

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-A: General Information and System Overview: Key Topic #1: Fundamental Concepts:

1A1 What is the fundamental concept of the GMDSS?

- A. GMDSS utilizes automated systems and satellite technology to improve emergency communications for the world's shipping industry.
- B. It is intended to automate and improve existing digital selective calling procedures and techniques.
- C. It is intended to provide more effective but lower cost commercial communications.
- D. It is intended to provide compulsory vessels with a collision avoidance system when they are operating in waters that are also occupied by non-compulsory vessels.

1A2 The primary purpose of the GMDSS is:

- A. Allow more effective control of SAR situations by vessels.
- B. Automate and improve emergency communications for the world's shipping industry.
- C. Provide additional shipboard systems for more effective company communications.
- D. Effective and inexpensive communications.

1A3 What is the basic concept of GMDSS?

- A. Shoreside authorities will rely on reports from nearby vessels to become aware of Distress alerts.
- B. Shoreside authorities and vessels can assist in a coordinated SAR operation only after the correct chain of DSC relays takes place.
- C. SAR authorities ashore can be alerted to a Distress situation & shipping in the vicinity can be requested to participate in SAR operations.
- D. SAR authorities ashore wait to have EPIRB Distress alerts confirmed by satellite follow-on communications.

1A4 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 and 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.

1A5 What is the responsibility of compulsory GMDSS vessels?

- A. Every vessel must be able to perform communications functions essential for its own safety and the safety of other vessels.
- B. Vessels must transmit a DSC distress relay upon receipt of a DSC distress alert.
- C. Only the vessels closest to a Distress incident must render assistance.
- D. Vessels must immediately acknowledge all DSC distress alerts.

1A6 GMDSS is required for which of the following?

- A. All vessels capable of international voyages.
- B. SOLAS Convention ships of 300 gross tonnage or more.
- C. Vessels operating outside of the range of VHF coast radio stations.
- D. Coastal vessels of less than 300 gross tons.

Answers: 1A1 – A 1A2 – B 1A3 – C 1A4 – D 1A5 – A 1A6 – B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-A: General Information and System Overview. Key Topic #2: Equipment Systems:

2A1 Which GMDSS system utilizes terrestrial radio techniques?

- A. F-77
- B. Inmarsat-C
- C. GPS
- D. VHF-MF-HF-DSC

2A2 What equipment utilizes satellite communications?

- A. Inmarsat-C
- B. VHF-MF-HF
- C. NAVTEX
- D. SART

2A3 What equipment is used in or near the survival craft?

- A. NAVTEX
- B. EPIRB
- C. Fathometer
- D. COSPAS-SARSAT

2A4 What equipment is programmed to initiate transmission of Distress alerts and calls to individual stations?

- A. NAVTEX
- B. GPS
- C. DSC Controller
- D. DSC Scanning Watch Receiver

2A5 What system provides accurate vessel position information to the GMDSS equipment?

- A. COSPAS-SARSAT
- B. EPIRB
- C. GPS
- D. Inmarsat-B

2A6 Which of these can be used to receive MSI?

- A. SART
- B. EPIRB
- C. Inmarsat-B
- D. NAVTEX

Answers: 2A1 – D 2A2 – A 2A3 – B 2A4 – C 2A5 – C 2A6 – D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-A: General Information and System Overview. Key Topic #3: Sea Areas:

3A1 The Sea Area you are in is determined by:

- A. The vessel's distance from shore.
- B. The types of maintenance available to your vessel.
- C. Whether the ship station is in range of a VHF-DSC, MF-DSC, HF-DSC Coast Station or Inmarsat coverage.
- D. Whether the ship only makes domestic/coastal voyages or it goes international.

3A2 If a vessel is on a voyage from Miami, Florida to Houston, Texas what Sea Areas may it transit through?

- A. Sea area A3 if it is beyond range of a MF-DSC equipped coast station.
- B. Sea area A2 or A3 if it is not within range of a VHF-DSC equipped coast station.
- C. Sea area A1 only if within range of a VHF-DSC equipped coast station.
- D. All of these answers may be correct depending on coast station DSC coverage.

3A3 If a vessel is engaged in local trade and at no point in its voyage travels outside the range of a VHF shore station with continuous DSC alerting then the vessel is operating in what area?

- A. Sea area A1
- B. Coastal and international zones
- C. Inland and coastal waters
- D. Sea areas A1 and A2

3A4 For a vessel to be in GMDSS Sea Area A-1:

- A. The vessel must be within VHF range of a Public Correspondence Station.
- B. The vessel must be within range of a coast station equipped with continuous VHF-DSC capability.
- C. The vessel must be within VHF range of a U. S. C. G. communication station.
- D. The vessel must be within VHF range of either a U. S. C. G. or a Public Correspondence Station.

