GOC RS/Set1

1) What equipment is associated with the land or terrestrial systems?
   a) EPIRB b) VHF-MF-HF
   c) Inmarsat-C d) GPS

2) What equipment is associated with the space systems?
   a) VHF-MF-HF b) Inmarsat-C
   c) NAVTEX d) SART

3) What is the primary equipment for receiving MSI?
   a) SART b) EPIRB
   c) NAVTEX d) Inmarsat-B

4) What is defined as an area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available?

   a) Ocean Area Regions AOR-E, AOR-W, POR or IOR b) Sea Area A4
   c) Sea Area A3 d) Coastal and Inland Waters

5) SITOR equipment is a full, partial or alternate carriage requirement under GMDSS for vessels operating in which sea area(s)?
   a) A1 b) A1 and A2
   c) A3 and A4 d) A1, A2, A3 and A4

6) Which of the following is a functional or carriage requirement for compulsory vessels?
   a) A compulsory vessel must carry at least two (2) licensed GMDSS Radio Operators.
   b) A compulsory vessel must satisfy certain equipment carriage requirements that are determined by where the vessel sails.
   c) A compulsory vessel must be able to transmit and respond to Distress alerts.
   d) All of the above

7) Which communications functions must all vessels be capable of performing under GMDSS as defined by the International Maritime Organization?
   a) Radio Direction Finding.
   b) Distress alerting to and from vessels, search and rescue coordination, on-scene communications, signals for locating, Maritime Safety Information, general and bridge-to-bridge communications.
   c) Communications in each of the operational ocean areas.
   d) All communications possible within the International Safety-Net service.

8) GMDSS-equipped ships will be required to perform which of the following communications functions?

   a) Distress alerting and Maritime Safety Information.
   b) Search and Rescue coordination and on-scene communications.
   c) Bridge-to-bridge and general radio communications.
   d) All of these

9) What equipment can be used to receive Maritime Safety Information?
   a) NAVTEX b) EGC receiver
   c) HF NBDP d) All of the above

10) Which of the following is a required GMDSS function?
   a) Transmit and receive locating signals. b) Transmit and receive general communications.
   c) Both of the above d) None of the above

11) What statement is true regarding the additional equipment carriage requirement imposed for the survival craft of vessels over 500 gross tons?
a) Additional carriage of two radio equipped lifeboats aft.
b) A second radar transponder is required.
c) Four additional portable VHF radios are required.
d) The ability to communicate in all modes with any shore station.

12) Vessels operating in which sea area(s) are required to carry either Inmarsat or HF equipment or a combination thereof under GMDSS?
a) All sea areas b) A3 c) A4 d) A1

13) If operating within Ocean Area A1, and outside of NAVTEX coverage, a GMDSS-equipped vessel must carry?
a) An Inmarsat-B terminal b) A GPS receiver
c) Equipment capable of maintaining a continuous DSC watch on 2187.5 kHz.
d) Equipment capable of reception of Maritime Safety Information by the Inmarsat enhanced group call system, or HF….

14) What is the equipment carriage requirement for survival craft under GMDSS?
a) At least three approved two-way VHF radiotelephones on every passenger ship and cargo ships of 500 gross tons and upwards.
b) At least two approved two-way VHF radiotelephones on every cargo ship between 300-500 gross tons.
c) At least one radar transponder must be carried on every cargo ship of 300-500 gross tons and two transponders (one for each side) of every passenger ship and every cargo ship of 500 gross tons and upward.
d) All of these

15) Which of the following statements concerning maintenance requirements is true?
a) The options are duplication of equipment, at-sea maintenance, and shore-based maintenance.
b) Compulsory vessels between 300-500 gross tons are required only to provide one maintenance option, while compulsory vessels larger than 500 gross tons and all passenger vessels are required to provide any two of the three maintenance options.
c) The "at-sea" maintenance may be waived if the compulsory vessel carries at least three licensed GMDSS Radio Operators.
d) Compulsory vessels operating in Sea Area A4 are required to carry at least one licensed GMDSS Radio Maintainer.

16) What statement is generally correct regarding the maintenance requirements for ships under GMDSS?
a) Redundancy of functions of certain equipment will partially meet this requirement.
b) On-board maintenance provided by a person holding a GMDSS Maintainer's license will partially meet the requirements.
c) Shoreside maintenance and scheduled tests and inspections will partially meet this requirement.
d) All of the above

17) A ship operating in sea area A-3 must have the following provisions for maintenance:
a) Duplication of Equipment b) Shore Maintenance
c) At Sea Maintenance d) Any two of the above

18) A ship operating in sea area A-1 must have the following provisions for maintenance:
a) Shore maintenance b) Duplication of equipment

c) At Sea Maintenance d) Any one of the above

19) How many sidebands are present in the J3E mode?
a) Two sidebands and a carrier. b) One upper sideband.
c) One lower sideband. d) Two carriers and one sideband.

20) What is the channel spacing for SITOR frequencies?

a) 500 Hz b) 170 Hz
c) 300 Hz d) 3 kHz

21) Which emission mode occupies the most bandwidth?
a) J2B b) J3E
c) F1B d) F3E

22) Which mode occupies the least bandwidth?
a) H3E b) J2B
c) AME d) F3E

23) A vertical (whip) antenna has a radiation pattern best described by?
a) A figure eight b) A cardioid
c) A circle d) An ellipse

24) A vertical quarter wave antenna with a good ground connection will:
a) Act like a half wave antenna
b) Not function due to being grounded.
c) Only be used in Satellite communications.
d) None of these

25) What is the most common type of antenna for GMDSS MF-HF?
a) Horizontally polarized whip antenna b) Long wire antenna
c) Vertical whip d) None of the above

26) What is the most common type of antenna for GMDSS VHF?
a) Horizontally polarized circular antenna b) Long wire antenna
c) Both of the above d) None of the above

27) What advantage does a vertical whip have over a long wire?
a) It radiates more signal fore and aft.
b) It radiates equally well in all directions.
c) It radiates a strong signal vertically.
d) None of the above

28) When may a compulsory vessel not be allowed to leave port?
a) When the vessel is in an over-carriage condition.
b) When the vessel has arranged for both duplication of equipment AND shore-based maintenance.
c) When the vessel has replaced a required piece of GMDSS-related equipment but its performance has not been verified or logged.
d) When the vessel is carrying only two licensed GMDSS Radio Operators and is capable of performing all required functions.

29) What are the vessel equipment and personnel requirements of GMDSS?
a) Two licensed GMDSS radio operators.
b) Equipment carriage requirements.
c) Distress alerting and response.
d) All of these

30) What is the meaning of “Reserve Source of Energy”?
a) The supply of electrical energy sufficient to operate the radio installations for the purpose of

conducting Distress and Safety communications in the event of failure of the ship's main and emergency sources of electrical power.

b) High caloric value items for lifeboat, per SOLAS regulations.
c) Diesel fuel stored for the purpose of operating the powered survival craft for a period equal to or exceeding the SOLAS requirements.
d) None of these

1 - 3

PART B

01) Your ship MV Jala Usha / VWLC in position 0120N 09010E MMSI 419230000 is sinking

a) What initial action will you take to inform all ships in area around 150 nm
b) What are the methods will you use to inform RCC on SAT B
c) What are the methods will you use to inform RCC on SAT C
d) What are the methods will you use to inform on Fleet 77
e) Write specimen message you will send

02) your ship MV Jala Usha / VWLC in position 0120N 09010E MMSI 419230000 sailing off Andamans and received information in EGC that a ship has sunk and crew abandoned the ship 8 nm S E of your position

a) What initial action will you take?
b) Your Master instructs to inform all the ships within the radius of 40 nm

03) Your ship MV Jala Ganga / VWFF in position 0420N 08010E MMSI 419235000 sailing off Lacadives on Fire and also came to know that some ships from African Countries who are not good in English are near by . State the action you would take in NBDP on MF Band.

a) Your Initial action?
b) Your message after initial action?

04) You are on ship MV Jala Usha /ATBT in position 0420N 080 10E MMSI 419335000 and inadvertently pressed the Emergency button on EPIRB -Take action.

05) Write the frequencies for the following:

a) MF frequency to send Routine alert to Singapore Radio:
b) MF frequency to send Routine alert to MV Akbar:
c) VHF channel used for inter ship safety of navigation :
d) Up link frequency of CES to Sat:
e) Down link frequency from Sat to SES:
f) VHF Channel from ship to aircraft:

KEY for Set No.1

1) B 2) B 3) C 4) C 5) C 6) D 7) B 8) D 9) D 10) C

11) B 12) B 13) D 14) D 15) A 16) D 17) D 18) D 19) B 20) B

21) D 22) B 23) C 24) A 25) C 26) D 27) B 28) C 29) D 30) A

SOLAS

01) Your ship MV Jala Usha / VWLC in position 0120N 09010E MMSI 419230000 is sinking

a) What initial action will you take to inform all ships in area around 150 nm
b) What are the methods will you use to inform RCC on SAT B
c) What are the methods will you use to inform RCC on SAT C
d) What are the methods will you use to inform on Fleet 77
e) Write specimen message you will send

a) Send a DSC distress alert on 2187.5 khz and call message on 2182 khz.
1

b) By Telephone and Telex methods:

Telephone

- Select telephone mode. 1
- Press Distress button for not less than 6 secs
- Press # key to initiate the call. Once RCC responds, transmit the distress call and msg.

Telex

- Select telex mode
- Press distress button for not less than 6 secs
- Press DMG and await till DMG completes of automatic transmission of undesignated distress message.
- Time permitting, edit the distress msg, and send.

c) Undesignated by pressing the distress buttons in BDU and designated distress alert from

Distress menu, selecting nature of distress, updating position, selecting LES and pressing
distress buttons for not less than 6 secs in BDU .
1

d) - Press distress button for not less than 6 secs.

- Select LES 1

- Press # key to initiate the call. Once RCC responds, transmit distress call and message.

e) Mayday
M.V. Akash/ATGR/419123000/(Sat.B,C,Fl.77 as appropriate)
12 00 N 085 25E
SINKING 2
Req Immdt.Assist.
23 crew on board
Gale winds and heavy swell
Master
Over (R/T) or NNNN(Tlx)

02) Your ship MV Jala Usha / VWLC in position 0120N 09010E MMSI 419230000 sailing off Andamans and received information in EGC that a ship has sunk and crew abandoned the ship 8 nm S E of your position

a) What initial action will you take ?
b) Your Master instructs to inform all the ship within the radius of 40 nm

a) Set watch on VHF Ch. 16 and 06 1
b) Send a Dsc Distress Relay Alert to All ships on Ch.70 and 2187.5 khz and call and message on Ch.16 and 2182 khz. 2

On VHF Ch.16 & MF 2182 khz
Call: Mayday Relay x3
All Stations x3
This is 1
M.V.Jala Usha X3/VWLC

Msg: Mayday
MV Jala Usha/VWLC
Received from EGC that a ship sunk 8 nm SE of my position 0120N 09010E and
2
crew abandoning the ship .
Self proceeding for help.
Require further assistance
Master
over

03) Your ship MV Jala Ganga / VWFF in position 0420N 08010E MMSI 419235000 sailing off Lacadives on Fire and also came to know that some ships from African Countries who are not good in English are near by . State the action you would take in NBDP on MF Band.

a) Your Initial action?
b) Your message after initial action?

