CEPT ECC
Electronic Communications Committee

ERC Decision (99)01

The harmonised examination syllabi for the General Operator's Certificate (GOC) and the Restricted Operator's Certificate (ROC)

Approved 10 March 1999

Amended 3 July 2015

EXPLANATORY MEMORANDUM

1 INTRODUCTION

The start of the Global Maritime Distress and Safety System (GMDSS) in February 1992 made it necessary to harmonise the examination requirements for certificates of maritime radio operators. The CEPT Recommendation T/R 31-03 was developed and approved by the ERC in 1993 to harmonise the examination syllabi for maritime radio personnel operating in the GMDSS and the procedures for conversion of non-GMDSS certificates to GMDSS certificates.

The efficient operation of GMDSS depends on the proficiency of the maritime radio operators. The Recommendation T/R 31-03 concerning the harmonised examination syllabi for the general operator's certificate and the restricted operator's certificate has proved to be a valuable tool for improving the competence of operators. The importance of the harmonised procedures is emphasised by the fact that part of the content of T/R 31-03 has been adopted by the IMO into the Model Training Course.

2 REQUIREMENT FOR AN ERC DECISION

Unfortunately serious operational mistakes have taken place on GMDSS frequencies, e.g. in the form of false distress alerts and incorrect distress relays.

In order to alleviate those problems, the status of the GOC and ROC examination syllabi needed to be enhanced. The 17th meeting of ERC in June 1996 recognised that more efficient provisions than a Recommendation were required and approved converting ERC Recommendation T/R 31-03 to an ERC Decision.

After WRC-12 it was considered necessary to revise this ERC Decision to take into consideration changes in the international regulations and developments which have occurred in the Maritime Mobile Service and Maritime Mobile-Satellite Service over time.

ERC DECISION OF 10 MARCH 1999 ON THE HARMONISED EXAMINATION SYLLABI FOR THE GENERAL OPERATOR'S CERTIFICATE (GOC) AND THE RESTRICTED OPERATOR'S CERTIFICATE (ROC) (ERC/DEC/(99)01) AMENDED 3 JULY 2015

"The European Conference of Postal and Telecommunications Administrations

considering

a) that the Maritime Mobile Service and the Maritime Mobile-Satellite Service are services according to ITU Radio Regulations and governed by the ITU Radio Regulations and national regulations;

b) that provisions closely related to the Maritime Mobile Service and the Maritime Mobile-Satellite Service are also given in the International Convention for the Safety of Life at Sea (SOLAS) and other IMO conventions and resolutions;

c) that it is desirable to establish common standards of competence for the personnel of stations of the Maritime Mobile Service and the Maritime Mobile-Satellite Service operating in accordance with the Global Maritime Distress and Safety System (GMDSS);

d) that the GMDSS entered into force on 1 February 1992;

e) that administrations are responsible, in accordance with Article 48 of the ITU Radio Regulations, to ensure that the personnel of ship stations and ship earth stations, operating in accordance with the GMDSS, are adequately qualified to enable efficient operation of the station;

f) that Article 47 of the ITU Radio Regulations specifies the conditions governing the issue of GMDSS certificates for personnel of ship stations and ship earth stations and the International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW) regulates the conditions for the issue of the GMDSS certificates;

g) that the STCW Code B-IV/2 recommends the training for maritime radio personnel operating in the GMDSS;

h) that the development in IMO and changes in the GMDSS need to be monitored and consequent modifications introduced in the examination syllabi;

i) that the basic requirements for the content of certificates are set down in Radio Regulations 47.9 through 47.16;

j) that the Directive 2005/45/EC of the European Parliament and of the Council of 7 September 2005 on the mutual recognition of seafarers' certificates issued by the Member States and amending Directive 2001/25/EC gives the procedures and criteria for the recognition of certificates issued by member states,

k) that the Directive 2012/35/EU of the European Parliament and of the Council amending Directive 2008/106/EC on the minimum level of training of seafarers gives the procedures and criteria for the recognition of certificates issued by third countries;

l) that the Directives referred to in considering j) and k) relate to seafarers on-board ships that are subject to the SOLAS Convention;