3A5 A vessel is on a coastwise voyage that results in a distance off shore of 10 to 40 nm and therefore:

- A. The vessel must be able to communicate with a coast station on Ch-16 to be within Sea Area A-1.
- B. To be within Sea Area A-1 the vessel must continuously be within range of a coast station with VHF-DSC capability.
- C. The vessel will always be in Sea Area A-1 because all coastal voyages have A-1 DSC coverage.
- D. To be within Sea Area A-1 the vessel must continuously be within range of a coast station with MF-DSC capability.

3A6 What is defined as the area within the radiotelephone coverage area of at least one VHF coast station in which continuous DSC alerting is available as defined by the IMO regulation for GMDSS?

- A. Ocean Area Regions AOR-E, AOR-W, POR or IOR
- B. Sea Area A2
- C. Sea Area A1
- D. Coastal and Inland Waters

Answers: 3A1 – C 3A2 – D 3A3 – A 3A4 – B 3A5 – B 3A6 – C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-A: General Information and System Overview. Key Topic #4 Functional Requirements:

4A1 Which of the following is a functional or carriage requirement for compulsory vessels?

- A. A compulsory vessel must carry at least two (2) FCC licensed GMDSS Radio Operators in all sea areas as well as a GMDSS Maintainer in sea areas A3 & A4.
- B. A compulsory vessel must satisfy certain equipment carriage requirements based on the intended sea area of operation.
- C. A compulsory vessel must be able to transmit and respond to Distress alerts and carry only one (1) FCC licensed GMDSS Radio Operator in sea areas A1 & A2.
- D. None of these answers are correct.

4A2 Which GMDSS communication functions must all compulsory vessels be capable of performing to meet International Maritime Organization requirements?

- A. Distress alerting and receipt of Maritime Safety Information via Inmarsat for all vessels intending to operate in Sea Area A4.
- B. Distress alerting and receipt of MSI in Sea Areas A1, A2, A3, and A4 regardless of the vessel's intended area of operation.
- C. Distress alerting, general communications and receipt of Maritime Safety Information in the vessel's intended area of operation.
- D. General communications via Inmarsat and receipt of Maritime Safety Information via Enhanced Group Calling in Sea Area A4.

4A3 GMDSS-equipped ships will be required to perform which of the following communications functions?

- A. Distress alerting, MSI, SAR and on-scene communications & receipt of satellite alerts from other vessels.
- B. SAR and on-scene communications, Bridge-to-Bridge and general radio communications, MSI and relay of satellite alerts from other vessels.
- C. Bridge-to-Bridge and general radio communications, RDF of EPIRB homing signals, Distress alerting and MSI.
- D. Transmit distress alerts, SAR and on-scene communications, MSI, Bridge-to-Bridge and general radio communications.

4A4 What equipment can be used to receive Maritime Safety Information?

- A. NAVTEX, EGC receiver or HF SITOR (NBDP).
- B. EGC receiver, Inmarsat B or F77 terminal.
- C. HF SITOR (NBDP), Inmarsat B or NAVTEX.
- D. All of these answers are correct.

4A5 Which of the following are required GMDSS functions?

- A. Bridge-to-Bridge communications, reception of weather map facsimile broadcasts, SAR communications.
- B. Reception of weather map facsimile broadcasts, receiving company email, On-scene communications.
- C. Reception of VHF weather channels, On-scene communications, general communications
- D. Bridge-to-Bridge communications, general communications, SAR communications.

4A6 Which of the following are required GMDSS functions for vessels?

- A. Transmit and receive locating signals, general communications and SAR communications.
- B. Transmit and receive general communications, transmit Distress Alerts by at least one means, MSI.
- C. Transmit and receive locating signals, send MSI to other ships via EGC, Bridge-to-Bridge communications.
- D. Transmit and receive SAR communications, transmit Distress Alerts by at least one means, Bridge-to-Bridge communications.

Answers: 4A1 – B 4A2 – C 4A3 – D 4A4 – A 4A5 – D 4A6 – A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-A: General Information and System Overview. Key Topic #5: Carriage Requirements:

5A1 Which statement is true regarding a vessel equipped with GMDSS equipment that will remain in Sea Area A1 at all times?

- A. The vessel must be provided with a radio installation capable of initiating the transmission of ship-to-shore Distress alerting from the position from which the ship is normally navigated.
- B. VHF DSC alerting may be the sole means of Distress alerting.
- C. HF or MF DSC may satisfy the equipment requirement.
- D. HF SSB with 2182 kHz automatic alarm generator may satisfy the equipment requirement.

5A2 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.

5A3 All passenger vessels must have what additional equipment?

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

5A4 Within a single sea area, what is the primary reason GMDSS imposes carriage requirements for different radio subsystems?

- A. Redundancy in duplicating all operational functions in the event of a system failure.
- B. Different subsystems are required to meet the specific equipment carriage requirements of national authorities.
- C. GMDSS vessels must be equipped to communicate in all modes with coast radio stations.
- D. The combined capabilities of redundant subsystems mitigate the risk of a single point of failure.