3

a) Send a Dsc Distress alert on 2187.5 khz and transmit message on 2174.5 khz Telex FEC

b) On 2174.5 kHz NBDP FEC Mode, send:
Mayday
MV Jala Ganga/VWFF/419235000 3
Posn 04 20N 080 10E off Lacadives
Fire
Req Immdt Assist.
23 crew on board
Master
NNNN

04) You are on ship MV Jala Usha /ATBT in position 0420N 080 10E MMSI 419335000 and inadvertently pressed the Emergency button on EPIRB -Take action

- Switch off EPIRB Immediately.

- Via Sat-c: a) Prepare a cancellation msg 2
b) In Sat-C Transmit menu select Distress Priority
c) Select LES, send the flwg cancellation msg:

To : RCC Mumbai
FM: Master MV Jala Usha/ATBT/Sat.c …. 2
Pls cancel my false EPIRB alert of 261200 utc, posn 04 20N 080 10E
MMSI 419335000

Master
NNNN

Via Terrestrial:
Send a cancellation msg to RCC through the nearest CRS by R/T or TLx.
2
Inform Ship owners and flag state control.

05) Write the frequencies for the following: 1 x 6

a) MF frequency to send Routine alert to Singapore Radio:
b) MF frequency to send Routine alert to MV Akbar:

c) VHF channel used for inter ship safety of navigation :
d) Up link frequency of CES to Sat:
e) Down link frequency from Sat to SES:
f) VHF Channel from ship to aircraft

a) 2189.5 kHz. b) 2177 kHz c) Ch.13 d) 6 Ghz. e) 1.5 Ghz f) Ch.06

GOC RS Set 2

1. Do not write anything on the question paper. Write your answers only in the answer sheet provided.
2. Write your name and roll No. (Bay Mo.) on the answer sheet on every page .
3. Mobile phone or any other electronic devices strictly not permitted.
4. Sction -A is'obje.ctive type and section B is descriptive type.
5. candidates have tcTscore minimum 15 marks in each section and total 36 marks to pass this paper.
6. In Section-A include the correct/most appropriate choice (A,B,C or D) against the respective question
7. In section-B answer should be discreet and brief and should be written against the question.

Section-A

1. What are the characteristics of Reserve Source of Energy under GMDSS?

A. Supplies independent HF and MF installations at the same time.
B. Cannot be independent of the propelling power of the ship.
C. Must be incorporated into the ship's electrical system.
D. Must be independent of the ship's electrical system when the RSE is needed to supply power to the GMDSS equipment. ;

2.Which of the following terms is defined as a back-up power source that provides power to radio installations for the purpose of conducting distress and safety communications when the vessel's main and emergency generators cannot?

A. Reserve Source of Encrgy.(RSE.)
B. Emergency Diesel Generator.(EDG)
C. Reserve Source of Diesel Power.(RSDP)
D. Emergency Back-up Generator. (EBG)

3. Under GMDSS a compulsory VHF-DSC radiotelephone installation must be tested at what minimum intervals at sea?
a) Daily b) Annually c) At the annual SOLAS inspection d) Monthly.

4.Testing of a compulsory radiotelephone station should be done? ,
A) Into an artificial antenna.
B) May be accomplished by using the radiotelephone for normal business.
C) On 2182 kHz and must be heard clearly under normal conditions at a range of 150 nautical miles
D) Either (a) or (b)

5. DSC controllers have a facility that allows the unit to be routinely tested without the associated transmitter being activated. The unit should be tested while underway at least?
a) Once a day. b) Once a Week, c) Twice a Week, d) Once a Month.

6. At sea all required equipment (other than Survival Craft Equipment)"must be proven operational by?
a) Daily testing b) By either (a) or (c)
c) Operational use of the equipment d) Testing at least every 48 hrs

7. The best way to test the MF--HF NBDP system is?
a) Make a radiotelephone call to a coast station.
b) Initiate an ARQ call to demonstrate that the transmitter and antenna arc working,
c) Initiate an FEC call to demonstrate that the transmitter and antenna are working.
d) Initiate an ARQ call to a Coast Station and wait for the automatic exchange to answerback.

8. The best way to test the Inmarsat-C terminal is?
a) Send a message to a shore terminal and wait for confirmation.
b) Compose and send a brief message to your own Inmarsat-C terminal.
c) Send a message another ship terminal.
d) If the send light flashes, proper operation has been confirmed.

9. A vessel certified for service in Sea Area A3 is required to maintain a watch on?
a) VHF Channel 70. b) MF Frequency 2187.5 Khz
c) HF on 8414.5 KHZ and one other HF DSC frequency. d) All of these.

10. What are the mandatory DSC watch keeping bands/channels?
A. Vhf Ch-70, 2 Mhz DSC, 6 Mhz DSC and one other HF DSC.
B. 2 Mhz MF DSC, 8 Mkz DSC, VHF Ch-16 and one other HF DSC.
C. 8Mhz HF DSC, one other HF DSC, 2 Mhz MF DSC and VHF Ch-70.
D. None of the above.

11. Proper watch keeping includes the following.
A. All required frequencies are monitored in the proper mode,
B. After silencing an alarm all displays and/or print out are read,
C. Notifying the Master of any distress alerts.
D. All of the above.

12. Proper watch keeping includes the following
A. Understanding the GMDSS console's normal operational indicators.
B. Maintaining a proper GMDSS radio station log:
C. Responding to and comprehending alarms.
D. All of the above.,'

13. Which of the following statements arc true?
   A. GMDSS Radio Logs are required to contain entries pertaining to all incidents connected with the radio communications service that appear to be of importance to the safety of life at sea.
   B. All distress communications must be entered in the GMDSS radio log
   C. Both of the above
   D. None of the above.

14. Which of the following statements are true?
   A. Kay letters or abbreviations may not be used in GMDSS Radio Logbooks under any circumstances.
   B. Urgent communications do not need to be entered in the GMDSS radio log.
   C. Both of the above
   D. None of the above.

15. Which of the following log keeping statements is true?
   A. Entries relating to pre-voyage. Pre-departure and daily tests are required.
   B. Both a) and c).
   C. All distress, urgent and safety communication'must be logged.
   D. Routine daily MF/HF and Inmarsat-C transmissions do not have lo be logged.

16. What would the number 1090 indicate?

   A. ship MMSI number.
   B . coast station MMSI number.
   C. coast station selcal number,
   D. ship station selcal number.

17. Which of the following steps should be taken, if possible when the vessel must be abandoned because of a distress situation?
   A. Alert the Indian Coast Guard by using the survival craft's portable INMARSAT- unit,
   B. Program the SART and EPIRB to transmit the vessel location and situation.
   C. Place the SART and EPIRB in the "ON" position and secure them to the survival craft,
   D. No additional steps are needed as the SART and EPIRB will both automatically float free and operate properly.

18. Which action is the most appropriate action for a GMDSS radio Operator to take in a distress situation where immediate help is needed, but the vessel is not sinking nor needs to be abandoned?
   A. Switch off EPIRB and SART manually.
   B. Transmit distress call by HF/MF/VHF DSC or Inmarsat
   C. Notify the RCC (Rescue Coordination Center) through VHF FM on channel 13.
   D. Transmit distress call by activating the radiotelegraph automatic alarm signal.

19) DSC is used primarily to:
   a) Receive weather warnings, navigational notices and other marine safety information.
   b) Provide routine communications with the ship owner.
   c) Transmit and receive Distress, Urgency and Safety alerts to and from other ships and shore stations via radio.
   d) Report ship's position to search-and-rescue authorities via satellite.

20) Which statement is true regarding Distress communications under GMDSS?
   a) Distress communications by NBDP should be in the ARQ mode when in communications with the Coast Guard or other coast stations.
   b) The Rescue Coordination Center (RCC) is responsible for controlling a search and rescue operation and will also coordinate the Distress traffic relating to the incident.
   c) The Rescue Coordination Center may appoint another station to coordinate Distress traffic relating to the incident.
   d) All of these

21) What indication is given to the personnel of survival craft of the approach of another vessel?

a) The SART will provide a visual or audible indication of interrogation by a 3-cm radar.
b) The Satellite EPIRB will emit an audible signal.
c) The VHF portable radio will emit an audible alarm signal on 156.525.
d) The VHF portable will provide a visual indication.

22) How can a SART's effective range be maximized?
a) The SART should be placed in water immediately upon activation.
b) The SART should be held as high as possible.
c) Switch the SART into the "high" power position.
d) If possible, the SART should be mounted horizontally so that its signal matches that of the searching radar signal.

23) In a lifeboat or liferaft, what is a method of maximizing the effectiveness of an SART?
a) Place the SART into the sea as soon as possible to begin transmitting.
b) Hold or mount the unit as high as possible.
c) Extend the length of the transmitting antenna.
d) Replace the internal battery with the AC power adapter.

24) At what point does a SART begin transmitting?
a) It immediately begins radiating when placed in the "on" position.
b) It must be manually activated.
c) If it has been placed in the "on" position, it will respond when it has been interrogated by a 9-GHz radar signal.
d) If it has been placed in the "on" position, it will begin transmitting immediately upon detecting that it is in water.

25) What statement is true regarding tests and maintenance that could be provided for the SART?
a) To fully verify operation within manufacturer's specifications would require measuring equipment to generate 9 GHz signals; generally beyond the scope of on-board maintenance.
b) Extreme care should be exercised because testing of the SART may be received by other vessels, and may be interpreted as a Distress condition, or it may interfere with other vessels' safe navigation.
c) Battery should be replaced with a new one before the manufacturer's expiration date shown on the SART.
d) All of these

26) The SART is required to have sufficient battery capacity to operate in the stand-by mode for what period of time?
a) Eight hours
b) Three days
c) Four days
d) Forty-eight hours

27) Which is a function of a satellite under COSPAS-SARSAT using satellite EPIRBs?
a) Relayed satellite message includes the EPIRB ID number which provides a reference for retrieval of vessel information from the shore database.
b) Doppler shift of EPIRB signal is measured.
c) Information received from EPIRBs are time-tagged and transmitted to any Local User Terminal in the satellite's view.
d) All of these

28) Which of the following statements concerning COSPAS-SARSAT is true?
a) EPIRBs are units that are used as alerting devices.
b) These are satellites in a low-earth polar orbit that detect EPIRB beacons on 406 MHz and relay the information to a Local User Terminal (LUT).
c)The Doppler frequency measurement concept is used to determine the EPIRB's location.
d)All of the above.

29) Which of the following statements concerning COSPAS-SARSAT is false?

a) EPIRBs are used primarily for Distress alerting.
b) These satellites are looking for EPIRB signals on 406 MHz.
c) These satellites use Doppler shift measurement to determine the location of the beacons.
d) After initiating a call request and selecting the CES, these satellites may be used for commercial messages.

30) Which of the following statements concerning satellite EPIRBs is true?

a) Once activated, these EPIRBs transmit a signal for use in identifying the vessel and for determining the position of the beacon.
b) The coded signal identifies the nature of the Distress situation.
c) The coded signal only identifies the vessel's name and port of registry.
d) If the GMDSS Radio Operator does not program the EPIRB, it will transmit default information such as the follow-on communications frequency and mode.

