of operation).
  4. Other method (state which).

(D) NON-AUTOMATIC DISCHARGE OVERBOARD OR DISPOSAL OTHERWISE OF BILGE WATER WHICH HAS ACCUMULATED IN MACHINERY SPACES

13. Quantity discharged or disposed of in cubic metres. (3)
14. Time of discharge or disposal (start and stop).
15. Method of discharge or disposal:
1. Through 15 ppm equipment (state position at start and end).
2. To reception facilities (identify port). (2)
3. Transfer to slop tank or holding tank [indicate tank(s) state quantity retained in tank(s) in cubic metres].

(E) AUTOMATIC DISCHARGE OVERBOARD OR DISPOSAL OTHERWISE OF BILGE WATER WHICH HAS ACCUMULATED IN MACHINERY SPACES

16. Time and position of ship at which the system has been put into automatic mode of operation for discharge overboard through 15 p.p.m. equipment.
17. Time when the system has been put into automatic mode of operation for transfer of bilge water to holding tank (identify tank).
18. Time when the system has been put into manual operation.

(F) CONDITION OF THE FILTERING EQUIPMENT

19. Time of system failure. (4)
20. Time when system has been made operational.
21. Reasons for failure.

(G) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGES OF OIL

22. Time of occurrence.
23. Place or position of ship at time of occurrence.
24. Approximate quantity and type of oil.
25. Circumstances of discharge or escape, the reasons therefor and general remarks.

(H) BUNKERING OF FUEL OR BULK LUBRICATING OIL

27. Bunkering.
1. Place of bunkering.
2. Time of bunkering.
3. Type and quantity of fuel oil and identity of tank(s) [state quantity added in tonnes and total content of tank(s)].
4. Type and quantity of lubricating oil and identity of tank(s) [state quantity added in tonnes and total content of tank(s)].

(I) ADDITIONAL OPERATIONAL PROCEDURES AND GENERAL REMARKS

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CARGO VESSELS

N/T	TASK
177	According to the MARPOL 73/78 Convention, the oil record book may be inspected at any port and must be readily available for any legal investigation. Mention what is specifically in force in relation to the inspections of Greek ships, based on an agreement signed by our country regarding the oil record book or other inspections. …… ……

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CARGO VESSELS

N/T	TASK
178	Write a report in English regarding the subjects mentioned below, each one of which should consist of at least 200 words (N/T 177 to N/T 184). …… ……

NOTE:
The subjects mentioned in the tasks N/T 178 – 184 are already written in English.

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CARGO VESSELS

N/T	TASK
185	Describe one of the following three subjects, depending on what might be available on your vessel: ***The subjects mentioned in this task are already written in English.*** …… ……

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CARGO VESSELS

N/T	TASK	COMPLETION OF TASK		
	DECK TASKS	DATE	CHIEF OFFICER'S CONFIRMATION	REMARKS
185A	1. Participation in determining and preparation of cargo holds for loading. 2. Inspection of bilges or drain well for cleanliness. 3. Inspection of the metal hatch covers for water-tightness. 4. Attending the hatch cover opening procedure, paying special attention to the pull wire and the safety hatch wedges. 5. Examination of the safety hatchways. 6. Examination of the hatchways and the handrails and damage report, if any. 7. Attending the placing of dunnage prior to and during loading. 8. Attending the hoisting of derricks prior to commencing cargo handling operations and, from time to time, during loading or unloading. 9. Ensuring that there are sufficient unobstructed routes on deck when deck cargo has been loaded. 10. Providing assistance to the Officer of the watch during loading or unloading. 11. Potential to obtain information from the IMDG Code prior to any work that involves dangerous goods. 12. Observation and implementation of the IMDG Code when transporting dangerous goods.			