5A5 If operating within Ocean Area A1, and outside of NAVTEX coverage, a GMDSS-equipped vessel must carry:

- A. Equipment capable of reception of Maritime Safety Information by the Inmarsat enhanced group call system, or HF SITOR (NBDP).
- B. A GPS receiver.
- C. Equipment capable of maintaining a continuous DSC watch on 2187.5 kHz.
- D. An Inmarsat-B terminal.

5A6 What is the equipment carriage requirement for survival craft under GMDSS?

- A. At least three SCT units and two SARTs on every cargo ship between 300-500 gross tons and the same on all passenger ships regardless of tonnage.
- B. At least three SCT units and two SARTs on every passenger ship and cargo ships of 500 gross tons and upwards.
- C. At least two radar transponders must be carried on every cargo ship of 300-500 gross tons and two radar transponders (one for each side) of every passenger ship regardless of tonnage.
- D. All cargo vessels above 300 gross tons and every passenger ship regardless of tonnage must carry three SCT units and two SARTs.

Answers: 5A1 - A 5A2 - B 5A3 - C 5A4 - D 5A5 - A 5A6 - B

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Section-A: General Information and System Overview. Key Topic #6: Maintenance Options:

6A1 Which of the following statements concerning maintenance requirements is false?

- A. Compulsory vessels sailing in Sea Areas A1 and A2 must provide any one of the three maintenance options which are duplication of equipment, shore-based, or at-sea maintenance capability.
- B. Compulsory vessels sailing in Sea Areas A3 and A4 must provide any two of the three maintenance options which are duplication of equipment, shore-based, or at-sea maintenance capability.
- C. Equipment warranties do not satisfy GMDSS maintenance requirements.
- D. If shore-based maintenance is used, maintenance services do not have to be completed or performance verified unless the vessel will be sailing to a non-US port.

6A2 Which of the following statements concerning GMDSS 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.

6A3 Which of the following is a GMDSS requirement for all vessels over 300 gross tons operating within range of a MF-DSC equipped shore station?

- A. Ship's Master or radio officer must be on watch at all times.
- B. Only one of the three maintenance options is required.
- C. MF communications must be handled by the holder of a General Radiotelephone Operator's License.
- D. Only FCC required spare parts and a maintenance kit for repairs are required.

6A4 What statement is correct regarding the maintenance requirements for A3 ships under GMDSS?

- A. If the vessel selects at-sea maintenance no additional parts and spares are required.
- B. On-board maintenance provided by a person holding a GMDSS Maintainer's license will fully meet the requirements.
- C. Redundancy of functions of certain equipment and on-board maintenance provided by a person holding a GMDSS Maintainer's license will partially meet this requirement.
- D. Shoreside maintenance and scheduled tests and inspections will not partially meet this requirement.

6A5 A ship operating exclusively in sea area A-1 must have the following provisions for maintenance:

- A. Carry an on-board maintainer plus duplication of equipment.
- B. Shore maintenance may not be selected.
- C. Only one option for maintenance is required.
- D. Must always select duplication of equipment to maximize safety.

6A6 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 these is sufficient.

Answers: 6A1 – D 6A2 – A 6A3 – B 6A4 – C 6A5 – C 6A6 – D

Section-A: General Information and System Overview. Key Topic #7: Radio Spectrum:

7A1 What is the frequency range for Medium Frequency?

- A. 10-30 MHz
- B. 1,000-10,000 kHz
- C. 300-3,000 kHz
- D. 30-300 kHz

7A2 What is the frequency range for High Frequency?

- A. 300-3,000 kHz
- B. 30-300 MHz
- C. 10-30 MHz
- D. 3-30 MHz

7A3 What is the frequency range for Very High Frequency?

- A. 30-300 MHz
- B. 3-30 MHz
- C. 300-3,000 kHz
- D. 10-30 MHz

7A4 What is the frequency range for Ultra High Frequency?

- A. 3-30 MHz
- B. 300-3,000 MHz
- C. 30-300 MHz
- D. 10-30 MHz

7A5 What is the frequency range for Super High Frequency?

- A. 30-300 GHz
- B. 3-30 GHz
- C. 300-3,000 MHz
- D. 30-300 MHz

7A6 What is the frequency range for Maritime VHF operations?

- A. 3-30 MHz
- B. 88-108 MHz
- C. 156-164 MHz
- D. 540-1640 kHz

Answers: 7A1 – C 7A2 – D 7A3 – A 7A4 – B 7A5 – B 7A6 – C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-B: F.C.C. Rules & Regulations: Key Topic #8: Inspections and Exemptions:

8B1 How often must a compulsory vessel's GMDSS radio station be inspected?

- A. Annually, by the U.S. Coast Guard.
- B. Annually, by the FCC or designated authority.
- C. Annually, by the FCC, and every six months if the vessel sails outside of Sea Areas A1 and A2.
- D. The FCC's annual inspection may be waived if and only if monthly inspections are performed by the vessel's on-board GMDSS Radio Maintainer.

8B2 What periodic inspection is required in order to remain in compliance with the regulations regarding GMDSS ship radio station inspections?