Section – B

01. Your ship M.V.Kirt/ATML MMS.410450000 in position 1220N065 25W The chief officer having severe chest pain. You came to know that passenger ship M.V.Akash / VWLX MMS1 419245000 about 60 NM from your position having doctor on board. Your Master decides to get medical assistance from that ship.

a) Write down the initial action you take.
b) Write specimen copy of the message.

0 2. Your ship M.V.Maharishi Vasist / VWFC MMSI No. 419350000 in position 07 20 N 085 25 W Selcal No.
42534 received a distress message from M.V.Akbar /ATOR 419235000.

a) How will you acknowledge on 2174.5 KHZ.
b) How will you.acknowledge on 2182 KHZ.
c) How will you inform all ships that restricted working can take place on 2182 Khz.
d) At 1200 UTC inform all ships to resume normal working on NBDP.

03 Your ship PARMESHWARI / VTPG at 1030 UTC has sighted a floating metal container, which is dangerous
to Navigation, in Posn 50 miles SE of Gridlines Light. It is drifting eastwards.

a) Give an example of the call you would transmit on VHF R/T.
b) On which channel would you transmit the call.
c) Give an example of the message you would transmit on the working channel

04. Your ship M.V. Maharishi / VWRT Fleet 77 No. 760358080 on a voyage from Chennai to Hongkong. You arc
logged on to LES Arvi. A crew member is suffering from fever. Your master decides to seek medical advice
from Singapore through Sentosa LES. Take action.

a) Write the initial action.
b) Write the message.

05. What the following signals indicate:

a) Mayday/Distress alert:
b) Seelonce Feenee:
c) Seelonce Distress:
d) Seelonce Mayday.
e) Prudonce:
f) Silence Fini

Set.2 Key - Part - I

1) D 2) A 3) A 4) D 5) A 6) B 7) D 8) B 9) D 10) C

11) D 12) D 13) C 14) D 15) B 16) C 17) C 18) B 19) C 20) D

21) A 22) B 23) B 24) C 25) D 26) C 27) D 28) D 29) D 30) A

01. Your ship M.V.Kirt/ATML MMSI No.410450000 in position 1220N065 25W The chief officer having severe chest pain. You came to know that passenger ship M.V.Akash / VWLX MMS1 419245000 round about 60 nm from your position having doctor on board. Your master decides to get medical assistance from that ship.

a) Write down the initial action you will take.
b) Write specimen copy of the message

3

a) Send a DSC Selective Urgency alert to M.V.Akash MMSI 419245000 on 2187.5 khz and
Call and message on 2048 khz.

b) On 2048 khz.
PanPan
M.V.Kirt/ATML/410450000
Posn 12 20N 065 25W
Chief Officer having severe chest pain
Rqst medical assistance
Master
271600 utc
over

3

1.5 x 4

0 2. Your ship M.V.Maharishi Vasist / VWFC MMSI No. 419350000 in position 07 20 N 085 25 W

Selcal No. 42534 received a distress message from M.V.Akbar /ATOR 419235000.

a) How will you acknowledge on 2174.5 KHZ.
b) How will you acknowledge on 2182 KHZ.
c) How will you inform all ships that restricted working can take place on 2182 Khz.
d) At 1200 UTC inform all ships to resume normal working on NBDP.

a) Mayday
M.V.Akbar/ATOR/419235000
This is
M.V.Maharishi Vasist/VWFC/419350000/42534
RRR Mayday
NNNN

b) Mayday
M.V.Akbar(x3)/ATOR/419235000
This is
M.V.Maharishi Vasist(x3)/VWFC/419350000
Received Mayday
Over

c) Mayday

All stations (x 3)
This is
M.V.Maharishi Vasist (x3)/VWFC /419350000
At 1200 UTC M.V.Akbar/ATOR
Prudonce
Out

d) Mayday
All stations
This is
M.V.Maharishi Vasist/VWFC/419350000/42534
At 1200 utc M.V.Akbar/ATOR
Silence Fini
NNNN

03 Your ship PARMESHWARI / VTPG at 1030 UTC has sighted a floating metal container, which is dangerous to Navigation, in Posn 50 miles SE of Gridlines Light. It is drifting eastwards.

a) Give an example of the call you would transmit on VHF R/T.
b) On which channel would you transmit the call.
c) Give an example of the message you would transmit on the working channel

a) Securite (3)
2
All Stations (x3)
This is
Parameshwari (x3)/VTPG

b) Ch.16 1

c) On channel 06
Securite
M.V.Parameshwari/VTPG
3
Navigational warning at 1030 utc
Sighted a floating metal container in posn 50 miles SE of Gridlines light,
Drifting eastwards.
Dangerous to navigation
Master
Out

04. Your ship M.V. Maharishi / VWRT Fleet 77 No. 760358080 on a voyage from Chennai to Hongkong.

You arc logged on to LES Arvi. A crew member is suffering from fever. Your master decides to seek medical advice from Singapore through Sentosa LES. Take action.

a) Write the initial action.
b) Write the message

a) Prepare the urgency message 3 x 2
Select telephone mode
Feed SAC 32
Select Urgent Priority

Select Sentosa LES
Press # key to initiate the call
Wait for response from concerned authorities
Then speak out call and the message.

b) PanPan
M.V.Maharishi/VWRT/760358080
Voyage from Chennai to Honkong
Crew member suffering from fever
Medicines given ……
Medicines on board…….
Rqst medical advice
Master
251400 utc
over

05. What the following signals indicate: 1 x 6

a) Mayday/Distress alert:
b) Seelonce Feenee:
c) Seelonce Distress:
d) Seelonce Mayday.
e) Prudonce:
f) Silence Fini

a) Indicates that a mobile unit or persons are threatened by grave and imminent danger and require immediate assistance.

b) Signal used by the controlling station to indicate that distress traffic is over and normal working may be resumed by voice procedure.

c) Signal used by other than the controlling station to impose silence on station causing interference to distress traffic.

d) Signal used by the controlling station to impose silence on stations causing interference to distress traffic

e) Signal used by the controlling staton to indicate restriced working may be carried out without causing interference to distress traffic.

f) Signal used in NBDP Tlx to indicate distress traffic is over and normal working may be resmed.

GOC RS/Set 3

Section – A

1.- What feature(s) may be found on certain satellite EPIRB units?
a) Strobe light b) Emergency transmission on 406 MHz.
c) Float-free release bracket. d) All of these

2.- What statement is true regarding 406 MHz EPIRB transmissions?
a) Allows immediate voice communications with the RCC.
b) Coding permits the SAR authorities to know if manually or automatically activated.
c) Transmits a unique hexadecimal identification number.
d) Radio Operator programs an I.D. into the SART immediately prior to activation.

3- Which of the following is normally found on EPIRBs that are detected by satellites?
a) A strobe light b) A 5-watt 406-MHz beacon.
c) A bracket designed to allow the EPIRB to automatically float-free. d) All of the above

4. Which piece of required GMDSS equipment is the primary source of transmitting locating signals?
a) Radio Direction Finder (RDF) b) An EPIRB transmitting on 406 Mhz.
c) Survival Craft Transceiver d) A SART transmitting on 406 Mhz.

5. What is an example of locating signal?
a) SSB phone traffic b) Ship to Shore transmissions
c) Loran C d) A float-Free EPIRB

6. With what other stations may portable survival craft transceivers communicate?
a) Communication is permitted between survival crafts
b) Communication is permitted between survival craft and ship
c) Communications is permitted between survival craft and rescue unit.
d) All of the above

7- Equipment for radiotelephony use in survival craft stations under GMDSS must have what capability?

a) Operation on Ch-16. b) Operation on 457.525 MHz.
c) Operation on 121.5 MHz. d) Any one of these

8- Equipment for radiotelephony use in survival craft stations under GMDSS must have what characteristic(s)?
a) Operation on Ch-16 b) Watertight
c) Permanently-affixed antenna d) All of these

9- Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?
a) Operation on Ch-16 b) Effective radiated power should be a minimum of 2.0 Watts.
c) Simplex (single frequency) voice communications only. d) All of these

10- Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?
a) Operation on Ch-13 b) Effective radiated power should be a minimum of 0.25 Watts.
c) Simplex (single frequency) voice communications only. d) Operation on Ch-16

11.- Which action should the GMDSS radio operator take in a Distress situation when embarking in survival craft?
a) Switch on EPIRB and SART immediately and leave on.
b) EPIRB and SART switched on manually prior to embarking; remain aboard vessel in Distress.
c) Notify RCC (Rescue Coordination Center) through VHF DSC in portable equipment.
d) Communicate via Inmarsat-C from the survival craft.

12.- Which of the following has been designated for on-scene communication in GMDSS?
a) Ch-24 b) Ch-2182
c) Ch-70 d) Ch-16 on VHF radiotelephone and 2174.5 khz using MF NBDP

13- Which of the following control selections may result in limited receiving range?
a) Setting the squelch control to its minimum level.
b) The power switch is set to the "high" output position, resulting in receiver overloading.
c) Setting the squelch control to its maximum level.
d) Setting the channel selection switch midway between channels 6 and 16.

14- Which factors normally determine the range of VHF transmissions:
a) Channel frequency b) Power level
c) Both b) and d) d) Vessel antenna height

15- Causes of much longer than normal VHF transmissions are:
a) Changing power from 1W to 25 W. b) Atmospheric ducting
c) Ionospheric activity in layers F1/F2. d) None of the above

16- The effectiveness of VHF communications is maximized by:
a) The adjustment of squelch for maximum receiver sensitivity.
b) Appropriate setting of the transmitter power.
c) Selecting an appropriate channel.

d) All of the above

17. A vessel using SafetyNet should:
a) Notify the NAVAREA coordinatot you are usung SafetyNet for MSI (Maritime Safety Information)
b) Set the receiver to your present NAVAREA
c) Set the receiver toyour destinationocean region
d) Notify the NAVAREA coordinator you are using SAFETYNet for MSI SafetyNet and set the receiver toyour destination Ocean Region

18. In using SafetyNet for MSI (Maritime Safety Information)

a) If you fail to log-in with your Ocean Region you will receive only unscheduled urgent and distress
broadcasts.
b) To receive scheduled and unscheduled broadcasts you must log-in with your ocean region Net Control
Station (NCS)
c) Your satellite receiver must have Enhanced Group Call (EGC) capability
d) All of these

19. MF/HF Transceiver Power levels should be set:
a) To the lowest level necessary for effective communications.
b) To the level necessary to maximize the propagation radius.
c) To the highest level possible so as to ensure other stations cannot "break-in" on the channel during use.
d) Both a) and c)

20. Where should the GMDSS radio log be kept on board ship?
a) Captain's office b) Sea cabin
c) At the GMDSS operating position. d) Anywhere on board the vessel.

21. When logging into the Inmarsat system using Inmarsat-C, it is necessary to:
a) Enter your IMN.
b) Enter the CES answer back.
c) Select the Ocean Region.
d) Call the CES and inform them that you are now operating in the appropriate ocean region.

22. What is the primary function of an NCS?
a) To monitor and control communications through the Inmarsat satellite for which it is responsible.
b) To provide direct communications between the Inmarsat station placing a call and the station receiving the call.
c) To provide multi-mode communications between the Inmarsat station placing a call and the coast radio station that will deliver it.
d) To determine which satellite is best suited to provide communications between the Inmarsat

station placing a call and the station receiving the call.