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CARGO VESSELS

N/T	TASK	COMPLETION OF TASK		
	DECK TASKS	DATE	CHIEF OFFICER'S CONFIRMATION	REMARKS
185A	13. Preparation and use of cargo plans. 14. Recording special cargoes. 15. Measurement and calculation of remaining capacity. 16. Use of draught scales and calculation of the amount of cargo loaded or unloaded. 17. Participation in closing and securing the hatch covers for getting underway. 18. Attending the implementation of securing regulations for the following: 1. Containers. 2. Vehicles. 3. Deck cargoes. 19. Attending the stowage and the securing of derricks and cranes. 20. Noting down damage to cargo or to the vessel and reporting it to the Chief Officer.			

Page 158

TANKERS

N/T	TASK
186	Complete the following table regarding the tanker you are sailing on: 1. Number of cargo tanks …… 2. Total capacity of cargo tanks …… m^3 …… U.S.A. barrels. 3. Number of tanks exclusively used for ballast …… 4. Total capacity of the aforementioned tanks (3) …… 5. Ballast weight for a routine voyage …… tonnes. 6. Ballast weight for bad weather …… tonnes. 7. The vessel is fitted with inert gas system YES NO
187	Provide a brief explanation of the following terms (see the International Safety Guide for Oil Tankers and Terminals, published by ICS/OCIMF) ISGOTT. ***The terms that follow are already written in English.***

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TANKERS

N/T	TASK
188	***The terms included in the task are already written in English.***

Page 160

TANKERS

N/T	TASK
189	Sketch the Flammability composition diagram – hydrocarbon gas / air / inert gas mixture from the book International Safety Guide for Oil Tankers and Terminals, published by ICS/OCIMF/IAPH. …… ……
190	In relation to the diagram of the previous task, mention under which atmosphere conditions, “A”, “B”, “C” or “D”, the cargo tanks are washed on your vessel. What exactly does this mean and which corresponding safety measures are taken? …… ……

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TANKERS

N/T	TASK
191	How long should the oil record book and the completed forms of the automatic oil discharge monitoring and control system be kept and under whose responsibility? …… ……
192	What do the regulations of Annex I of the MARPOL 73/78 Convention provide regarding the discharge into the sea of oil or oily mixtures within and outside special areas? …… ……
193	After studying and completing N/T 176 that refers to all ships (Cargo ships and Tankers), do the same for this task that refers to oil tankers only. …… ……

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Plan view of cargo and slop tanks is already translated in English.

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GUIDELINES

Keeping the Oil Record Book, **"Part II": cargo / ballast operations**.

I. GENERAL

1. Keeping the new oil record book is provided by MARPOL 1973/78 International Convention "prevention of pollution from ships", which was certified by Greece with law 1269/82 (Governmental Gazette 89 A'/1982). Particularly, the obligation for keeping this book derives from Regulation 20 of Annex I of the said convention. The new oil record book, which is easy to use and uniform in all countries, fully corresponds to the requirements of the convention as a result of a decision made by the Marine Environment Protection Committee (MEPC).

2. An Oil Record Book "Part II" shall be carried on board every oil tanker of 150 gross tons and above. In addition, these vessels shall carry an Oil Record Book "Part I".

II. OBLIGATIONS - RATIFICATIONS

3. The Oil Record Book is completed when one or more than one cargo / ballast operations is performed:
   - loading of oil cargo,
   - internal transfer of oil cargo during voyage,
   - unloading of oil cargo,
   - ballasting of cargo tanks or clean ballast tanks (CBT),
   - washing of cargo tanks with water or crude oil washing (COW),
   - discharge of ballast except from segregated ballast tanks (SBT),
   - discharge of water from slop tanks,
   - closing of all valves or similar devices after discharging residues overboard from slop tanks has finished,
   - closing of all necessary valves for isolating the clean ballast tanks from loading and stripping lines, after discharging residues from slop tanks has finished,
   - disposal of residues.

4. Keeping the Oil Record Book. The Oil Record Book Part II shall be kept in such a place as to be readily available for inspection at all reasonable times and, except in the case of unmanned ships under tow, shall be kept on board the ship. It shall be preserved for a period of three years after the last entry has been made.