DECIDES

1. that CEPT **administrations shall:**

   a) issue General Operator's Certificates (GOC) for candidates passing the examination described in Annex 1;

   b) issue Restricted Operator's Certificates (ROC) for candidates passing the examination described in Annex 2;

2. that GOC and ROC certificates issued in accordance with this Decision shall bear a reference to the Radio Regulations and this Decision;

3. that administrations mutually recognise certificates when these are issued in accordance with this Decision;

4. that this Decision shall **enters into force** 3 July 2015 ;

5. that the preferred **date for implementation** of the Decision shall be 3 January 2016;

6. that administrations shall communicate their **national measures** implementing this Decision to the ECC Chairman and the ECO when this Decision is nationally implemented."

Note:

Please check the Office documentation database http://www.ecodocdb.dk for the up to date position on the implementation of this and other ECC Decisions.

ANNEX 1: EXAMINATION SYLLABUS FOR GENERAL OPERATOR'S CERTIFICATE (GOC)

The examination shall consist of theoretical and practical tests and shall include at least:

A. THE BASIC FEATURES OF THE MARITIME MOBILE SERVICE AND THE MARITIME MOBILE-SATELLITE SERVICE

- A1. The general principles and basic features of the maritime mobile service
- A2. The general principles and basic features of the maritime mobile-satellite service
- A3 The general principles and basic features of the GMDSS

B. PRACTICAL SKILLS TO USE A SHIP STATION

- B1. Radio installation
- B2. Digital Selective Calling (DSC)
- B3. Narrow Band Direct Printing (NBDP) / Radio Telex Systems
- B4. NAVTEX
- B5. GMDSS compliant satellite systems.

C. OPERATIONAL PROCEDURES

- C1. Distress, urgency and safety communication for DSC and radiotelephony
- C2. Satellite communication
- C3. Other means of alerting and locating
- C4. Search And Rescue (SAR) communication
- C5. Maritime Safety Information (MSI)
- C6. Routine communication

D. MISCELLANEOUS SKILLS

- D1. Regulations and agreements
- D2. Documentation and publications
- D3. Ability to use English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea
- D4. Voyage planning
- D5. Traffic charges

EXAMINATION SYLLABUS GUIDELINES FOR GOC CERTIFICATE

A. KNOWLEDGE OF THE BASIC FEATURES OF THE MARITIME MOBILE SERVICE AND THE MARITIME MOBILE-SATELLITE SERVICE

A1. The general principles and basic features of the Maritime Mobile Service

1.1 Types of communication in the Maritime Mobile Service
- Distress, urgency, safety and other communications
- Public correspondence
- Port operations and ship movement service
- Intership communications
- On-board communications
- Security communications
- Automatic communications

1.2 Types of stations in the Maritime Mobile Service
- Ship stations
- Coast stations:
    - Rescue Coordination Centres (RCC);
    - Port stations, etc.
- Stations on-board aircraft

1.3 Knowledge of frequencies and frequency bands
- The concept of frequency
- The equivalence between frequency and wavelength
- The unit of frequency: Hz, kHz, MHz, GHz
- The subdivision of the most significant part of the radio spectrum: LF, MF, HF, VHF, UHF, SHF

1.4 Knowledge of propagation of frequencies
- Different propagation mechanisms: line of sight, free space, ground wave and ionospheric
- Propagation of MF, HF, VHF, UHF and SHF frequencies

1.5 Knowledge of the role of the various modes of communication
- DSC
- Radiotelephony
- NBDP
- Data

1.6 Knowledge of different types of modulation and classes of emission
- Classes of emission
- Carrier frequency and assigned frequency
- Bandwidth of different emissions
- Official designations of emissions (e.g., G3E, G2B, J3E, F1B, J2B, H3E, etc.)
- Unofficial designations of emissions (e.g. SSB, TLX, etc.)