23. Which of the following statements concerning Inmarsat geostationary satellites is true?
a) They are in a polar orbit, in order to provide true global coverage.
b) They are in an equatorial orbit, in order to provide true global coverage.
c) They provide coverage to vessels in nearly all of the world's navigable waters.
d) Vessels sailing in equatorial waters are able to use only one satellite, whereas other vessels are able to
choose between at least two satellites.

24. Which mode of communications is NOT possible through an Inmarsat-C SES?
a) Data b) TELEX c) Emergency Activation d) Shore-to-ship Facsimile

25.Which statement is false regarding a Distress request?
a) Any Distress request is automatically switched to an Inmarsat Distress working frequency.
b) If all satellite channels are busy, one of them will be preempted by a Distress request.
c) The NCS in each ocean region automatically monitors the processing of such calls by other CESs in that region, and processes calls if any anomaly exists in the system.
d) Any request message with Distress priority is automatically recognized by the CES and a satellite channel is instantly assigned.

26.How is a Distress message be initiated through Inmarsat?
a) All Inmarsat units must use a dedicated key that can be pressed for immediate action.
b) By adding the word "Distress" in the first line of the message's preamble.
c) By pressing dedicated key(s) for this purpose or using menu-driven features to produce a Distress priority message.
d)By transmitting the Distress message on the Coast Guard's dedicated monitoring channel.

27. Which of the following two-way communications can be made through Inmarsat without charge?
a) A service message that advises a vessel of other ship traffic in its vicinity.
b) Safety NET
c) Distress traffic
d) Vessel position information when the ship's GPS fails.

28. How is ship to shore transmission of a Distress priority message in most SESs initiated?
a) By provision of a "Distress button" or code in the SES.
b) By including the priority code in the preamble of the TELEX message.
c) By including the priority code in the dialed number in voice communications.
d) By initial voice contact with the Rescue Coordination Center.

29. Upon receipt of SafetyNET^{TM} messages of the Distress or Urgency category on the ship's EGC receiver, what action is required by the GMDSS Radio Operator?
a) No immediate action is required as an audible tone will be generated at the beginning and end of the transmission and a paper printout of the message will be generated.
b) Manually reset the alarm.
c) No immediate action is required by the operator since the transmission will be automatically acknowledged by the receiving vessel.
d) A periodic alarm tone will be heard until the radio operator prints the message from the unit's memory.

30. For RF communications, "modulation" is best defined as:
a) The combination of information or intelligence with a carrier frequency.

b) Using a single carrier frequency with the proper power level.
c) Setting up the transceiver with the correct bandwidth to ensure proper communications.
d) The combination of the received frequency and oscillator frequency in the mixer.

SECTION – B

1. You are on a GMDSS ship m.v. Rivera/BYCQ. Your Chief Engineer having severe chest pain aged 35, male. Your posn:11 05N / 088 06E Co/270 Spd/12 Kts, Monitoring IOR. m.v.Splender/ GBQS is about 60 miles from you, equipped with all medical facilities and Doctor on board.

a) State the initial action you will take to contact m v.Splendor?
b) Write the complete follow-up action you will take.

2) State the procedure you will adopt when you receive a Undesignated distress alert on 8414.5 khz, when you as well as the vsl in distress are in Area A3?

3. (a) What does the DSC distress alert indicate?
(b) What does the DSC Urgency alert indicate?
(c) What does the DSC Safety alert indicate?
(d) On which MF frequency will you send the above mentioned DSC alerts?
(e) On which VHF frequency will you send the safety message?
(f) On which VHF frequency will you send the distress message?

4 Your ship is in AOR-E. LES selected is Southbury. Ask for Medical Advice using GOONHILLY LES utilizing Telephone service of FLEET 77
(a) State the Initial action?
(b) State the follow-up message.

5 You are on M.V. Tamil Anna / ATML/MMSI419123456 / Sat -C IMN 423456789. When your vessel is 50 miles East of Colombo, inadvertently distress alert has been sent using Sat-C.
a) What is the initial action you will take?
b) Write down the message you would convey after the initial action.

Key to Set:3

Part – A

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

Part - B

1.. You are on a GMDSS ship m.v. Rivera/BYCQ. Your Chief Engineer having severe chest pain aged
35, male. Your posn:11 05N / 088 06E Co/270 Spd/12 Kts, Monitoring IOR. m.v.Splender/ GBQS is
about 60 miles from you Equipped with all medical facilities and Doctor on board.
a) State the initial action you will take to contact m v.Splendor?
b) Write the complete follow-up action you will take.

3

a) Send a Dsc Selective Urgency Alert to m.v.Splender on 2187.5 khz and call and message on 2048 khz

b) On 2048 khz

Panpan (x3)
M.V.Splender(x3)/GBQS 1
This is
M.V.Rivera(x3)/BYCQ

PanPan
M.V.Rivera/BYCQ/MMSI
Posn 11 05N 088 06E Co/270 Spd 12 kts 2
Ch.Engr, male, aged 35 having severe chest pain.
Rqst medical assistance
Master
251400 utc
Over

2) State the procedure you will adopt when you receive a Undesignated distress alert on 8414.5 khz, when you as well as the vsl in distress are in Area A3? 6

a) Log info and inform Master
b) Set watch on corresponding voice frequency 8291 khz
c) Wait for 5 min for CRS/MRCC to Acknowledge.
d) If no Acknowledgement by CRS/MRCC via R/T (Voice) or DSC with vessel in distress (or no contact established with CRS), relay Alert ashore by any means.
e) DO NOT ACKNOWLEDGE

3. (a) What does the DSC distress alert indicate? 1 x 6
b) What does the DSC Urgency alert indicate?
c) What does the DSC Safety alert indicate?
d) On which MF frequency will you send the above mentioned DSC alerts?
e) On which VHF frequency will you send the safety message?
f) On which VHF frequency will you send the distress message?

a) It indicates a mobile unit or person(s) are threatened by grave and imminent danger and require immediate assistance.
b) It indicates the station has a very urgent message concerning the safety of a mobile unit or persons.
c) It indicates the station has an important navigational or meteorological warning to follow.
d) 2187.5 kHz.
e) Ch.06/156.30 Mhz..
f) Ch.16/156.80 Mhz.

4 Your ship is in AOR-E. LES selected is Southbury. Ask for Medical Advice using GOONHILLY LES utilizing Telephone service of FLEET 77
a) State the Initial action?
b) State the follow-up message.

Prepare the urgency message
3
Select telephone mode
Feed SAC 32
Select Urgent Priority
Select GOONHILLY LES
Press # key to intiate the call.

Wait for response from concerned authorities
Then speak out the prepared message.

PanPan
3
M.V.Akash/VWST/760123400
Posn 12 20N 087 35E
Crew, male, aged 35, having severe stomach pain
Medicines given ……..
Medicines on board……
Rqst medical advise
Master
241600 utc
Over

5 You are on M.V. Tamil Anna / ATML/MMSI419123456 / Sat -C IMN 423456789. When your vessel is
50 miles East of Colombo, inadvertently distress alert has been sent using Sat-C.

a) What is the initial action you will take?
b) Write down the message you would convey after the initial action.

Edit the cancellation message
3 x 2
In Sat-C Transmit Menu, select distress priority.
Select same LES
Send the edited cancellation message

To RCC IOR
Fm Master M.v Tamil Anna/ATML/423456789

Please cancel my false Sat-C alert of 241600 UTC. Posn 50 miles east of Colombo

NNNN

GOC /RS Set 4

SECTION – A

1. The dual watch (DW) function is used to:
   A. Listen to Ch-70 at the same time while monitoring Ch-16
   B. Sequentially monitor 4 different channels
   C. Sequentially monitoring all VHF channels
   D. Listen on any selected channel while periodically monitoring Ch-16.

2. What would be an indication of a malfunction on a GMDSS station with a 24VDC battery system?
   A) constant 30 volt reading on the GMDSS console voltmeter
   B) After testing the station on battery power, the ammeter reading indicates a high rate of charge that then declines

C) After testing the station on battery power, a voltmeter reading of 30 volts for brief period followed by a steady 26 Volt reading
D) None of the above.

3. A vertical whip antenna has a radiation pattern best described by?
   A. A figure eight
   B. A cardiod
   C. A circle
   D. An ellipse.
4. What is the advantage of a 406 MHz satellite EPIRB?
   A. It is compatible with the COSPAS-SARSAT Satellites and Global Maritime Distress Safety System (GMDSS) regulations. .
   B. Provides a fast, accurate method for the Coast Guard to locating and rescuing persons in distress.
   C. Includes a digitally encoded message containing the ship's identity and nationality.
   D. All the above.

5. How should the signal from a Search and Rescue Radar Transponder appear on a RADAR display?
   A. Series of dashes.
   B. A series of twenty dashes.
   C. A series of 12 equally spaced dots.,
   D. A series of spirals all originating from the range and bearing of the SART.

6. Which of the following is the primary frequency that is used exclusively for NAVTEX broadcasts internationally?

   A) 518 KHz. B) 2187.5 KHz C) 4209.5 KHz.

   D) VHF channel 16 when the vessel is sailing in Sea Area A1, and 2187.5 KHz when in Sea Area A2.

7. What equipment is associated with the space systems ?
   A. VHF-MF-HF
   B. lnmarsat-C ,
   C. Navtex
   D. SART

8. What sea area is defined as being within range of a shore-based MF station that provides for continuous DSC alerting?
   A. Sea Area A2 B. Coastal waters
   C. Sea Area A3 D. Sea Area A1
9. What is defined as an area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available? •
   A. Ocean Area Regions AOR-E, AOR-W, POR or IOR
   B. Sea Area A4
   C. Sea Area A3
   D. Coastal and inland waters

10. The emission or mode control of an MF/HF transceiver
    A. Allows fine tuning of the receiver
    B. Allows the type of modulation to be selected
    C. Increases the range of the transmitter
    D. Reduces the received gain automatically -

11. If a ship is not able to comply immediately the acknowledgement sequence, should include a telecomm and

signal
A. 104
B. 105 .
C. 106
D. None of the above

12. The RT signal that indicates return to normal working is
A. Seelonce Mayday
B. Seelonce Over
C. Seelonce Distress Feenee
D. Seelonce Feenee

13. Which would indicate a malfunction in a 2182 kHz radiotelephone system?
A. No discernable traffic has been heard on the 2182 kHz during the Radiotelephone silence periods.
B. Failure to contact another station 60 miles distant during day time operation.
C. Dramatic decrease in noise level observed during night and early morning hours.
D. The visual indication of power to the antenna fluctuates while testing the RT alarm signal generator into an artificial antenna

14. What usually comprises a Coast Stations call sign?
A. Three numerals from a group assigned to the coast stations nation by the ITU:
B. Four numerals from a group assigned to the coast stations nation, by ITU.
C. Three letters from a group assigned to the coast stations nation by ITU.
D. Four letters from a group assigned to the coast stations nation by ITU.

