



UNIVERSITI KUALA LUMPUR
Malaysian Institute of Marine Engineering Technology

FINAL EXAMINATION
FEBRUARY 2025 SEMESTER SESSION

SUBJECT CODE : LGD21402

SUBJECT TITLE : MARITIME COMMUNICATION ENGLISH

PROGRAMME NAME : DET IN MARINE ENGINEERING &
(FOR MPU: PROGRAMME LEVEL) DET IN ELECTRICAL AND ELECTRONICS (MARINE)

TIME / DURATION : 09.00 AM - 11.30 AM
(2 HOURS 30 MINUTES)

DATE : 21 JUNE 2025

INSTRUCTIONS TO CANDIDATES

1. Please read **CAREFULLY** the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of **THREE (3)** sections.
4. Answer **ALL** questions in all sections.
5. Please write your answers in this question paper.
6. Answer **ALL** questions in English language **ONLY**.

THERE ARE 7 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 30 marks)**Instruction:****Read the passage and answer the questions.****Communication at Sea**

All vessels, irrespective of their type, share common characteristics: they have to communicate with one another and establish and maintain contact with the port authorities and the pilot stations on approaching canals and harbours. Sometimes they must keep in touch with the searching aircraft and helicopters taking part in rescue operations.

There are various ways of conveying information at sea. Therefore, maritime communication comprises communication between vessels and coast-stations, intership communication, (communication between the ship and other ships) and intraship communication (internal communication when the vessel is berthing, casting off, leaving berth, loading and discharging, etc.). Vessels and coast-stations can communicate by means of Radio-Telephony, Satellite, Digital Selective Calling (DSC) and Radio-Telex. Radio signals may be passed using radio-telegraphy and radio-telephone. When communicating over the radio the phonetic alphabet is used so that combinations of letters can be understood by people regardless of a poor radio signal or differences in pronunciation or native language.

Communication within the ship is done by an internal telephone system or walkie-talkies. Communication within the ship is carried out in the crew's native language, or in case of mixed crews, it is carried out in English. Communication over short distances can be made by both visual and sound signals. Visual signals can be sent using flags of the International Code of Signals or using an Aldis lamp for flashing messages in Morse Code, which has been phased out. There are different coloured flags for each letter of the alphabet. Flags can also be hoisted in combinations of two, three or four, which have a particular meaning. Sound signals are used in fog and can be made with the ship's siren, whistle or bell.

Communication over long distances can be sent by radio. Radio telephony uses Very High Frequency (VHF), Medium Frequency (MF) and High Frequency (HF) to allow spoken messages to be passed. The VHF is used to bridge short distances, is easy to operate and is allowed to be used in international, territorial and inland waterways. Medium Frequency (MF) is used to communicate between stations that are not separated by a distance greater than 200 nautical miles. High Frequency (HF) is used for medium and long-range radio communication.

Voice communications at sea depend entirely on the use of language and, if they are to be effective, it would be advisable for the participants to share a common language. Since there are many nationalities that use VHF radio for voice communications at sea, it was decided by the International Maritime Organization that English would be used for that purpose.

The Global Maritime Distress and Safety System (GMDSS) is part of the International Convention concerning Safety of Life at Sea (SOLAS). Its main objective is to prevent accidents by providing Marine Safety Information and at least minimize the consequences of marine accidents by means of effective communication. GMDSS consists of a terrestrial and a satellite-system. The terrestrial system (earth-system) comprises Radio-Telephony (RTF), Digital Selective Calling (DSC), Direct Printing Telegraphy (DPT), Navigational Telex (NAVTEX) and the Search and Rescue Radar Transponder (SART). The satellite systems comprise Inmarsat, COSPAS/SARSAT, Emergency Position Indicating Radio Beacons (EPIRBs) and the Status Recording-System (STAREC). GMDSS will enable a vessel to communicate with coastal stations and other vessels at any time and under any circumstances.

Categories of messages that can be transmitted and received are called "priorities" and they indicate the importance of the message. There are four types of messages:

- 1) A **DISTRESS** message is used to indicate that there is serious and immediate danger for vessel, crew and passengers. A DISTRESS ALERT is also referred to as a "MAYDAY".
- 2) An **URGENCY** message indicates that there is serious danger for vessel, crew and passengers. This message is also referred to as a "PAN PAN" message.
- 3) A **SAFETY** message indicates that there is imminent risk for navigation. A SAFETY message is also referred to as a "SECURITE" message.
- 4) A **ROUTINE** message is transmitted to ensure safe navigation. Routine messages refer to inter-ship communication, exchange of data in port operations, communication between ships and Vessel Traffic Services, inshore radar stations, bridges and locks.