5. According to article 46 of the State Maritime Law Code (Law 187/73, Governmental Gazette 261 A'/73) the oil record book is included among maritime documents which shall be carried aboard every ship. This book is kept by the master in accordance with the provisions of the international convention in force for the prevention of pollution from oil products (article 52 of the SLMC). It is completed by deck officers (Chief or Second Officer) who are in charge according to the Labour Regulation, on board cargo vessels and are appointed by the Master for performing the operations mentioned in par. 3.

6. The oil record book is examined by the Greek port or consular authorities and by the port authorities of the international convention member states.

7. The lack of the oil record book, its improper keeping and its not producing to the competent authorities at the port of destination whenever this is asked for, constitute a violation of article 4 and Annex I Regulation 20 of MARPOL. This shall be punished as per article 9 of Law 1269/82, in combination with articles 13 and 14 of Law 743/77 (Governmental Gazette 319 A'/1977) and is likely to establish sanctions provided from the national legislation of each member state of the convention.

III. MARPOL 1973/78 REQUIREMENTS

8. General. According to the provisions of MARPOL 73/78 international convention, strict criteria are established, amongst others, regarding the discharge of oil residues (sludge) or mixtures. The purpose of these provisions is the best protection of the marine environment from pollution caused by ships.

9. Special areas. According to Regulation 10 of Annex I of the international convention, certain environmentally sensitive sea areas are characterised as "special areas", within which any discharge into the sea of oil or oily mixture from any oil tanker and any ship of 400 tons gross tonnage and above other than an oil tanker shall be prohibited. Such ships while in a special area shall retain on board all oil drainage and sludge, dirty ballast and tank washing waters and discharge them only to port reception facilities. According to the international convention, the special areas are the Mediterranean Sea area, the Black Sea area, the Red Sea area, the Baltic Sea area and the Persian Gulf area, the boundaries of which are clearly defined in the convention.

10. The aforementioned prohibition shall not apply to the discharge of clean or segregated ballast, which has been loaded in tanks exclusively used for ballast and are not, in any way, connected to the fuel tanks (segregated ballast tanks – SBT), or tanks that have previously been washed with water or crude oil. In the latter situation, those tanks intended to be used for clean ballast should be washed with water.

11. According to Regulation 9, par. 1(a) of Annex I of the international convention, any discharge into the sea of oil or oily mixtures from an oil tanker of 150 tons gross tonnage and above, shall be prohibited except when all the following conditions are satisfied:
    a) the tanker is not within a special area;
    b) the tanker is more than 50 nautical miles from the nearest land;
    c) the tanker is proceeding en route;
    d) the total quantity of oil discharged into the sea does not exceed for existing tankers 1/15,000 of the total quantity of the particular cargo of which the residue formed a part, and for new tankers 1/30,000 of the total quantity of the particular cargo of which the residue formed a part,
    e) the tanker has in operation, except as provided for in Regulation 15 (3) of Annex I of the convention, an oil discharge monitoring and control system and a slop tank arrangement as required by Regulation 15 of this Annex,
    f) the instantaneous rate of discharge of oil content does not exceed 60 litres per nautical mile. According to Regulation 15 par. 3(a) of the international convention, oil tankers of 150 tons gross tonnage and above shall be fitted with a recording device to provide a continuous record of the discharge in litres per nautical mile and total quantity discharged, or the oil content and rate of discharge. The requirements for these systems shall apply to existing oil tankers 3 years after the international convention has been put into force. In this situation, the instantaneous rate of discharge (R) 60 litres per nautical mile shall be calculated in the following way:

$$R = (PPM) \times (PR\ m^3/h) / 1000\ S$$

- PPM means oil content of effluents,
- PR means the discharge rate of the pump in m^3/h
- S means the vessel's speed.