15. A DSC distress call is received by your vessel and your transceiver frequency display reads: Transmit=4207.5 kHz and Receive=4207.5 kHz—what information can you infer from this?
A. The DSC controller decoded the requested voice frequency as 4207.5 kHz Simplex and your DSC Controller has automatically set-up your transceiver.
B. The DSC controller decoded the contents of the DSC call but the request is illegal.
C. Both a) and b) are true.
D. The DSC call came in on 4 MHz DSC and you should set-up your transmitter and respond on the appropriate voice follow-on frequency.

16. Why must the GMDSS operator be able to set-up FEC & ARQ modes and differentiate between them?
A. The proper mode must be selected for reception of HF MSI.
B. The proper mode must be selected for follow-on telex communications in a distress situation
C. The ARQ telex mode must be selected for follow-on telex communications in a distress situation And the FEC telex mode selected for reception of HF MSI.' --.
D. Both a) and b) are correct.

17. GMDSS operators should routinely focus on the factors affecting propagation in what Priority for MF/HF?
A. Distance & Time of Day, Seasonal variations, Sunspot cycle, Solar flare alert.
B. Sunspot cycle, Distance & Time of Day, Seasonal variations, Solar flare alerts.
C. Solar flare alerts, Sunspot cycle, Seasonal variations, Distance & Time of Day.
D. Solar flare alerts. Distance & Time of Day, Sunspot cycle, Seasonal variations.

18. Which of the following would be a valid automatic telex code and number for a request for a real time telex
connection to a shore based telex terminal?
a) DIRTLX023424998+ b) DIRTLX then waits for MSG+ to dial 023419645+
c) DIRTLX23122445+ d) DIRTLX then after GA+ then sends telex number.

19. When placing a telex call to a Coast Station, you should always:
a) Choose the closest station.
b) Make sure the frequency is not occupied with normal traffic
c) Tune the transmitter on another' frequency
d) Wait until coast station sends his Traffic list

20. For RF communications, "bandwidth" is best defined as:
a) The modulation technique required to insure proper ITU channel spacing.
b) The emission designation resulting from the desired modulation technique.
c) The portion of the radio spectrum consumed by a particular emission selection and modulation
technique.
d) The portion of the radio spectrum reserved for frequency allocations by the ITU.

21. If you call a coast station on a working frequency^- it will normally reply on
a) Distress Channel b) Suitable RTT frequency
c) DSC Channel d) On the same Channel/Paired channel.

22. When making Test transmission we should:
a. Use artificial antenna b) Use Low power
c. Test call does not exceed 10 SECONDS WITH Identity d) All the above

23. An Inmarsat EPIRB is not useful for Sea Area
a)A1 b)A2 c)A3 d)A4

24. You are to abandon the ship due to some reason,, which of the following will you take with you?
a) SART & EPIRBs b) VHF DSC c) Portable VHF d) (a) & (c) above

25. In the Inmarsat C system a distress alert for which no acknowledgement is received, shall be repeated at an interval of:
a) 10 minutes b) 3 minutes c) 5 minutes d) 2 minutes

26. An INMARSAT - "B" terminal
a) can provide real time telex service b) cannot provide real time telex service
c) tlx service depends on the Sat being accessed d) tlx service depends on the posn of the ship

27. The information that must be included in a test transmission is the
a) GOC operator's ID b) vessel's ID'
c) vessel's position d) vessel's nationality

28. According to international regulations, VHF Ch.06 may be used for
a) Ship to Aircraft engaged in SAR operation b) ship to shore communications
c) on-board communications d) bridge-to-bridge safety of navigation

29. With respect to Distress communications the.MAIN function of the On-Scene Co-ordinator (OSC) is to:
a) deploy a SART to assist in homing
b) fix the posn of the casualty using an EPIRB
c) maintain communication with all SAR facilities
d) recover and switch off the EPIRB

30. In the terrestrial radio service, the category with the highest priority is:
a) inmarsat-C msg to the owners
b) gale warning

c) RT call to pilot
d) request for berthing instructions

4 - 3

SECTION-B

1.
a) Assume your ship Desh Lok/VWTL is in position 10 OON/088 0OE course/050 degs speed/12 kts. You are 7 miles from ship named Brando/GBNK who is on FIRE. You are having enough fire pumps to fight fire on board Brando. Your ETA to Brando is 30 mins. Write down the proceeding message on VHF Ch.16.

b) Ship Viking/SDEQ is interfering with the above distress traffic. Write down the message to keep him silent (Assume you are Controlling distress traffic)

2. a). State the R/T urgency signal
b). What does the Urgency Signal indicate?
c). Give an example of an Urgency R/T call on 2182 KHz '
d). Can an Urgency call be addressed to a particular station?

3.
a) State the signal to be used in NBDP when distress traffic is finished and Normal Working may be resumed
b) State the NBDP distress frequencies on 8 MHz & 12 MHz bands.:-
c) State the heading under which a Distress Relay message would be received in Sat - C:-
d) When abandoning a ship state the two radio equipments to be activated for locating purpose?
e) Under what circumstances the signal "Seelonce Distress" is used,
f) Range of Cospas-Sarsat EPIRB

4. (a) Your ship Praveena/ ATKZ has received a distress message by NBDP from Priya / ATMD. Write down the signal and message you would transmit by NBDP to acknowledge the receipt of distress message.
(b)Give an example of the message indicating Distress traffic has ceased when transmitted over NBDP by a Coast Station —

5. State the purpose of the following frequencies in GMDSS

a) 2187.5 Khz:
b) 406 MHz
c) 2182 KHz
d) 4125 KHz
e) 8414.5 KHz
f) 3023KHz

Key to Set No.4
Part –I

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

Part - II

1.
a) Assume your ship Desh Lok/VWTL is in position 10 OON/088 0OE course/050 degs speed/12 kts. You are 7 miles from ship named Brando/GBNK who is on FIRE. You are having enough fire pumps to fight fire on board Brando. Your ETA to Brando is 30 mins. Write down the proceeding message on VHF Ch.16.

b) Ship Vikirig/SDEQ is interfering with the above distress traffic. Write down the message to keep him silent (Assume you are Controlling distress traffic)

a) Mayday
Brando (x3) /GBNK 2
This is
Desh Lok (x3)/VWTL

Have enough fire pumps. Proceeding for your assistance.
Posn 10 00N 088 00E, Course 050 degs, Spd 12 kts ETA 30 mins 2
Master
Over

b) Mayday
Viking (x3)/SDEQ 2
This is
Desh Lok (x3)/VWTL
Seelonce Mayday
Out

2. a). State the R/T urgency signal 1.5 x 4
b). What does the Urgency Signal indicate?
c). Give an example of an R/T call on 2182 KHz '
d). Can an Urgency call be addressed to a particular station?

a) PANPAN
b) It indiacates the station has a very urgent message concerning safety of a mobile or persons.
c) PanPan (x3)
All Stations (x3) or Particular Station (x3)
This is
M.V.Akash (x3)/VWTL

d) Yes. When requesting for tow or Medical Advice/Assistance.

3. 1 x 6

a) State the signal to be used in NBDP when distress traffic is finished and Normal Working may be resumed
b) State the NBDP distress frequencies on 8 MHz & 12 MHz bands.:-
c) State the heading under which a Distress Relay message would be received in Sat - C:-
d) When abandoning a ship state the two radio equipments to be activated for locating purpose?
e) Under what circumstances the signal "Seelonce Distress" is used,
f) Range of Cospas-Sarsat EPIRB

a) Silence Fini
b) 8376.5 khz, 12520 khz.
c) EGC Mail/Distress Relay
d) EPIRB and SART
e) Other than a controlling station to impose silence on ships causing interference to distress traffic.
f) Global Range.

4. (a) Your ship Praveena/ ATKZ has received a distress message by NBDP from Priya / ATMD. Write down the signal and message you would transmit by NBDP to acknowledge the receipt of distress message.
(b) Give an example of the message indicating Distress traffic has ceased when transmitted over NBDP by a Coast Station

3 x 2

a) Mayday
Priya/ATMD
This is
Praveena/ATKZ
RRR Mayday
NNNN

b) Mayday
All Stations
This is
Chennai Radio/VWM
At 1200 utc M.V.Priya/ATMD
Silence Fini
NNNN

5. State the purpose of the following frequencies in GMDSS 1 x 6

a) 2187.5 Khz:
b) 406 MHz
c) 2182 KHz
d) 4125 KHz
e) 8414.5 KHz
f) 3023 KHz

a) MF DSC Distres, Urgency and Safety Alerting.
b) Cospos/Sarsat EPIRB
c) MF Voice for Distress, Urgency, Safety and Routine calling.
d) HF Voice for Distress, Urgency and Safety working and on scene communication
e) HF DSC Distress, Urgency and Safety Alerting
f) MF Voice SAR communication between ship and SAR aircraft

GOC/RS-SET 5

Part –1 Instructions

1 Do not write anything on the question paper. Write your answers.
2. Write your name and roll no (Bay No) on the answer sheet on every page.
3. Mobile phone or any other electronic devices strictly not permitted.
4. Section-A is is objective type and section B is descriptive type.
5. Candidates have to score minimum 15 marks in each section and total 36 marks to pass this paper.
6. In section-A include the correct / Most appropriate choice (A,B,C or D) against the respective question.
7. In section – B answer should be discreet and brief and should be written against the question.

1. Small passenger vessels that sail 20 to 150 nautical miles from the nearest land must have what additional equipment ?

A) Inmarsat -B terminal B) Inmarsat-C terminal
C) Transceiver with 121.5 MHz D) MF-HF SSB Transceiver

2. What equipment is programmed to initiate transmission of distress alerts and calls to individual stations ?

A) NAVTEX B) GPS C) DSC controller D) Scanning watch receiver

3.What are the radio operator requirements of a passenger ship equipped with a GMDSS installation ?

A. The operator must hold a general Radiotelephone operator License or higher-class license
B. The operator must hold a Restricted Radiotelephone operator Permit or higher class license
C. The operator must hold a Marine Radio operator permit or higher class license
D. Two operators on board must hold a GMDSS Radio operator License or a Restricted GMDSS Radio Operator License, depending on the ship's operating areas.

4..Shipboard transmitters using F3E emission (FM voice) may not exceed what carrier power ?

A) 500 WATTS b) 250 watts C) 100 watts D) 25 watts

5..What is the priority of communications ?

A) Safety, distress, urgency and radio direction-finding B) Distress, Urgency and Safety.
C) Distress. Safety, radio direction-finding, SAR. D) Radio direction-finding, Distress, Safety.

6 .Under what circumstances may a coast station using telephony transmit a general call to a group of vessels?

A. Under no circumstances.
B. When announcing or preceding the transmission of Distress, Urgency, Safety or other important messages.
C. When the vessels are located in interactional waters beyond 12 miles
D. When identical traffic is destined for multiple mobile stations within range.

7. Radio watches for compulsory radiotelephone stations will include the following.
A) VHF Ch. 22A continuous watch at sea. B) 121.5 MHz continuous watch at sea
C) VHF channel 16 continuous watch. D) 500 kHz

8. What channel must all compulsory non-GMDSS vessels monitor at all times in the open sea?
A) Channel 8. B) Channel 70 C) Channel 6 D) Channel 16

9. What is required of a ship station which has established initial contact with another stn on 2182 khz or Ch-16?
A. The stations must change to an authorized working frequency for the transmission of messages.
B. The stations must check the radio channel for Distress, Urgency and Safety calls at least once every -ten minutes
C Radiated power must be minimized so as not to interfere with other stations needing to use the channel,
D.To expedite safety communications, the vessels must observe radio silence for two out of every fifteen minutes.