1.7 Frequencies allocated to the Maritime Mobile Service
- The usage of MF, HF, VHF, UHF and SHF frequencies in the maritime mobile service
- Simplex and duplex (VHF). - Paired and unpaired frequencies (HF).
- Distress and safety frequencies
- Routine calling frequencies

A2. The general principles and basic features of the Maritime Mobile-Satellite Service

2.1 Basic knowledge of satellite infrastructure system
- Space segment (satellites, orbits and coverage)
- Ground segment; Coast Earth Stations (CES) and Network Co-ordination Stations (NCS)
- Ship Earth Stations (SES)

2.2 Services
- Distress and safety
- Other services

A3. The general principles and basic features of the Global Maritime and Distress and Safety System (GMDSS)

3.1 Functional requirements in accordance with SOLAS Chapter 4
3.2 Sea Areas
3.3 Carriage requirements and methods to ensure the availability of radio equipment
3.4 Watch keeping on distress frequencies
3.5 Sources of energy including emergency and reserve sources of energy
3.6 Licences, radio safety certificates, radio operator certificates, inspections and surveys

B. PRACTICAL SKILLS TO USE A SHIP STATION

B1 Radio installation

1.1 VHF radio installation
- Typical controls and usage, e.g.
    - On/off switch
    - Transmitting power level control
    - Channel selector
    - Dual watch and scan mode
    - Volume control and squelch
    - DSC function, including watch keeping receiver

1.2 MF/HF radio installation
- Typical controls and usage, e.g.
    - On/off switch
    - Transmit power level control
    - ITU channel number setting
    - RX frequency setting
    - TX frequency setting
    - Tuning the transmitter
    - Mode of emission
    - Volume control and squelch
    - RF gain
    - AF gain
    - Automatic gain control (AGC)
- DSC function, including watch keeping receiver

1.3 Antennas and connections
- VHF whip antennas
- MF/HF whip antennas
- MF/HF wire antennas
- Spare antennas
- Satellite antennas
- Antenna cables
- Insulators

1.4 Reserve source of energy
- Different kinds of batteries and their characteristics
- Charging of batteries
- Maintenance of batteries
- Uninterruptible Power Supply (UPS) systems
- Dedicated generator for radio equipment (option for batteries)

1.5 Survival craft radio equipment
- Portable two-way VHF radiotelephone apparatus
- AIS-SART
- Search And Rescue Transponder (SART)
- Emergency Position Indicating Radio Beacons (EPIRB)

B2. Digital Selective Calling (DSC)

2.1 DSC setup menu (e.g. frequency selection, system check)

2.2 DSC call menu tree
- Type of call (format specifier)

2.3 Message parts in a distress alert
- Maritime Mobile Service Identity (MMSI) (identification of the ship in distress)
- Nature of distress
- Position and time (distress coordinates and UTC time)
- Common choices of follow-up communication (telecommand)

2.4 Message parts in other calls
- Address of the DSC call (address, MMSI)
- Position definition (address) - (geographical MF or HF call only)
- Order of priorities (category)
- Common choices of follow-up communication (telecommand 1)
- Additional information (telecommand 2)
- Frequency or position information

B3. Radio Telex (NBDP)

3.1 Equipment
- Controls and indicators
- Keyboard operation

3.2 Modes
- Automatic Repeat Request (ARQ)
- Forward Error Correction (FEC)

3.3 Numbering system and answerback

B4. NAVTEX

4.1 The system
- Purpose
- Frequencies
- Message format (transmitter ID, message type and number)
- Transmitting stations
- Reception range

4.2 The receiver
- Selection of transmitters
- Selection of message type
- Messages which cannot be rejected
- Storage of messages
- Message interpretation
- Use of subsidiary controls