Any message concerning maritime communication consists of three parts: the announcement of the message which may be followed by the acknowledgement from the receiving station or vessel; the actual message and the ending of the message.

In maritime communication a distinction must be made between GMDSS vessels and non-GMDSS vessels, that is, vessels that do not have to comply with the Global Maritime Distress and Safety System. Non-GMDSS vessels include small vessels such as pleasure yachts that are not engaged in trade, ships that are not self-propelled, but also men-of-war.

GMDSS vessels include all vessels engaged on international voyages. The difference between the two lies merely in the way communication is initiated, for example the announcement of a message. Non-GMDSS vessels announce a message by means of VHF (voice-communication). GMDSS vessels announce a message by means of Digital Selective Calling (DSC). DSC is intended to digitally announce and initiate ship/ship, ship/shore and shore/ship radio-telephone and radio-telex calls. After the announcement has been digitally acknowledged by the receiving station or ship, communication is usually continued on VHF. To transmit a DSC call, a GMDSS-operator enters the required commands to address the station or ship with which he wishes to communicate, and the priority of the call.

Answer the questions based on the passage.

1. Why is communication at sea essential?

2. What does maritime communication comprise?

3. How can vessels and coast-stations communicate?

4. Which frequency categories are used in radio telephony?

5. What is the purpose of GMDSS?

6. How many systems does GMDSS consist of?

7. What does the terrestrial system comprise?

8. What does the satellite system comprise?

9. What are the four types of messages that are usually transmitted and received?

10. What does a Distress alert indicate and how is it referred to?

11. What does an Urgency message indicate and how is it referred to?

12. What does a Safety message refer to?

13. What does a GMDSS vessel stand for?

14. Which vessels are regarded as non-GMDSS vessels?

15. What is the difference between GMDSS and Non-GMDSS vessels?

SECTION B (Total: 50 marks)

INSTRUCTION:

1. In the GMDSS framework, there are different Sea Areas to allot the working equipment in the respective area. Fill in the blanks with the range and communication equipment required in the GMDSS – Areas A1, A2, A3 and A4 (20 marks).

AREA	RANGE	EQUIPMENT
A1		
A2		
A3		
A4		

2. Fill in the empty boxes with the right alphabet codes (20 marks).

Letter	Code	Letter	Code
A	Alpha	N	11.
B	1.	O	Oscar
C	2.	P	12.
D	3.	Q	13.
E	4.	R	14.
F	Foxtrot	S	15.
G	5.	T	16.
H	6.	U	Uniform
I	India	V	17.
J	7.	W	Whiskey
K	8.	X	18.
L	9.	Y	19.
M	10.	Z	20.

3. State the Message Marker for each message below (10 marks).

1. _____ : Buoy number two-six is unlit.
2. _____ : What are my berthing instructions?
3. _____ : No vessels are at the anchorage.
4. _____ : Go to berth number eight.
5. _____ : What is your draught aft?
6. _____ : Advise you keep your present course.
7. _____ : I expect to be underway within period: two hours.
8. _____ : Please provide fire-fighting assistance.
9. _____ : Push on my port bow.
10. _____ : The vessel ahead of you is stopping.

SECTION C (Total: 20 marks)

Produce Step 1: Initial Call and Message for the given information. (20 marks)

- a) You are the distressed vessel "Anticosti", call sign TSUR, IMO 7314723, in position 45° 56' N, 015° 28' W. You have collided with an unknown object. Vessel is flooding. You are sinking. There are 18 crewmembers on board, one of whom is dead and three injured. You transmit a distress alert on VHF.

Answer:

- b) You are the vessel "Emma Maersk", call sign OYGR2, IMO 9321483, in position 53° 23' N, 024° 13' W. Your vessel was attacked by Somali pirates with rocket propelled grenades. Vessel is on fire. There are 25 crewmembers on board, three of whom are injured and four have been taken hostages. You ask for assistance on VHF.

Answer:

END OF EXAMINATION PAPER