- A. U.S. Coast Guard annual inspection.
- B. FCC inspection every five years.
- C. An inspection at least once every 12 months by the FCC or a holder of a GMDSS Maintainers license.
- D. Periodic inspections not required if on board maintainers perform routine preventive maintenance.

8B3 Which statement is false regarding a GMDSS-equipped ship?

- A. A conditional or partial exemption may be granted, in exceptional circumstances, for a single voyage outside the sea area for which the vessel is equipped.
- B. The regulations apply to all passenger ships regardless of size and cargo ships of 300 gross tons and upwards.
- C. Ships must carry at least two persons holding a GMDSS Radio Operator's license for Distress and Safety radio-communications purposes.
- D. Ships must have the required equipment inspected at least once every five years.

8B4 Which statement is false regarding a GMDSS equipped ship?

- A. A conditional or partial exemption may not be granted, in exceptional circumstances, for a single voyage outside the sea area for which the ship is equipped.
- B. Ships must have the required equipment inspected at least once every 12 months.
- C. The regulations apply to all passenger ships regardless of size and cargo ships of 300 gross tons and upwards.
- D. Ships must carry at least two persons holding a GMDSS Radio Operator's license for Distress and Safety radio-communications purposes.

8B5 During an annual GMDSS station inspection:

- A. Licensed GMDSS operators may not be required to demonstrate equipment competencies but all required equipment must be fully operational.
- B. All required equipment must be fully operational and any required publications that are not current must be on order.
- C. GMDSS operators may be required to demonstrate equipment competencies and any of required equipment that is not fully operational can be repaired at the next port of call as long as there is functional duplication.
- D. All required documents and publications might have to be produced and GMDSS operators may be required to demonstrate equipment competencies.

8B6 Which situation is least likely to result in an inspection of the radio installation by foreign governments or administrations?

- A. When a ship visits a port for the first time.
- B. When the ship's station license cannot be produced without delay.
- C. When operational irregularities are observed.
- D. When compulsory equipment is found to be inoperative.

Answers: 8B1 – B 8B2 – C 8B3 – D 8B4 – A 8B5 – D 8B6 – A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-B: F.C.C. Rules & Regulations: Key Topic #9: Required Documents and Publications:

9B1 Which of the following references should be consulted for information on the proper setup and use of GMDSS equipment?

- A. The manufacturer's operating manuals.
- B. 47 CFR Part 80 Subpart W.
- C. Instructions are available through the Maritime Safety Information (MSI) system.
- D. ITU List of Equipment Operations.

9B2 Where can GMDSS regulations pertaining specifically to U.S.-flag vessels be found?

- A. These are located in CCIR #476.
- B. These are located in 47 CFR Part 80.
- C. These are located in FCC Part 83.
- D. These are published only by the U.S. Coast Guard.

9B3 What publications should the GMDSS Radio Operator consult to review the proper procedures to be followed in Distress situations under GMDSS?

- A. The manufacturer's technical manuals.
- B. The manufacturer's operator manuals.
- C. 47 CFR Part 80 Subpart W.
- D. 47 CFR Part 90 Subpart V.

9B4 Which of the following documents or publications are required by the FCC for GMDSS vessels on international voyages (other than the Great Lakes)?

- A. IMO master plan of shore-based facilities (or substitute), station logs, appropriate operator licenses, Inmarsat handbook for GMDSS.
- B. NGA Pub. 117 (or substitute), station logs, appropriate operator licenses, IAMSAR manual volume III.
- C. Part 80 FCC rules, station logs, station licenses, ITU publications, IMO manual for Maritime Mobile stations.
- D. Part 80 FCC rules, station logs, station licenses, ITU publications, ITU manual for Maritime Mobile stations.

9B5 Which of the following documents or publications are required by Part 80 of the FCC rules for vessels on international voyages (other than the Great Lakes)?

- A. ITU List IV & List V, Appropriate Safety Convention Certificate & ITU manual for Maritime Mobile stations.
- B. Appropriate Safety Convention Certificate, ITU Master Plan of GMDSS Coast stations, and ITU manual for Maritime Mobile stations.
- C. ITU Master Plan of GMDSS Coast stations, ITU manual for Maritime Mobile stations, ITU List IV & List V.
- D. ITU List IV & List V, Appropriate Safety Convention Certificate & IMO manual for Maritime Mobile stations.

9B6 Which of the following references should be consulted to identify the name of a vessel based on its Maritime Mobile Service Identity?

- A. ITU list of Coast Stations.
- B. ITU List of Ship Stations and Maritime Mobile Service Identity Assignments.
- C. ITU List of Radio-determination and Ship Stations.
- D. ITU Master Plan of Shore-Based Facilities.

Answers: 9B1 – A 9B2 – B 9B3 – C 9B4 – D 9B5 – A 9B6 – B

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Section-B: F.C.C. Rules & Regulations: Key Topic #10: Maintenance:

10B1 Which of the following maintenance functions is not the responsibility of the GMDSS Radio Operator?