Example: We assume that a vessel is proceeding at a speed (S) of 15 knots and is discharging dirty ballast at a rate of discharge (PR) of 8000 m^3/h and the oil content is 30 ppm. According to what has been said in this paragraph the calculation is: R = (30 x 8000) / 15 x 1000 = 16 litres per nautical mile. Following measurements carried out, it has been proved that in order for the separation of oil and water to occur in the dirty ballast, at least 24 hours are required under favourable weather conditions. In this situation, the water which is below the separating line of oil / water contains 30 ppm of oil. Moreover, in order for the separation of oil residues transferred in the slop tank to occur, at least 36 hours are required under favourable weather conditions. In this situation, the water which is below the separating line of oil / water contains 150 ppm of oil. However, as long as the discharge of "water" is in progress, the separating surface between the two liquids (oil / water) is closing to the suction of the tank, the oil content is increasing and may reach 500 ppm, there is a possibility to reach 2000 or 3000 ppm rapidly. In that case, the person in charge of the system operation has to take the appropriate measures (visual observation of the water being discharged, reduction of the discharge rate, shutting down of the pump, etc.) in order to prevent pollution.

12. The above-mentioned discharge criteria are applied in the following disposal situations at sea:
    - residues/sludge of oil cargo,
    - residues of oil cargo coming from cargo tank washing,
    - dirty ballast that was loaded into cargo tanks,
    - residues in the bilges of the pump room,
    - residues from the engine room, but mixed in any way with the oil cargo or residues / sludge of the oil cargo. Such a case is, for instance, the transfer of residues from the engine room bilges to a cargo tank or a slop tank.

IV. OPERATIONS

13. Following the guidelines, all the cargo / ballast operations of an oil tanker are listed on the initial pages of the oil record book (13 to 19). No entry shall be recorded by the master or the officers on these pages (see below).

14. Encoding of operations. All cargo / ballast operations have been sorted out into 17 groups and are characterised with the corresponding letters of the alphabet (code letters), as follows:
    (A) Loading of oil cargo;
    (B) Internal transfer of oil cargo during voyage;
    (C) Unloading of oil cargo;
    (D) Crude oil washing (COW tankers only);
    (E) Ballasting of cargo tanks;
    (F) Ballasting of dedicated clean ballast tanks (CNT tankers only);
    (G) Cleaning of cargo tanks;
    (H) Discharge of dirty ballast;
    (I) Discharge of water from slop tanks into the sea;
    (J) Disposal of residues and oily mixtures not otherwise dealt with;
    (K) Discharge of clean ballast contained in cargo tanks;
    (L) Discharge of ballast from dedicated clean ballast tanks (CBT tankers only);
    (M) Condition of oil discharge monitoring and control system;

(N) Accidental or other exceptional discharges of oil;
(O) Additional operational procedures and general remarks;
(P) Loading of ballast water;
(Q) Re-allocation of ballast water within the ship;
(R) Ballast water discharged to reception facility.
Each of these operations includes items which are sorted out with their item numbers (1, 2, 3…). For example an entry recorded in the book with the code (E)18 means:
- (E) Ballasting of cargo tanks;
- 18 Position of ship at start and end of ballasting.

V. ENTRIES

15. After the coded operations, the rest of the pages follow (21 to 100) for the entries to be recorded. The pages are properly outlined, so as all relevant details regarding each operation of a certain entry shall be recorded.
These details are:
Voyage, date, code letter of the operation, item number of the operation and description of the operation if necessary.

16. On page 5 there is a sketch of the sectional plan view of the cargo tanks and the slop tanks, which is recorded by the master on the date the oil record book is used for the first time. The identifying characteristics of the cargo tanks and their capacity in cubic metres or feet must be recorded on the outlined table of the same page. The capacity and depth of the slop tank(s) must be recorded at the bottom of the table.