10. What are the mandatory DSC watch keeping bands/channels?
A) VHF Ch-70, 2 Mhz Dsc. 6 Mhz Dsc and 1 other HF Dsc ,
B) 8 Mhz HF Dsc, 1 other HF Dsc, 2 Mhz MF Dsc and VHF Ch-70
C) 2 Mhz MF Dsc, 8 Mhz Dsc, VHF Ch-16 and 1 other HF Dsc
D) None of the above .

11. Who is responsible for the proper maintenance of station logs?
A) The station licensee
B) The commercially-licensed radio operator in charge of the station
C) The ship's master and the station licensee
D) The station licensee and the radio operator in charge of station

12. Which of the following is true?
A) Battery test must be logged daily
B) EPRIB tests are normally logged monthly
C) Radiotelephone tests are normally logged weekly.
D) None of the above.

13. Where should the GMDSS radio log be kept on board ship?
A) Captain's office B) Sea cabin
c) At the GMDSS operating position D) Anywhere on board the vessel.

14. On what frequency should a ship station normally call a coast station when using radiotelephony emission-?
A) On a vacant radio channel determined by the license radio officer.
B) Calls should be initiated oh the appropriate ship-to-shore working frequency of the coast station
C) On any calling frequency intemationally approved for use within ITU region 3.
D) On 2182 KHz or ch-16 at anytime,

15) The urgency signal has lower priority than:
A) Ship-to-ship routine calls B) Distress
C) Safety D) Security

16. GMDSS is primarily a system based on?
A) Ship-to-Ship Distress communications using MF or HF radiotelephony
B) VHF digital selective calling from ship to shore
C) Distress. Urgency ahd Safety communications carried out by the use of narrow-band direct printing

telegraphy

D) The linking of search and rescue authorities ashore with shipping in the immediate vicinity of a ship In ' distress or in need of assistance.

17. Why must all VHF Distress, Urgency and Safety communications (as well as VTS traffic calls) be performed in Simplex operating mode?

A) To minimize interference from vessels engaged in routine communications
B) To ensure that vessels not directly participating in the communication can hear both sides of the radio exchange
C) To enable RCC or Coast station to only hear communications from the vessel in distress
D) To allow an RCC or Coast station to determine which transmissions are from other vessels and which transmissions are from the vessel actually in distress.

18. What is Distress traffic?

A) All messages relative to the immediate assistance required by a ship, aircraft or other vehicle threatened by grave and imminent danger, such as life and safety of persons on board, or man overboard.
B) In radiotelephony, the speaking of the word "Mayday"
C) Health and welfare messages concerning property and the safety of a vessel.
D) Internationally recognized communications relating to Important situations.

19. Ordinarily, how often would a station using a telephony emission identify?

a) Atleast every 10 minutes .
b) At the beginning and end of each transmissions and at 15-minute intervals.
c) At 15-minute intervals, unless public correspondence is in progress
d) At 20-minule intervals.

20. The Urgency signal concerning the safety of a ship or person shall be sent only on the authority of:

A) Master of a ship.
B) Person responsible for mobile station
C) Either Master of ship or person responsible for mobile station
D) A WPC-licensed operator.

21.VHF ship station transmitters must have the capability of reducing carrier power to:

A) 1 watt B) 10 watts
C) 25 watts D) 50 watts

22. For a small passenger vessel inspection, reserve power batteries must be tested:

A) At intervals not exceeding every 3 months
B) At intervals not exceeding every 6 months.
C) At intervals not exceeding 12 months, or during the inspection
D) Before any new voyage

23. Which of the following conditions would a symptom of malfunctions in a 2182 KHz radiotelephone system that must be reported to the Master, then logged appropriately.

A) Much higher noise-level observed during daytime operations.
B) No indication of power output when speaking in to the microphone.
C) When testing a radiotelephone alarm on 2182 KHz into an artificial antenna, the Distress Frequency watch receiver becomes unmated an improper testing procedure.
D) Failure to contact -a shore station 600 nautical miles distant during daytime operation.

24. The best way to test the MF-HF NBDP system is ?

A. Make a radiotelephone call to a coast station
B. Initiate an ARQ call to demonstrate that the transmitter and antenna are working

C. Initiate FEC call to demonstrate that the transmitter and antenna are working
D. Initiate an ARQ call to a Coast station and wait for the automatic exchange of answerbacks.

25. What emission must be used when operating on the MF distress and calling frequencies?
A) J3E - Single sideband radiotelephony .
B) AIA - on-off keying without modulation by an audio frequency
C) F3E - Frequency modulation telephony
D) A3E- Amplitude modulation telephony, double sideband.

26. Which VHF channel is used only for digital selective calling ?
A) Channel 70 B) Channel 16 C) Channel 22A. D) Channel 6

27. Which modes could be selected to receive vessel traffic lists from high seas shore stations ?
A) AM and Vhf-FM B) ARQ and FEC
C) Vhf-FM and SSB D) SSB and FEC

28. When testing is conducted on 2182 kHz or Ch-16, testing should not continue for more than in any 5 minute
period.
A) 2 minutes B) 1 minute C) 30 seconds D) 10 seconds

29. Under normal circumstances, what do you do if the transmitter aboard your ship is operating off-frequency,
over-modulating or distorting ?
A) Reduce to low power. B) Reduce audio volume level
C) Stop transmitting D) Make a notation in station operating log.

30. What is most common type of antenna for GMDSS VHF?
A) Horizontally polarized circular antenna
B) Long wire antenna
C) Both of the above
D) None of the above

SECTION- B

1.
a) What is the command code in NBDP for requesting medical advice?
b) Give an example of distress message acknowledgement in NBDP?
c) Write down the message sent by CRS indicating distress is over and normal working can be
resumed in NBDP?

2. Your vessel Rossana / R6FD MMSI 600023495 is in sea are A2.in position 42 33 N 027 36W You have sighted a vessel capsizing 3NM SSE from your .position at 0830 UTC. You have neither received any distress alert nor any distress alert relay. You also observe the vessel's crew abandoning vessel into two life rafts. Slate the action that you as Master of your vessel would take.

3. a) What does the Distress Alert indicate?
b) What does the Urgency Alert I indicate?
c) On which MF frequency will you send Distress / Urgency Alert?
d) What is the Urgency signal?
e) What does the Safety signal.indicate?

f) Signal :Seelonce Distress" when Is it \used?

4. You are on GMDSS vessel MT. Diamond Pearl. You have received a DSC Distress Alert on 2187.5 kHz. The distress vessel and you are in Sea Area A2 within MF range of a CRS. State the action you will take.

5. a) Your Inmarsat Fleet 77 is fully operational and set to operate in the AOR-W region with Burum as the default CES. State the sequence you would use to make a distress call.

b) State the contents of the distress message you would send.

Key to Set No.5
Part – I

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

Part - II

1.
a) What is the command code in NBDP for requesting medical advice? 2 x 3
b) Give an example of distress message acknowledgement in NBDP?
c) Write down the message sent by CRS indicating distress is over and normal working can be
resumed in NBDP?

a) MED+
b) Mayday

M.V.Akash/VWRT
This is
M.V.Splender/GWST
RRR Mayday
NNNN

c) Mayday
All Stations
This is
Chennai Radio/VWM
At 1200 utc M.V.Akash/VWRT
Silence Fini
NNNN

2. Your vessel Rossana / R6FD MMSI 600023495 is in sea are A2.in position 42 33 N 027 36W You have sighted a vessel capsizing 3NM SSE from your .position at 0830 UTC. You have neither received any distress alert nor any distress alert relay. You also observe the vessel's crew abandoning vessel into two life rafts.
Slate the action that you as Master of your vessel would take.

Set watch on Ch.16 and 06 1

Send a Dsc Distress Relay Alert to all stations on vhf Ch.70 and 2187.5 khz and call and msg 2
on Ch.16 and 2182 khz

On Ch.16 & 2182 khz
Mayday Relay (x3)
All Stations (x3)
1
This is
Rossana (x3)/R6FD

Mayday
At 0830 UTC Sighted a vessel capsizing 3 NM SSE of my position 42 33N 027 36W.
2
Also observed vessel's crew abandoning vessel into two life rafts.
Rqst further assistance
Master
over

3. a) What does the Distress Alert indicate?

b) What does the Urgency Alert I indicate?

c) On which MF frequency will you send Distress / Urgency Alert?
d) What is the Urgency signal?
e) What does the Safety signal.indicate?
f) Signal :Seelonce Distress" when Is it \used?

a) It indicates a mobile unit or person(s) are threatened by grave and imminent danger and

requires immediate assistance.

b) It indicates the station has a very urgent message concerning the safety of a person or
a mobile unit.
c) 2187.5 khz.
d) PANPAN
e) It indicates the station has an important message concerning navigational or meterological
warning to follow.
f) Used by other than the controlling station to impose silence on stations causing interference
to distress traffic.

4. You are on GMDSS vessel MT. Diamond Pearl. You have received a DSC Distress Alert on 2187.5 kHz. The distress vessel and you are in Sea Area A2 within MF range of a CRS. State the action you will take.

Log information and inform Master 6
Set watch on 2182 khz.
Wait for a short while for CRS to acknowledge first.
Acknowledge by voice procedure
If no contact with vessel in distress,
and no CRS/MRCC acknowledgement by voice or DSC,
Realy alert ashore by appropriate means.

5. a) Your Inmarsat Fleet 77 is fully operational and set to operate in the AOR-W region with Burum
as the default CES. State the sequence you would use to make a distress call.
b) State the contents of the distress message you would send.

a) Select telephone mode

Press distress button for not less than 6 secs

Select Burum LES 3

Press # key to initiate the call

Wait for the response from RCC and pass the message

b) Mayday
M.V.Akash/VWTR/765432000/AOR W
Posn 20 00N 085 25W 3
Sinking

Req Immdt Assistance

23 crew on board

Master

Over

GOC/RS-SET 6

SECTION-A

1) Shipboard transmitters using F3E emission (FM voice) may not exceed what carrier power?

   a) 500 W b) 250 W c) 100 W d) 25 W

2) Small passenger vessels that sail 20 to 150 Nautical miles from the nearest land must have what additional equipment?

   a) Inmarsat B Terminal b) Inmarsat C Terminal
   c) Transciever with 121.5 Mkhz d) MF-HF SSB Transciever

3) Who is required to make entries in a required service or maintenance log?

   a) The licensed operator or a person whom he o she designates
   b) The operator responsible for the station operation or maintenance
   c) Any commercial radio operator holding atleast a Restricted Radiotelephone operator permit
   d) The technician who actually makes the adjustments to the equipment

4) The primary purpose of bridge to bridge communication is :

   a) Search and rescue emergency calls only
   b) All short range transmission aboard ship
   c) Navigational communications
   d) Transmission of Captains' orders from the bridge

5) What is distress traffic?

   a) All messages relative to the immediate required by a ship, aircraft or the vehicle threatened by grave and and imminent danger, such as life and safety of persons on board or man overboad.
   b) In radiotelephony the speaking of the word "Mayday".
   c) Health and welfare messages concerning property and the safety of the vessel
   d) Internationally recognized communications relating to important situations

6) The primary purpose of the GMDSS is

   a) Allow more effective control of SAR situations by vessels.

b) Provide additional shipboard systems for more effective company communications.

c) Automate and improve emergency communications for the worlds shipping industry.

d) Effective and inexpensive communications.