- A. Visual inspection of equipment, including the antenna and associated components.
- B. Perform on-the-air verification checks.
- C. Perform scheduled testing of the battery's charged condition.
- D. Aligning the power output stage for maximum power.

10B2 When may a compulsory vessel not be allowed to leave port?

- A. When the vessel has replaced a required piece of GMDSS-related equipment but its performance has not been verified or logged.
- B. When the vessel is in an over-carriage condition.
- C. When the vessel has arranged for both duplication of equipment and shore-based maintenance.
- D. When the vessel is carrying only two licensed GMDSS Radio Operators and is capable of performing all required functions.

10B3 Which statement is false regarding the maintenance of GMDSS equipment at sea?

- A. Ships must carry at least one person who qualifies as a GMDSS maintainer for the maintenance and repair of equipment if the at-sea maintenance option is selected.
- B. The GMDSS maintainer may not be the person designated to have primary responsibility for radio-communications during Distress incidents even if licensed as an operator.
- C. All at-sea maintenance and repairs must be performed by, or under the supervision of a person holding a GMDSS Maintainer license.
- D. The GMDSS maintainer may be the person responsible for ensuring that the watches are properly maintained and that the proper guard channels and the vessel's position are entered into the DSC equipment.

10B4 Which of the following service or maintenance functions may NOT be performed by the holder of a GMDSS Radio Operator License?

- A. Reset tripped circuit breakers or replace defective fuses.
- B. Routine battery maintenance if used as part of the GMDSS station.
- C. Any adjustments or maintenance that may affect the proper operation of the station.
- D. Replacement of consumable items such as paper, ribbons, etc.

10B5 What are the conditions, under GMDSS, whereby a ship is NOT allowed to depart from any port?

- A. The vessel is carrying more than the required number of qualified GMDSS radio operators.
- B. The vessel has a temporary waiver of its radio license and Safety Certificate.
- C. The vessel is not capable of performing all required Distress and Safety functions.
- D. The vessel is not carrying a GMDSS radio maintainer, but has provided for shoreside maintenance plus duplication of equipment if required.

10B6 What determines the spares and maintenance materials requirements for the VHF-DSC equipment under GMDSS?

- A. 47 CFR Part 80
- B. IMO Circular "Equipment Spares".
- C. The GMDSS Maintainer's requirements.
- D. The recommendations of the manufacturer.

Answers: 10B1 - D 10B2 - A 10B3 - B 10B4 - C 10B5 - C 10B6 - D

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Section-B: F.C.C. Rules & Regulations: Key Topic #11: License and Personnel Requirements:

11B1 Which FCC license meets the requirement to serve as a GMDSS operator?

- A. General Radiotelephone Operator's License.
- B. Marine Radio Operator's Permit.
- C. GMDSS Radio Operator's License
- D. GMDSS Radio Maintainer's License.

11B2 Which of the following statements concerning GMDSS Radio Operator requirements is false?

- A. Each compulsory vessel must carry at least two licensed GMDSS Radio Operators at all times while at sea.
- B. Each compulsory vessel must carry at least two licensed GMDSS Radio Operators at all times while at sea and may elect to carry a GMDSS Radio Maintainer as well.
- C. While at sea, adjustments to, and the maintaining of, GMDSS equipment may be performed by the GMDSS Radio Operator as long as the work is supervised by an on-board licensed GMDSS Radio Maintainer.
- D. All communications involving Safety of life at sea must be logged as long as the compulsory vessel was not involved in such communications.

11B3 Which FCC license meets the requirements to perform or supervise the performance of at-sea adjustments, servicing, or maintenance which may affect the proper operation of the GMDSS station?

- A. GMDSS Operator's/Maintainer's license or GMDSS Maintainer's license.
- B. General Radiotelephone Operator's License with Shipboard RADAR endorsement.
- C. Marine Radio Operator's Permit or GMDSS Maintainer's license.
- D. GMDSS Radio Operator's license or Marine Radio Operator's Permit.

11B4 Which statement is false regarding the radio operator requirements for a GMDSS-equipped ship station?

- A. One of the qualified GMDSS radio operators must be designated to have primary responsibility for radio-communications during Distress incidents.
- B. Maintaining a record of all incidents connected with the radio-communications service that appear to be of importance to Safety of life at sea is not required.
- C. A qualified GMDSS radio operator, and a qualified backup, must be designated to perform Distress, Urgency and Safety communications.
- D. While at sea, all adjustments or radio installations, servicing or maintenance of such installations that may affect the proper operation of the GMDSS station must be performed by, or under the supervision of, a qualified GMDSS radio maintainer.

11B5 Which of the following are personnel, functional, or equipment FCC requirements of the GMDSS?