B5. Usage of satellite systems

5.1 INMARSAT C
- Components of an INMARSAT C terminal
- Usage of an INMARSAT C terminal
- Performance Verification tests (P/V) (Link test)

5.2 INMARSAT Enhanced Group Call (EGC) Receiver
- Pre-programming a Ship Earth Station for EGC message reception
- Selecting operating mode for EGC reception

5.3 INMARSAT FLEET 77 / INMARSAT B
- Satellite acquisition
- Priority of calls
- Telephone services
- Data (e-mail)
- Telex services (INMARSAT B)

C. OPERATIONAL PROCEDURES

C1. Distress, urgency and safety communication for DSC and radiotelephony

1.1 Distress communications using DSC
- Distress alert
  - The definition of a distress alert
  - Transmission of a distress alert
- Distress alert relay
  - The definition of a distress alert relay
  - Transmission of a shore-to-ship distress alert relay
  - Transmission of a ship-to-shore distress alert relay
  - Transmission of a distress alert by a station not itself in distress
- Receipt and acknowledgement of a distress alert
  - Receipt and acknowledgement by a coast station
  - Receipt and acknowledgement by a ship station
- Testing procedure

1.2 Distress communications using radiotelephony
- Distress signal
- Distress call
- Distress message
- Acknowledgement of a distress message
- Distress call relay (Transmission of a distress message by a station not itself in distress)

- Handling of distress traffic
- Search And Rescue (SAR) communications
- On-scene communications
- Distress traffic terminology
- Cancelling false distress alerts

1.3 Urgency and safety communications
- The meaning of urgency and safety communications
- Procedures for DSC urgency and safety calls
- Urgency announcement
- Urgency signal
- Urgency communications
- Medical transports
- Medical advice
- Safety announcement
- Safety signal
- Safety communications

1.4 Protection of distress and safety frequencies
- Guard bands
- Tests on distress and safety frequencies
- Transmissions during distress traffic
- Avoiding harmful interference
- Prevention of unauthorised transmissions

C2. Satellite communication

2.1 Ship Earth Station
- Distress alerting
    - Sending a distress alert
    - Sending a distress priority message
- Distress communications
    - Use of the distress facility
    - Telephony distress calls and messages
    - Procedures for distress calls and messages
- Rescue Co-ordination Centres associated with the Coast Earth Stations.
- Urgency and safety communications
- Use of the urgency/safety facilities
    - Procedures for urgency/safety calls and messages
    - Telephony urgency/safety calls and messages
- Cancelling false distress alerts

2.2 INMARSAT FLEET 77 Ship Earth Station
- Distress and safety services
    - Use of the distress facility
    - Satellite acquisition
    - Telephony distress calls
    - Procedures for distress calls
    - 2-digit code
- Rescue Co-ordination Centres associated with the Coast Earth Stations.

2.3 INMARSAT B Ship Earth Station
- Distress and safety services
    - Use of the distress facility
    - Satellite acquisition
    - Telephony / telex distress calls
    - Procedures for distress calls
    - 2-digit service codes
- Rescue Co-ordination Centres associated with the Coast Earth Stations.

2.4 INMARSAT C Ship Earth Station
- Distress and safety services
    - Sending a distress alert
    - Sending a distress priority message
    - The INMARSAT C safety services
    - 2-digit service codes
- Log in/log out
- Performance Verification tests (P/V) (Link test)

2.5 INMARSAT EGC
- Purpose of the EGC system
- Pre-programming a Ship Earth Station for EGC message reception
- Selecting operating mode for EGC reception

C3. Other means of alerting and locating

3.1 Satellite EPIRBs
- Basic characteristics of operation
- Homing functions
- Content of a distress alert
- Manual activation
- Automatic activation (Float-free function)
- Routine maintenance
    - Testing
    - Checking battery expiry date
    - Checking the hydrostatic release mechanism expiry date