7) Why must all VHF distress, urgency and safety communications(as well as VTS traffic calls)be performed in simplex operating mode?

a) To minimize interface from vessels engaged in routine communications.

b) To ensure that vessels do not directly participating in the communication can hear both sides of the radio exchange.

c) To enable RCC or coast station to only hear communication from the vesssels in distress

d) To allow an RCC or Coast station to determine which transmissions are from other vessels and which transmissions are from the vessel actually in distress.

8) Which VHF channel is used for digital selective calling?

a) Channel 70 b) Channel 16 c) Channel 22A d) Channel 6

9) Which modes could be selected to receive vessel traffic lists from high seas shore-station?

a) AM & VHF-FM b) ARQ & FEC c) VHF-FM & SSB d) SSB & FEC

10) What is the proper procedure for testing a radiotelephone installation?

a) A dummy antenna must be used to ensure the test will not interfere with ongoing communications.

b) Transmit the stations call sign, followed by the word “test” on the frequency being used for the test.

c) Permission for the voice test must be requested and received from the nearest public coast station.

d) Short tests must be confirmed to a single frequency and must never be conducted in port.

11) When you may test a radiotelephone transmitter on the air?

a) Between midnight & 6.00 AM local time.

b) Only when authorized by the commission

c) At any time (except during silence periods) as necessary to assure proper operation

d) After reducing transmitter power to 1 Watt

12) What is the purpose of the antenna tuner?

a) It alters the electrical characteristics of the antenna to match the frequency in use.

b) It physically alters the length of the antenna to match the frequency in use.

c) It makes the antenna look like a half-wave antenna at the frequency in use.

d) None of the above

13) What advantages does a vertical whip have over a long wire?

a) It radiates more signal fore and aft

b) It radiates equally well in all directions

c) It radiates a strong signal vertically

d) None of the above

14) How to you cancel a false EPIRP distress alert?

a) Transmit a DSC distress alert cancellation.

b) Transmit to broadcast a message to “all stations” cancelling the distress message.

c) Notify the Coast Guard or rescue co-ordination center at once.

d) Make a radio telephony “Distress cancellation” transmission on 2182 kHz.

15) At what point does a SART begin transmitting?

a) It immediately begins radiating when placed in the “ON” position.

b) It must be manually activated.

c) If it has been placed in “ON” position, it will respond when it has been interrogated by a 9 GHz Radar signal.

d) If it has been placed in the “ON” position, it will begin transmitting immediately upon detecting that it is in water.

16) With what other stations may portable survival craft transceivers communicate?

a) Communication is permitted between survival crafts

b) Communication is permitted between survival crafts and ship

c) Communication is permitted between survival craft and rescue unit.

d) All of the above

17) When do “NAVTEX” broadcast typically achieve maximum transmitting range?

a) Local noon time b) middle of the night c) sunset d) post sunrise

18) Which statement best describes amplitude modulation?

a) The character data from the terminal is changed to audio tones

b) The frequency is varied in synchronization with the modulating signal.

c) The information signal changes the amplitude but does not change the carrier frequency.

d) The amplitude of the carrier is changed but there is still a single frequency being transmitted.

19) How many side bands are present in the J3E mode?

a) Two side bands and a carrier b) One upper side band
c) One lower side band d) Two carriers and a side band

20) The best way to test the Inmarsat-C terminal is

a) Send a message to a show terminal and wait for confirmation

b) Compose and send a brief message to your own Inmarsat-C terminal

c) Send a message to another ship terminal

d) If the send light flashes proper operation has been confirmed

21) What does the MID (Maritime Identification Digits) signify?

a) Port of registry b) Nationality c) Gross tonnage d) Passenger vessel

22) Which of the following numbers would indicate ship station MMSI?

a) 003372694 b) 623944326 c) 030356328 d) 3384672

23) Which of the following would indicate an Inmarsat-B terminal?

a) 150036 b) 366632824 c) 430363275 d) 1502460

24) When sending a DSC call:

a) Vessels position will automatically be sent

b) Vessels position will automatically be sent if the vessel is sending a “Distress Hot key” alert

c) Vessels MMSI will indicate its ocean region

d) None of the above

25) DSC transmission are received

a) Using voice or telex modes as appropriate

b) Using J3E or H3E modes as appropriate

c) Using digital decoding by the DSC controller

d) Using F1B and/or J2B decoding by the transceiver

26) What does the DSC control unit do if the GMDSS Radio Operator fails to insert updated information when initiating a DSC distress alert?

a) It will abort the transmission and set off an audible alarm that must be manually reset.

b) It will initiate the DSC distress alert, but as no information will be transmitted, rescue personnel will not be able to identify the vessel, its position, or its position.

c) It will initiate the DSC distress alert, and default information will be automatically be transmitted.

d) It will initiate the DSC distress alert, but any station receiving it will have to establish contact with the distressed vessel to determine its identity, its position and its situation.

27) How many total frequencies are available for DSC distress alerting?

a) One (1) b) two (2) c) five (5) d) seven (7)

28) What information should be included in a distress follow on voice transmission?

a) Follow on working frequency b) ETA on next port
c) None of the above d) Both of the above

29) What does the acronym “EOS” indicate in the received message?

a) Error of sequence

b) End of sequence

c) End of signals

d) Equal operating signals

30) Under what conditions would you relay a DSC distress alert/

a) If the mobile unit in distress is incapable of further Distress Alert Communications

b) If no Coast Station/Mobile Unit acknowledgement is observed

c) Both a & b are possible

d) You should never relay such an alert – the Coast station & RCC will do that

SECTION – B

1) You are on MV Maha Sagar/VWYQ IMN 312336482. Your position is 30.28N/053.52W. The vessel is on fire and listing heavily to port. A heavy swell is being experienced and your Inmarsat B with default CES Station 12.

   a) State the procedure you would use to contact MRCC using Inmarsat B telex?

   b) When the link is established, what is the message you will send ?

2) a) What does the DSC distress alert indicate?
   b) What does the DSC urgency alert indicate?
   c) What does the DSC safety alert indicate?
   d) On which MF frequency will you send the above mentioned DSC alerts?

   e) On which VHF frequency will you send the safety message?

   f) On which VHF frequency will you send the distress message?

3) Your ship PERAL PROSPERITY/VTPG at 1030 UTC has sighted a floating metal container in posn 50 miles SE of Gridlines Light. It is drifting East wards which is dangerous to navigation.

   a) Give an example of the call you would transmit on VHF R/T

   b) On which channel would you transmit the call

   c) Give an example of the message you would transmit on the working channel?

4) a) What is the purpose of an EPIRB?
   b) What does the EPIRB signal indicate?
   c) On what frequencies do the following operate?
      (i) COSPAS – SARSAT EPIRB
      (ii) VHF EPIRB
   d) State the purpose of SART?

5) Your vessel MV Goondala/9LAR, IMN 441987632 having Inmarsat C terminal on board. You are bound for Malaysia. There is a flooding in Engine Room and experiencing Gale force winds/high seas. Your position is 08.45N/ 062.45E

   a) State the TWO methods for sending Distress alerts using your inmarsat- C?

   b) State the detailed distress message using the edit menu?

Key to Set.6

Part - I

1) D	2) C	3) B	4) C	5) A	6) C	7) B	8) A	9) D	10) B
11) C	12) A	13) B	14) C	15) C	16) D	17) B	18) C	19) B	20) B

21) B 22) B 23) B 24) B 25) C 26) C 27) D 28) C 29) B 30) C

Part – II

1) You are on MV Maha Sagar/VWYQ IMN 312336482. Your position is30.28N/053.52W. The vessel is on fire and listing heavily to port. A heavy swell is being experienced and your
Inmarsat B with default CES Station 12

a) State the procedure you would use to contact MRCC using Inmarsat B telex
b) When the link is established, what is the message you will send .

a) Select Telex mode 3
Press distress button for not less than 6 secs for automatic connection to RCC
Select Station1 12 LES
Press DMG and wait till transmission completes the details of ship.
Time permitting , Edit detailed distress message., select LES and send.

b) Mayday 3
M.V. Maha Sagar/VWYQ / 312336482
30 28N 053 52W AOR-W
On fire and listing heavily to port.
Req Immdt Assistance
Heavy swell
Master
NNNN

1 x 6

2) a) What does the DSC distress alert indicate?
b) What does the DSC urgency alert indicate?
c) What does the DSC safety alert indicate?
d) On which MF frequency will you send the above mentioned DSC alerts?
e) On which VHF frequency will you send the safety message?
f) On which VHF frequency will you send the distress message?

a) It indicates a mobile unit or person(s) are threatened by grave and imminent danger and require
immediate assistance
b) It indicates the station has a very urgent message concerning the safety of a mobile or person
c) It indicates the station has an important navigational or meteorological warning to follow.
d) 2187.5 khz.
e) 156.650 Mhz.
f) 156.80 Mhz.

.

3)Your ship PERAL PROSPERITY/VTPG at 1030 UTC has sighted a floating metal container in
posn 50 miles SE of Gridlines Light. It is drifting East wards which is dangerous to navigation.
a) Give an example of the call you would transmit on VHF R/T

b) On which channel would you transmit the call

c) Give an example of the message you would transmit on the working channel?

a) Securite (3) 2
All Stations (x3)
This is
Pearl Prosperity (x3)/VTPG

b) Ch.16
1

c) on channel 06 (working channel)
Securite 3
M.V.Pearl Properity
Navigational warning at 1030 utc
Sighted a floating metal container in posn 50 miles SE of Gridlines light,
Drifting eastwards.
Dangerous to navigation
Master
Out

4) a) What is the purpose of an EPIRB?
1.5 x 4
b) What does the EPIRB signal indicate?
c) On what frequencies do the following operate?
(i) COSPAS – SARSAT EPIRB
(ii) VHF EPIRB
d) State the purpose of SART?

a) Its secondary means of initiating ship to shore distress alerting.
Helps determine the position of survivors during Search and Rescue
b) The survivors are in grave and imminent danger
May no longer be on board their ship
They may not have any receiving facility.
c) (i) 406.025/121.5 Mhz. (ii) Ch.70 (156.525 Mhz.)
d) It helps SAR units to homein to the position of survivors

5) Your vessel MV Goondala/9LAR, IMN 441987632 having Inmarsat C terminal on board. You are bound for Malaysia. There is a flooding in Engine Room and experiencing Gale force winds/high seas. Your position is 08.45N/ 062.45E
a) State the TWO methods for sending Distress alerts using your inmarsat- C? 1.5x2

b) State the procedure and detailed distress message using the edit menu?

a) i) Undesignated distress alert by pressing the distress button for not less than 6 secs in BDU
ii) Designated Distress alert from Distress Meuu , Select nature of distress, update posn, select
LES and press distress button for not less than 6 sec in BDU.

b) Edit the distress Message
In transmit Menu, select distress priority 1.5 x 2
Select LES
Send the message