- A. One FCC licensed GMDSS radio operator in sea areas A1 & A2, two FCC licensed GMDSS radio operators in sea areas A3 & A4 and equipment carriage based on intended sea area of operations.
- B. Equipment carriage based on intended sea area of operations, distress alerting and response and two FCC licensed GMDSS radio operators.
- C. Distress alerting and response, two USCG STCW GMDSS watchstanders, equipment carriage based on intended sea area of operations.
- D. Equipment carriage reduced for sea areas A3 & A4, Distress alerting and response and two FCC licensed GMDSS radio operators.

11B6 How many GMDSS radio maintainers must be carried aboard a compulsory vessel if the At-Sea maintenance method is used?

- A. Two in Sea Areas A3 and A4.
- B. Two in Sea Area A1.
- C. One regardless of sea area of operation.
- D. None of these answers are correct.

Answers: 11B1 - C 11B2 - D 11B3 - A 11B4 - B 11B5 - B 11B6 - C

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Section-B: F.C.C. Rules & Regulations: Key Topic #12: Reserve Energy and Equipment Testing:

12B1 Under GMDSS, a compulsory VHF-DSC radiotelephone installation must be tested at what minimum intervals at sea?

- A. Annually, by a representative of the FCC.
- B. Daily
- C. At the annual SOLAS inspection.
- D. Monthly

12B2 What is the meaning of "Reserve Source of Energy"?

- A. High caloric value items for lifeboat, per SOLAS regulations.
- B. Diesel fuel stored for the purpose of operating the powered survival craft for a period equal to or exceeding the U.S.C.G. and SOLAS requirements.
- C. Power to operate the radio installation and conduct Distress and Safety communications in the event of failure of the ship's main and emergency sources of electrical power.
- D. The diesel fueled emergency generator that supplies AC to the vessel's Emergency power bus.

12B3 Which term describes the source of energy required to supply the GMDSS console with power if the ship's source of main or emergency energy fails?

- A. Emergency power
- B. Ship's emergency diesel generator
- C. Ship's standby generator
- D. Reserve Source of Energy

12B4 What is the requirement for emergency and reserve power in GMDSS radio installations?

- A. Compulsory ships must have emergency and reserve power sources for radio communications.
- B. An emergency power source for radio communications is not required if a vessel has proper reserve power (batteries).
- C. A reserve power source is not required for radio communications.
- D. Only one of the above is required if a vessel is equipped with a second 406 EPIRB as a backup means of sending a Distress alert.

12B5 While underway, how frequently is the DSC controller required to be tested?

- A. Once a month
- B. Twice a week
- C. Once a week
- D. Once a day

12B6 At sea, all required equipment (other than Survival Craft Equipment) must be proven operational by:

- A. Daily testing or daily successful use of the equipment.
- B. Testing at least every 48 hours.
- C. Weekly testing of all S.C.E. and other compulsory equipment.
- D. Daily testing of the S.C.E. and weekly tests of the other equipment.

Answers: 12B1 - B 12B2 - C 12B3 - D 12B4 - A 12B5 - D 12B6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-B: F.C.C. Rules & Regulations: Key Topic #13: Watch and Log Keeping Requirements:

13B1 Proper watchkeeping includes the following:

- A. After silencing an alarm all displays and/or printouts are read, monitoring all required frequencies in the proper mode, notifying the Master of any Distress alerts.
- B. Monitoring all required frequencies in the proper mode, setting the DSC scanner to 2 MHz, 4 MHz and 8 MHz for ships in the vicinity, notifying the Master of any Distress alerts.
- C. Notifying the Master of any Distress alerts, setting the DSC scanner to 2 MHz, 4 MHz and 8 MHz for ships in the vicinity, monitoring all required frequencies in the proper mode.
- D. Setting the DSC scanner only to the mandatory 2 MHz & 8 MHz, maintain continuous watch on 2182.0 kHz or 4125.0 kHz, notify the Master of any Distress traffic heard.

13B2 Proper watchkeeping includes the following:

- A. Understanding normal operational indicators, setting the DSC scanner frequencies to minimize alarms, maintaining a proper log.
- B. Maintaining a proper GMDSS radio station log, understanding normal operational indicators, responding to and comprehending alarms.
- C. Responding to and comprehending alarms, logging out of Inmarsat-C terminals while at sea, maintaining a proper GMDSS radio station log.
- D. Maintaining a proper GMDSS radio station log, setting the DSC scanner frequencies to minimize alarms, logging out of Inmarsat-C terminals while at sea.

13B3 Which is true concerning a required watch on VHF Ch-16?

- A. When a vessel is in an A1 sea area and subject to the Bridge-to-Bridge act and in a VTS system, a watch is required on Ch-16 in addition to both Ch-13 and the VTS channel.
- B. It is not compulsory at all times while at sea until further notice, unless the vessel is in a VTS system.
- C. When a vessel is in an A1 sea area and subject to the Bridge-to-Bridge act and in a VTS system, a watch is not required on Ch-16 provided the vessel monitors both Ch-13 and the VTS channel.
- D. It is not always compulsory in sea areas A2, A3 and A4.