17. The entries in the oil record book shall be recorded in Greek and English in a chronological order and signed by the officers in charge of the operations concerned (Chief Officer, Second Officer, etc.), who have performed the operation.

18. Example: On 10th October 1983, in position Lat……. Long……., from 0800 to 1300 hours, No. 2 central cargo tank was washed by means of fixed washing machines and the tank washings of approximately 2000 cubic metres were transferred to the slop tanks starboard and port. This shall be recorded in the oil record book as follows:
- 10-10-83 -G- -27- No. 2 centre
- -//- -G- -28- Lat……. Long…….
- -//- -G- -29- From 0800 to 1300
- -//- -G- -30- Fixed washing machines
- -//- -G- -31.2- 2000 S + P slop tanks

19. For oil tankers which are fitted with crude oil washing system (COW), besides recording data regarding crude oil washing operations, full personal details of the officer(s) in charge of specific operations shall be recorded at the bottom left-hand side of the pages used for the entries (full name – rank – certificate number – seaman's book number).

20. According to Resolution 15 (TSPP CONFERENCE) "Tanker safety and pollution prevention 1978", the officer who will be in charge of the operation and control of crude oil washing system (COW) must, in advance, among other responsibilities (Training Centre for Merchant Marine Officers certificate, full awareness regarding the content of the "Operation and equipment manual"), have carried out a full washing procedure with crude oil on board the vessel where they are going to sign in or on board another similar vessel (sister ship). At the bottom left-hand side of the page in the oil record book, a relevant entry should be made (as it has already been explained in paragraph 19 above).

21. Master's countersignature. At the bottom right-hand side of the page, the book is countersigned by the master once the page is completed or the voyage has ended.

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OIL RECORD BOOK (PART II)
OPERATIONS

(A) LOADING OF OIL CARGO

1. Place of loading.
2. Type of oil loaded and identity of tank(s).
3. Total quantity of oil loaded [state quantity loaded in cubic metres at 15° C and the total content of tank(s) in cubic metres].

(B) INTERNAL TRANSFER OF OIL CARGO DURING VOYAGE

4. Identity of tank(s).
1. From:
2. To: [state quantity transferred and total quantity of tank(s) in cubic metres].
5. Was (were) the tank(s) in 4.1 emptied? (if not, state quantity retained in cubic metres).

(C) UNLOADING OF OIL CARGO

6. Place of unloading.
7. Identity of tank(s) unloaded.
8. Was (were) the tank(s) emptied? (if not, state quantity retained in cubic metres).

(D) CRUDE OIL WASHING (COW TANKERS ONLY)

(To be completed for each tank being crude oil washed)

9. Port where crude oil washing was carried out or ship's position if carried out between two discharge ports.
10. Identity of tank(s) washed. (1)
11. Number of washing machines in use.
12. Time of start of washing.
13. Washing pattern employed. (2)
14. Washing line pressure.
15. Time washing was completed or stopped.
16. State method of establishing that tank(s) was (were) dry.
17. Remarks. (3)

(E) BALLASTING OF CARGO TANKS

18. Position of ship at start and end of ballasting.
19. Ballasting process:
1. Identity of tank(s) ballasted.
2. Time of start and end.
3. Quantity of ballast received. Indicate total quantity in cubic metres of ballast for each tank involved in the operation.

(F) BALLASTING OF DEDICATED CLEAN BALLAST TANKS (CBT TANKERS ONLY)

20. Identity of tank(s) ballasted.

21. Position of ship when water intended for flushing, or port ballast was taken to dedicated clean ballast tank(s).
22. Position of ship when pump(s) and lines were flushed to slop tank.
23. Quantity of the oily water which, after line flushing, is transferred to the slop tank(s) or cargo tank(s) in which slop is preliminarily stored [identify tank(s)]. State the total quantity in cubic metres.
24. Position of ship when additional ballast water was taken to dedicated clean ballast tank(s).
25. Time and position of ship when valves separating the dedicated clean ballast tanks from cargo and stripping lines were closed.
26. Quantity of clean ballast taken on board in cubic metres.