Mayday
M.V.Goondala/9LAR/441987632
Posn 08 45N 062 45E IOR
Flooding in Engine Room
Req Immdt Assist
Gale force winds and high seas
Master
NNNN

GOC/RS-SET-7

SECTION –A

1. The emission or mode used for RT (voice) operation on MF is
   A) FSK B) DSB C) ISB D) SSB

2. Ship to ship Safety of Navigation RT communication on Ch.13 VHF uses a
   A) Common calling channel B) Semi-duplex channel
   C) Duplex channel D) Simplex channel

3. A set of ITU RT paired frequencies can be described as
   A) Simplex B) Double sideband C) Duplex D) Single sideband

4. It is important to ventilate a ship's battery locker to
   A) Reduce the risk of explosion B) Prevention sulphation on the terminals
   C) Allow oxygen into the locker to assist charging D) Keep the celltops dry

5. The correct format for an RT Urgency call is
   A) PANPAN (x3) All Stations (x3) this is Nonsuch(x3) GABC 232123456
   B) PAN(x3) this is Nonsuch GABC 232123456
   C) All Stations(x3) this is Nonsuch(x3)
   D) SECURITE(x3) All Stations(x3) this is Nonsuch(x3) GABC 232123456

6. The signal "Seelonce Feenee" should only be transmitted by
   A) Any station involved in distress incident
   B) The port operation station nearest the distress position
   C) The control station to impose silence
   D) The station controlling the distress working

7. You are in GMDSS Sea Area A1 and have received a DSC Distress Alert you should
   A) Wait a short period, then acknowledge by RT on Ch.16
   B) Wait a short period, then acknowledge by Dsc on Ch.70
   C) Acknowledge immediately by RT on Ch.16
   D) Acknowledge immediately

8. You are in GMDSS Sea Area A1 drifting ashore and you require a tow. You should initially transmit by Ch.70 DSC
   A) An All stations Urgency Alert B) A distress Alert
   C) An All stations Safety Alert D) A Distress Relay Alert

9. The main purpose of transmission on 2174.5 khz is for
   A) Navtex English language broadcasts
   B) Ship to Ship RT communications for the Safety of navigation
   C) Routine Ship to Ship telex messages on HF
   D) MF Telex Distress, Urgency and Safety messages

10. Generally communications on the Port Operations Service are restricted to
    A) Inter-ship correspondence(bridge to bridge communicatons) only
    B) Maritime Safety Information broadcasts only

C) RT pubic correspondence only
D) Operational handling and movement of ships only

11. The purpose of ITU channel spacing is:
A) To maximize the number of voice &telex channels available
B) To minimize the possibility of interference from adjacent channels
C) To make most efficient use of the radio spectrum by using voice channels rather than tlx chnls
D)To make most efficient use of the radio spectrum by using telex channels rather than voice chnls

12. You are in Sea Area A2 and require medical advice from Humber Coastguard. You should initially transmit by MF DSC on 2187.5 khz
A) An Urgency Alert addressed to Humber Coastguards MMSI
B) A Distress Alert addressed to Humber Coastguard MMSI
C) A safety Alert to All Stations
D) A Routine Alert to All Stations

13. Your vessel is GMDSS Sea Area A1 and you have sighed an unlit buoy. To warn other ships you should transmit on Ch.70 by DSC
A) a Routine Alert addressed to All Stations
B) a safety Alert addressed to All Stations
C) an Urgency Alert addressed to All Stations
D) a Distress Relay Alert

14. A coast station making a DSC international Routine shore to ship alert transmits on
A) 2177 kHz B) 2182 lKz C) 2187.5 kHz D) 2189.5 kHz

15. To maintain serviceability and availability of GMDSS equipment on board ship, SBM means
A) A qualified maintainer is carried on board a ship
B) A recognized shore based company is responsible for maintenance
C) The ship's GMDSS operator is responsible for maintenance
D) The ship's GMDSS equipment is duplicated

16. A station causing interference with RT communications between another ship and coast station shall
A) Cease transmission on the first request by the coast station
B) Change the mode of the emission being used
C) Reduce transmitter power
D) Request the mobile station to cease transmission

17. In routine VHF RT communications between two ships, the controlling station is deemed to be the
A) Nearest coast station
B) Ship with the highest priority of traffic
C) Ship station which initiates the call
D) Ship station that has been called

18. In the terrestrial radio service, the category with highest priority is
A) Request for berthing instructions
B) Inmarsat-C messages to the owners
C) RT call to pilot
D) Gale warning

19. In the event of a distress situation, the transmission of a Distress Alert and messages is authorized by
A) The Master or person in charge of the vessel
B) The GMDSS Operator
C) The person responsible for equipment maintenance
D) The C/E/O or person in-charge of E/Room

20. Prioritisation and pre-emption are features of

A) Inmarsat Fleet 55
B) Inmarsat C
C) Inmarsat Fleet 77
D) Inmarsat B

21. Which factors normally determines the range of VHF transmissions
A) Channel frequency B) Power level
C) both B) and D) D) Vessel antenna height

22. Your vsl is being called, but you are unsure of the id of the calling station.You must
A) reply immediately
B) wait for the call to be repeated
C) wait one minute, then reply
D) wait two minutes, then reply

23. In the event of distress situation, the transmission of distress alert is authorized by
A) The GMDSS Operator
B) The person in-charge of engine room
C) The Master or person in-charge of the vessel
D) The person responsible for equipment maintenance

24.In terrestrial radio service, the category message with the highest priority is :
A) Weather observation B) Telex call to owners
C) Urgency message from Master D) Message to port control

25)Services that are available in Fleet 77 are
A) Tlx
B) Store and forward messages only
C) Slow speed fax only
D) Data and voice communications

26)Vessel sailing in Sea area A3/A4 must keep continuous DSC watch on
A) VHF Ch.70, 2187.5 kHz and 2174.5 kHz
B) VHF Ch.70, & 2187.5 kHz only
C) VHF Ch.70, 8414.5 kHz plus one HF distress frequency
D) VHF Ch.70, 2187.5 kHz, 8414.5 kHz plus one other HF distress frequency

27)Distress messages are sent on Sat-C using the following service
A) Voice
B) Store and forward
C) Real time
D) E-mail

28)The ISDN and MPDS data communications facility is available using
A) Inmarsat-A B) Inmarsat-B
C) Inmarsat-C D) Inmarsat Fleet 77

29)The word WAIT indicates
A) End of transmission when no reply is expected or required

B) Pause for few seconds
C) Your transmission is received satisfactorily
D) End of transmission when immediate reply is expected

30) Communication through the Inmarsat system are by:
A) Ground wave B) Combination of Ground and Sky wave
C) Space wave D) Sky wave

SECTION - B

1. a) Ship Brando is informing ship Malvino “Seelonce Mayday.” Which vessel is in control of the distress traffic at the moment?

b) What action should you take if you receive an “Urgency”call not followed by a message even after waiting for three minutes?

c) What is Navtex International broadcast frequency?

d) When your are controlling distress traffic , state under what circumstances you will send Mayday relay message

e) In Satcom-B how many seconds will you press the”Distress” push button switch if you want to send a distress R/Tcall?

f) What is the primary intership working channel on VHF?

2. Write down the action you will take on Satcm-B for a FIRE in the E/Room (assume all information)

3. a) Write down the full details of Distress alert received on MF and VHF assuming all information?
b) Under what circumstances will the following signals be used in RadioTelephony?

(i) SEELONCE MAYDAY
(ii) SEELONCE FEENEE
(iii) MAYDAY RELAY

4. Answer the following:
a) VHF channel/frequency you will listen to on receiving distress alert on Ch.70
b) Priority to be used on Sat-C when cancelling a False Distress Alert & why?
c) Having used two digit service 38 for a Doctor call on Sat-B, what signal will you use preceding the call/message

d) You have sent a Distress alert via Sat-C, no reply received. After how long will you repeat the
Alert ?
e) What is the priority number used in Satcom Equipments for distress?
f) State a VHF channel & one HF frequency that can be used for Ship-Aircraft communications
during SAR?

5 a) What is the purpose of an EPIRB?
b) What does the EPIRB signal indicate?
c) On what frequencies do the following operate
(i) COSPAS/SARSAT EPIRB
(ii) VHF EPIRB
d) State the purpose of SART

Key to Set No.7
Part – I

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

Part – II

1. a) Ship Brando is informing ship Malvino “Seelonce Mayday.” Which vessel is in control of the distress traffic at the moment?
b) What action should you take if you receive an “Urgency”call not followed by a message even after waiting for three minutes?
c) What is Navtex International broadcast frequency?
d) When your are controlling distress traffic , state under what circumstances you will send Mayday relay message
e) In Satcom-B how many seconds will you press the”Distress” push button switch if you want to send a distress R/Tcall?
f) What is the primary intership working channel on VHF?

a) Ship Brando
b) Inform the nearest CRS if possible and resume normal working.
c) 518 kHz.
d) When further assistance is required.
e) Not less than 6 secs
f) Ch.06

2. Write down the action you will take on Satcm-B for a FIRE in the E/Room (assume all information)

a) We can send by Telephone and Telex procedures

Initial procedures: By Telephone By Telex (2 marks each)

Select telephone mode
Select LES
Press distress button for not less than 6 secs
Press # key to intiate the call
Once RCC responses, speak the call and message

Select Telex mode
Press distress button for not less than 6 ecs
Select LES
Press DMG to send undesignated distress alert.
Time permitting, edit distress msg , select LES, select File and send

Mayday (x3) This is MV Akash (x3)

MESSAGE

Mayday
M.V.Akash/VWTR/345678000
12 00N 085 30E
Sinking
Req Immdt Assist
23 POB
Master
Over/NNNN(tlx)

3) 3

a) MF/HF

DISTRESS CALL

TIME: 12: 45 30 APR UTC
FREQ: 2187.5 khz
FROM: 419123000
NAT: SINKING
MODE: SSB TELEPHONY
LAT: N 56’ 05”
LONG: E 012’ 10’
UTC: 12:40

VHF

DISTRESS CALL

TIME: 12:45 30 APR UTC
FORMAT: DISTRESS
FROM: 419123000
NAT: SINKING
LAT: N 56’ 05”
LONG: E 012’ 10’’
UTC: 12:40

3

b) I) The controlling station imposes silence on ships causing interference to distress traffic
Ii) The controlling station indicates that distress is over and normal working may be resumed.

iii) a) When the vessel in distress is not able to transmit the distress message on its own.
b) The Master of the other vessel considers further help is necessary

4) a) Ch.16/156.800 Mhz.
b) Distress Priority/ To get direct access to RCC
c) PANPAN
d) 5 mins.
e) P3
f) Ch.06 and 5680 khz.

1.5 x 4

5) a) What is the purpose of an EPIRB?
b) What does the EPIRB signal indicate?
c) On what frequencies do the following operate?
(i) COSPAS – SARSAT EPIRB
(ii) VHF EPIRB
d) State the purpose of SART?

a) Its secondary means of initiating ship to shore distress alerting.
Helps determine the position of survivors during Search and Rescue
b) The survivors are in grave and imminent danger
May no longer be on board their ship
They may not have any receiving facility.
c) (i) 406.025/121.5 Mhz. ii) Ch.70 (156.525 Mhz.)
d) It helps SAR units to home in to the position of survivors