13B4 Which of the following statements meets requirements for 47 CFR 80 Subpart-W?

- A. GMDSS Radio Logs may not be retained aboard compulsory vessels in an electronic file (e.g., word processing) format.
- B. GMDSS Radio Logs must be retained aboard compulsory vessels for a period of at least 90 days in their original form.
- C. Entries in the GMDSS Radio Log are only required for communications within the vessel's intended Sea Area of operation.
- D. GMDSS Radio Logs must contain entries of all Distress and Urgency communications affecting your own ship.

13B5 How long must the radio log be retained on board before sending it to the shoreside licensee?

- A. At least 30 days after the last entry.
- B. At least one year after the last entry.
- C. At least two years after the last entry.
- D. At least 90 days after the last entry.

13B6 Which statement concerning radio log archival by the station licensee is false?

- A. Retain for two years if there are no Distress entries.
- B. Retain for one year unless there are Distress or Urgency entries.
- C. Logs related to an investigation may not be destroyed without specific authorization.
- D. Retain for three years if there are Distress entries.

Answers: 13B1 - A 13B2 - B 13B3 - C 13B4 - D 13B5 - A 13B6 - B

Section-C: DSC & Alpha-Numeric ID Systems: Key Topic #14: MMSI: MID and Ship I.D. Numbers:

14C1 What is the MID?

- A. Mobile Identification Number
- B. Marine Indemnity Directory
- C. Mobile Interference Digits
- D. Maritime Identification Digits

14C2 How many digits are in the MID (Maritime Identification Digits)?

- A. 3
- B. 7
- C. 9
- D. 10

14C3 What does the MID (Maritime Identification Digits) signify?

- A. Port of registry
- B. Nationality
- C. Gross tonnage
- D. Passenger vessel

14C4 Which of the following numbers indicates a U.S. flag ship station?

- A. 036627934
- B. 243537672
- C. 338426791
- D. 003382315

14C5 Which of the following MMSI numbers indicates a U.S. flag ship station?

- A. 430326890
- B. 033609991
- C. 303236824
- D. 257326819

14C6 Which of the following numbers indicates a ship station MMSI?

- A. 003372694
- B. 030356328
- C. 3384672
- D. 623944326

Answers: 14C1 - D 14C2 - A 14C3 - B 14C4 - C 14C5 - C 14C6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-C: DSC & Alpha-Numeric ID Systems: Key Topic #15: MMSI: Group & Coast Station I.D. Nrs:

15C1 A DSC call is received from a station with a MMSI number of 003669991. What type of station made the call?

- A. A vessel operating in Sea Area A3.
- B. A group ship station
- C. A U.S. coast station
- D. An Intercoastal vessel

15C2 A valid MMSI number for a DSC call to a specific group of vessels is:

- A. 003664523
- B. 338462941
- C. 003036483
- D. 030327931

15C3 A MMSI 030346239 indicates what?

- A. Group MMSI
- B. Inmarsat-C I.D. number
- C. Coast station
- D. Ship station

15C4 Which of the following statements concerning MMSI is true?

- A. Coast station MMSI numbers have 9 digits starting with 4.
- B. All MMSI numbers are 9 digits and contain an MID.
- C. Ship station MMSI numbers can be 7 digits or 9 digits depending on the Inmarsat terminal.
- D. Group MMSI numbers must begin with 2 zeros.

15C5 Which of the following statements concerning MMSI is false?

- A. All Coast Station MMSI must begin with 2 zeros.
- B. All Coast Station MMSI must begin with the MID then 2 zeros.
- C. A group call must begin with a single zero followed by the MID.
- D. The first 3 digits of a ship MMSI comprise the MID.

15C6 Which of the following statements concerning MMSI is true?

- A. All ship station MMSI must begin with a single zero and include the MID.
- B. All group station MMSI must begin with the MID.
- C. None of these answers are correct.
- D. All Coast Station MMSI must be 9 digits and begin with the MID and then two zeros.

Answers: 15C1 - C 15C2 - D 15C3 - A 15C4 - B 15C5 - B 15C6 - C

Section-C: DSC & Alpha-Numeric ID Systems: Key Topic #16: DSC Format and Information Sent:

16C1 When making a routine DSC call to another vessel what information should be included?

- A. Time of transmission.
- B. Proposed working channel.
- C. Your own vessel's position.
- D. Subject matter of the call.

16C2 A VHF "Distress Hot Key" alert will always include what information?

- A. The nature of Distress and vessel position.
- B. The vessel's current position, course and speed from the GPS.
- C. The vessel's programmed MMSI number and code for Distress priority.
- D. The follow-on frequency required for Distress voice communications.

16C3 When sending a DSC call:

- A. Vessel's position will automatically be sent with DSC calls specifying an alternate frequency.
- B. Vessel's MMSI will indicate its ocean region and vessel position.
- C. Vessel's MMSI and position will automatically be sent for all types of DSC calls.
- D. Vessel's position will automatically be sent if the vessel is sending a "Distress Hot Key" alert.