3.2 Cancelling false distress alerts

3.3 Search And Rescue Transponder (SART)
- Purpose
- Operation
- Range
- Routine maintenance
    - Checking battery expiry date
    - Testing

3.4 AIS Search And Rescue Transmitter (AIS-SART)
- Purpose
- Operation
- Range
- Routine maintenance
    - Checking battery expiry date
    - Testing

C4. Search And Rescue (SAR) communication

4.1 The role of RCCs

4.2 Maritime rescue organisations

4.3 Volume III of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual

4.4 Ship reporting systems

C5. Maritime Safety Information (MSI)

5.1 Reception of maritime safety information (MSI)
- NAVAREAS /METAREAS
- Reception by NAVTEX
- Reception by INMARSAT EGC
- Reception by HF NBDP
- Reception by radio telephony

C6. Routine communication

6.1 Communication by DSC
- Calling a coast station (ship-to-shore)
    - Transmitting individual DSC call on MF, HF, VHF
    - DSC acknowledgment from coast station
    - Follow-up communication

- Calling a ship station (ship-to-ship)
    - Transmitting individual DSC call on MF and VHF
    - DSC acknowledgment from ship station
    - Follow-up communication

- Coast station calling a ship station (shore-to-ship)
    - Receiving individual DSC call on MF, HF and VHF
    - Transmitting DSC acknowledgment to coast station
    - Follow-up communication

- Calling a group of stations
    - Transmitting and receiving DSC group call on MF, HF and VHF
    - Follow-up communication

6.2 Communication by radiotelephony
- Calling a coast station (ship-to-shore)
    - Calling on MF, HF, VHF

- Calling a ship station (ship-to-ship)
    - Calling on VHF

- Coast station calling a ship station (shore-to-ship)
    - Calling on VHF

D. MISCELLANEOUS SKILLS

D1. Regulations and agreements

1.1 Regulations and agreements governing the maritime mobile service and the maritime mobile-satellite service

D2. Documentation and publications

2.1 Use of obligatory documents and publications

2.2 Radio record keeping

D3. Ability to use English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea

3.1 Use of the IMO Standard Marine Communication Phrases (SMCP) and the International Code of Signals

3.2 Recognised standard abbreviations and commonly used service codes

3.3 Use of the international phonetic alphabet

D4. Voyage planning

4.1 Use of appropriate publications for the ships entire voyage
- Identify the appropriate RCCs/Coast Radio Stations
- Identify Search and Rescue Regions (SRR)
- Identify NAVAREAs/METAREAs
- Identify satellites to obtain Meteorological and Navigational information (EGC SafetyNet)
- Identify NAVTEX stations
- Identify the appropriate frequency or band

D5. Traffic charges

5.1 International charging system including AAIC code (ITU documentation)

ANNEX 2: EXAMINATION SYLLABUS FOR RESTRICTED OPERATOR'S CERTIFICATE (ROC)

The examination shall consist of theoretical and practical tests and shall include at least:

A THE BASIC FEATURES OF THE MARITIME MOBILE SERVICE

- A1. The general principles and basic features of the maritime mobile service
- A2 The general principles and basic features of the GMDSS

B PRACTICAL SKILLS TO USE A SHIP STATION

- B1. Radio installation
- B2. Digital Selective Calling (DSC)
- B3. NAVTEX

C OPERATIONAL PROCEDURES

- C1. Distress, urgency and safety communication for DSC and radiotelephony
- C2. Other means of alerting and locating
- C3. Search And Rescue (SAR) communication
- C4. Maritime Safety Information (MSI)
- C5. Routine communication

D MISCELLANEOUS SKILLS

- D1. Regulations and agreements
- D2. Documentation and publications
- D3. Ability to use English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea
- D4. Voyage planning
- D5. Traffic charges