(G) CLEANING OF CARGO TANKS

27. Identity of tank(s) cleaned.
28. Port or ship's position.
29. Duration of cleaning.
30. Method of cleaning. (4)
31. Tank washings transferred to:
1. In reception facilities (state port and quantity in cubic metres). (5)
2. Slop tank(s) or cargo tank(s) designated as slop tank(s) [identify tank(s); state quantity transferred and total quantity in cubic metres].

(H) DISCHARGE OF DIRTY BALLAST

32. Identity of tank(s).
33. Time and position of ship at start of discharge into the sea.
34. Time and position of ship on completion of discharge into the sea.
35. Quantity discharged into the sea in cubic metres.
36. Ship's speed(s) during discharge.
37. Was the discharge monitoring and control system in operation during the discharge?
38. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?
39. Quantity of oily water transferred to slop tank(s) [identify slop tank(s). State total quantity in cubic metres].
40. Discharged to shore reception facilities (identify port and quantity involved in cubic metres). (5)

(I) DISCHARGE OF WATER FROM SLOP TANKS INTO THE SEA

41. Identity of slop tank(s).
42. Time of settling from last entry of residues, or
43. Time of settling from last discharge.
44. Time and position of ship at start of discharge.
45. Ullage of total contents at start of discharge.
46. Ullage of oil / water interface at start of discharge.
47. Bulk quantity discharged in cubic metres and rate of discharge in cubic metres per hour.
48. Final quantity discharged in cubic metres and rate of discharge in cubic metres per hour.
49. Time and position of ship on completion of discharge.
50. Was the discharge monitoring and control system in operation during the discharge?
51. Ullage of oil / water interface on completion of discharge in metres.

52. Ship's speed(s) during discharge.
53. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?
54. Confirm that all applicable valves in the ship's piping system have been closed on completion of discharge from the slop tank.

(J) DISPOSAL OF RESIDUES AND OILY MIXTURES NOT OTHERWISE DEALT WITH

55. Identity of tank(s).
56. Quantity disposed of from each tank (state the port and the quantity retained).
57. Method of the disposal:
1. To reception facilities (identify port and quantity involved in cubic metres). (5)
2. Mixed with cargo (state quantity).
3. Transferred to (an)other tank(s); identify tank(s); state quantity transferred and total quantity in tank(s) in cubic metres.
4. Other method (state which); state quantity disposed of in cubic metres.

(K) DISCHARGE OF CLEAN BALLAST CONTAINED IN CARGO TANKS

58. Position of ship at start of discharge of clean ballast.
59. Identity of tank(s) discharged.
60. Was (were) the tank(s) empty on completion?
61. Position of ship on completion if different from 58.
62. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?

(L) DISCHARGE OF BALLAST FROM DEDICATED CLEAN BALLAST TANKS (CBT TANKERS ONLY)

63. Identity of tank(s) discharged.
64. Time and position of ship at start of discharge of clean ballast into the sea.
65. Time and position of ship on completion of discharge into the sea.
66. Quantity discharged in cubic metres.
1. Into the sea, or
2. To reception facilities (identify port).
67. Was there any indication of oil contamination of the ballast water before or during discharge into the sea?
68. Was the discharge monitored by an oil content meter?
69. Time and position of ship when valves separating dedicated clean ballast tanks from the cargo and stripping lines were closed on completion of deballasting.

(M) CONDITION OF OIL DISCHARGE MONITORING AND CONTROL SYSTEM

70. Time of system failure.
71. Time when system has been made operational.
72. Reasons for failure.

(N) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGES OF OIL

73. Time of occurrence.
74. Port or ship's position at time of occurrence.

75. Approximate quantity in cubic metres and type of oil.
76. Circumstances of discharge or escape, the reasons therefor and general remarks.