EXAMINATION SYLLABUS GUIDELINES FOR ROC CERTIFICATE

A KNOWLEDGE OF THE BASIC FEATURES OF THE MARITIME MOBILE SERVICE

A1. The general principles and basic features of the Maritime Mobile Service

1.1 Types of communication in the Maritime Mobile Service
- Distress, urgency, safety and other communications
- Public correspondence
- Port operations and ship movement service
- Intership communications
- On-board communications
- Automatic communications

1.2 Types of stations in the Maritime Mobile Service
- Ship stations
- Coast stations:
    - Rescue Coordination Centres (RCC);
    - Port stations, etc.
- Stations on-board aircraft

1.3 Knowledge of frequencies and frequency bands
- The concept of frequency
- The equivalence between frequency and wavelength
- The unit of frequency: Hz, kHz, MHz, GHz
- The subdivision of the most significant part of the radio spectrum: LF, MF, HF, VHF, UHF, SHF

1.4 Knowledge of propagation of frequencies
- Different propagation mechanisms: line of sight and ground wave
- Propagation of VHF and UHF frequencies

1.5 Knowledge of the role of the various modes of communication
- DSC
- Radiotelephony
- Data

1.6 Knowledge of different types of modulation and classes of emission
- Classes of emission
- Official designations of emissions (e.g., G3E, G2B, F1B)

1.7 Frequencies allocated to the Maritime Mobile Service
- The usage of MF, HF, VHF, UHF and SHF frequencies in the maritime mobile service
- Simplex and duplex
- Distress and safety frequencies
- Routine calling frequencies

A2 The general principles and basic features of the GMDSS

2.1 Functional requirements in accordance with SOLAS Chapter 4
2.2 Sea Areas
2.3 Carriage requirements and methods to ensure the availability of radio equipment
2.4 Watch keeping on distress frequencies
2.5 Sources of energy including emergency and reserve sources of energy
2.6 Licences, radio safety certificates, radio operator certificates, inspections and surveys

B. PRACTICAL SKILLS TO USE A SHIP STATION

B1 Radio installation

1.1 VHF radio installation
- Typical controls and usage, e.g.
    - On/off switch
    - Transmitting power level control
    - Channel selector
    - Dual watch and scan mode
    - Volume control and squelch
- DSC function, including watch keeping receiver

1.2 Antennas and connections
- VHF whip antennas
- Spare antennas
- Antenna cables
- Insulators

1.3 Reserve source of energy
- Different kinds of batteries and their characteristics
- Charging of batteries
- Maintenance of batteries
- UPS systems
- Dedicated generator for radio equipment (option for batteries)

1.4 Survival craft radio equipment
- Portable two-way VHF radiotelephone apparatus
- AIS-SART
- SART
- EPIRB

B2. Digital Selective Calling (DSC)

2.1 DSC setup menu (e.g. frequency selection, system check)

2.2 DSC call menu tree
- Type of call (format specifier)

2.3 Message parts in a distress alert
- MMSI (identification of the ship in distress)
- Nature of distress
- Position and time (distress coordinates and UTC time)
- Choices of follow-up communication (telecommand)

2.4 Message parts in other calls
- Address of the DSC call (address, MMSI)
- Order of priorities (category)
- Follow-up communication (telecommand 1)
- Additional information (telecommand 2)
- Frequency or position information

B3. NAVTEX

3.1 The system
- Purpose
- Frequencies
- Message format (transmitter ID, message type and number)
- Transmitting stations

- Reception range

3.2 The receiver
- Selection of transmitters
- Selection of message type
- Messages which cannot be rejected
- Storage of messages
- Message interpretation
- Use of subsidiary controls

C. OPERATIONAL PROCEDURES

C1. Distress, urgency and safety communication for DSC and radiotelephony

1.1 Distress communications using DSC
- DSC distress alert
    - The definition of a distress alert
    - Transmission of a distress alert
- DSC distress alert relay
    - The definition of a distress alert relay
    - Transmission of a shore-to-ship distress alert relay
    - Transmission of a ship-to-shore distress alert relay
    - Transmission of a distress alert by a station not itself in distress
- Receipt and acknowledgement of DSC distress alert
    - Receipt and acknowledgement by a coast station
    - Receipt and acknowledgement by a ship station
- Testing procedure

1.2 Distress communications using radiotelephony
- Distress signal
- Distress call
- Distress message
- Acknowledgement of a distress message
- Distress call relay (Transmission of a distress message by a station not itself in distress)
- Handling of distress traffic
- SAR communications
- On-scene communications
- Distress traffic terminology
- Cancelling false distress alerts

1.3 Urgency and safety communications
- The meaning of urgency and safety communications
- Procedures for DSC urgency and safety calls
- Urgency announcement
- Urgency signal
- Urgency communications
- Medical transports
- Medical advice
- Safety announcement
- Safety signal
- Safety communications

1.4 Protection of distress frequencies
- Guard bands
- Tests on distress and safety frequencies
- Transmissions during distress traffic
- Avoiding harmful interference
- Prevention of unauthorised transmissions

C2. Other means of alerting and locating

2.1 Satellite EPIRBs
- Basic characteristics of operation
- Homing functions
- Content of a distress alert
- Manual activation
- Automatic activation (Float-free function)
- Routine maintenance
    - Testing
    - Checking battery expiry date
    - Checking the hydrostatic release mechanism expiry date

2.2 Cancelling false distress alerts

2.3 Search And Rescue Transponder (SART)
- Purpose
- Operation
- Range
- Routine maintenance
    - Checking battery expiry date
    - Testing

2.4 AIS Search And Rescue Transmitter (AIS-SART)
- Purpose
- Operation
- Range
- Routine maintenance
    - Checking battery expiry date
    - Testing

C3. Search And Rescue (SAR) communication

3.1 The role of RCCs

3.2 Volume III of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual

3.3 Maritime rescue organisations

3.4 Ship reporting systems

C4. Maritime Safety Information (MSI)

4.1 Reception of maritime safety information (MSI)
- NAVAREAS / METAREAS
- Reception by NAVTEX
- Reception by radio telephony

C5. Routine communication

5.1 Communication by DSC
- Calling a coast station (ship-to-shore)
    - Transmitting individual DSC call
    - DSC acknowledgment from coast station
    - Follow-up communication

- Calling a ship station (ship-to-ship)

- Transmitting individual DSC call
- DSC acknowledgment from ship station
- Follow-up communication

- Coast station calling a ship station (shore-to-ship)
  - Receiving individual DSC call
  - Transmitting DSC acknowledgment to coast station
  - Follow-up communication

- Calling a group of stations
  - Transmitting and receiving DSC group call
  - Follow-up communication

5.2 Communication by radiotelephony
- Calling a coast station (ship-to-shore)
- Calling a ship station (ship-to-ship)
- Coast station calling a ship station (shore-to-ship)

D. MISCELLANEOUS SKILLS

D1. Regulations and agreements

1.1 Regulations and agreements governing the maritime mobile service and the maritime mobile-satellite service

D2. Documentation and publications

2.1 Use of obligatory documents and publications

2.2 Radio record keeping

D3. Ability to use English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea

3.1 Use of the IMO Standard Marine Communication Phrases (SMCP) and the International Code of Signals

3.2 Recognised standard abbreviations and commonly used service codes

3.3 Use of the international phonetic alphabet

D4. Voyage planning

4.1 Use of appropriate publications for the ships entire voyage
- Identify the appropriate RCCs/Coast Radio Stations
- Identify Search and Rescue Regions (SRR)
- Identify NAVAREAs/METAREAs
- Identify NAVTEX stations

D5. Traffic charges

5.1 International charging system including Accounting Authority Identification Code (AAIC) (ITU documentation)