(O) ADDITIONAL OPERATIONAL PROCEDURES AND GENERAL REMARKS

TANKERS ENGAGED IN SPECIFIC TRADES

(P) LOADING OF BALLAST WATER

77. Identity of tank(s) ballasted.
78. Position of ship when ballasted.
79. Total quantity of ballast loaded in cubic metres.
80. Remarks.

(Q) RE-ALLOCATION OF BALLAST WATER WITHIN THE SHIP

81. Reasons for re-allocation.

(R) BALLAST WATER DISCHARGED TO RECEPTION FACILITY

82. Port(s) where ballast water was discharged.
83. Name or designation of reception facility.
84. Total quantity of ballast water discharged in cubic metres.
85. Date, signature and stamp of port authority official.

****1.** When an individual tank has more machines than can be operated simultaneously, as described in the Operations and Equipment Manual, then the section being crude oil washed should be identified, e.g. No2C, forward section.*
***2.** In accordance with the Operations and Equipment Manual, enter whether single-stage or multi-stage method of washing is employed. If multi-stage method is used, give the vertical arc covered by the machines and the number of times that arc is covered for that particular stage of the programme.*
***3.** If the programmes given in the Operations and Equipment Manual are not followed, then the reasons must be given under Remarks.*
***4.** Hand-hosing, machine washing and/or chemical cleaning. Where chemically cleaned, the chemical concerned and amount used should be stated.*

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TANKERS

N/T	TASK
194	Make up a table that contains the garbage allowed to be disposed of from vessels when travelling within and outside a special area in relation to the distance from shore as it is determined by Annex V of the MARPOL 73/78 Convention (Sea Pollution by Garbage from Ships). …… ……

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TANKERS

Complete the following table with the details of the cargo for every voyage according to the numeration of page……

N/T **195**

Voyage number	Loading port	Type of cargo	Specific gravity or API	Temperature Loading	Temperature Discharging	Volatility	Particular hazards	Any required special care during loading, sea passage or discharging

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TANKERS

N/T	TASK
196	Write a report in English regarding the subjects mentioned below, each one of which should consist of at least 200 words (N/T 196 to N/T 204). …… ……

NOTE:
The subjects mentioned in the tasks N/T 196 – 204 are already written in English.

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TANKERS

N/T	TASK	COMPLETION OF TASK		
	DECK TASKS	**DATE**	**CHIEF OFFICER'S CONFIRMATION**	**REMARKS**
205	1. Briefing on and understanding of the Tanker Safety Guide. 2. Providing assistance to the Officer in charge of preparing: 1. Loading 2. Discharging 3. Ballasting 4. Tank washing 3. Check of the anti-pollution measures - scupper plugs - drain boxes - absorption material equipment - sea inlet valves closed and secured wherever necessary - unused connection flanges of the manifold closed - periodic check of both deck sides - inspection for possible leak in connections and deck pipelines 4. Providing assistance to the Officer in charge during: 1. Loading 2. Discharging 3. Ballasting 4. Tank washing, including COW system if it can be applied 5. Gas-freeing 5. Identifying and understanding communication signals between ship and shore during loading.			

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TANKERS

N/T	TASK	COMPLETION OF TASK		
	DECK TASKS	**DATE**	**CHIEF OFFICER'S CONFIRMATION**	**REMARKS**
206	6. Understanding and capability to use machinery in the cargo control room. 7. Understanding and explanation of the fact that "you must never turn the cargo inlet switches off on the vessel". 8. Capability to use the inert gas system. 9. Keeping a loading logbook. 10. Preparation of safety instruments and provision of assistance to the tank inlet control. 11. Reading the ullage, the pressure and the flow indicators.			

(*) *Translator's Note:* The abbreviations used in the table have been explained as per the following book:
G.D.Dunlap and H.H.Shufeldt, ***Dutton's Navigation and Piloting***, pub. Naval Institute Press, 1969.

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TRAINEE'S TASKS