16C4 A "Distress Hot Key" VHF DSC Distress alert:

- A. Always goes out on the DSC frequency of Ch-70 to alert other stations.
- B. Must go out on Ch-16 and Ch-70 to indicate "MAYDAY" traffic will follow.
- C. Must go out on Ch-16 to alert the nearest vessels and coast stations of imminent "MAYDAY" traffic.
- D. May go out on Ch-70 or Ch-16 depending on the manufacturer.

16C5 Which statement is true regarding vessel position when sending a "Distress Hot Key" alert?

- A. The operator must choose to include the position.
- B. The vessel's position will always be correct if taken from the connected GPS.
- C. A connected GPS is always required to ensure the Distress position is accurate.
- D. The position will either be taken from the connected GPS or the updated manual position.

16C6 A "Distress Hot Key" alert will always include what information?

- A. Distress priority, vessel's position if available and the vessel's MMSI number.
- B. The vessel's current position, course and speed from the GPS.
- C. The vessel's MMSI number and category of Distress.
- D. Distress priority, frequency for voice Distress communications and vessel position.

Answers: 16C1 - B 16C2 - C 16C3 - D 16C4 - A 16C5 - D 16C6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-C: DSC & Alpha-Numeric ID Systems: Key Topic #17: DSC Operations:

17C1 A Ch-70 DSC Distress alert is received. What action should be taken?

- A. Silence the alarm, review the message and set up watch on Ch-16 to listen for Mayday communications.
- B. Silence the alarm and immediately call the master for further instructions.
- C. Review the incoming message information but take no action unless requested to do so by the RCC.
- D. Use DSC to immediately notify the vessel their Distress has been received.

17C2 Which of the following statements on DSC acknowledgement and relay of DSC Distress alerts is true?

- A. Operators cannot initiate acknowledgements or relays.
- B. Most equipment was designed to allow for DSC acknowledgements and ALL SHIPS DSC relays but this should only be done per current regulations.
- C. The equipment was designed to allow for DSC acknowledgements and relays and the operator should follow the software menu structure accordingly.
- D. DSC acknowledgements and relays are automatically transmitted by the unit to ensure the RCC receives the Distress.

17C3 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 situation.
- C. It will initiate the DSC Distress alert and default information will 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, position, and situation.

17C4 A DSC Distress alert is received. What action should be taken?

- A. Transmit a DSC acknowledgement.
- B. Call the nearest Coast Guard Station.
- C. No action is necessary.
- D. Advise the Master and monitor Ch-16.

17C5 What is the quickest method of transmitting a DSC Distress alert?

- A. Press the "Distress Hot Key".
- B. Make a "MAYDAY" call on Ch-70.
- C. Make a "MAYDAY" call on Ch-16.
- D. Select "Distress" priority from the menu.

17C6 DSC relays of Distress alerts by vessels:

- A. Should be done for all Distress alerts received aboard the ship.
- B. Should be avoided; unless an acknowledgement has not been heard.
- C. Should be transmitted to all ships involved in Distress traffic.
- D. Are the best means to provide for a retransmission of Distress communications.

Answers: 17C1 - A 17C2 - B 17C3 - C 17C4 - D 17C5 - A 17C6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-C: DSC & Alpha-Numeric ID Systems: Key Topic #18: Sending a Distress Alert:

18C1 A VHF-DSC "Distress Hot Key" alert always transmits what information if connected to GPS?

- A. Distress designation and follow on communications channel.
- B. A "Nature of Distress" category and Distress priority specifier code.
- C. Position, UTC time of position update and Ch-70 for voice follow-on.
- D. Position, time of position update, MMSI number programmed and Distress priority specifier.

18C2 Which of the following statements is true regarding Distress alerting under GMDSS?

- A. The Distress alert must identify the station in Distress and its position and may additionally include information regarding the nature of the Distress.
- B. Ship to shore Distress alerts are used to alert other ships in port of navigational hazards.
- C. Ship-to-ship Distress alerts are used to alert other ships in the vicinity of navigational hazards and bad weather.
- D. The vessel nearest to the emergency must notify the Coast Guard before leaving the vicinity.

18C3 If a GMDSS Radio Operator initiates a DSC Distress transmission but does not insert a message, what happens?

- A. The transmission is aborted and an alarm sounds to indicate this data must be provided by the operator.
- B. The transmission will be made with "default" information provided automatically.
- C. The transmission is not initiated and "ERROR" is indicated on the display readout.
- D. The receiving station will poll the DSC unit of the vessel in Distress to download the necessary information.

18C4 Repetition of a DSC Distress call is normally automatic if not acknowledged after a delay of:

- A. 2 - 5 minutes
- B. 10-15 minutes
- C. 3.5 - 4.5 minutes
- D. 1 - 2 minutes

18C5 A VHF-DSC Distress alert call:

- A. Using the "Distress Button" or "Distress Hot Key" ensures that all information pertinent to a Distress will be transmitted.
- B. Contains information on the vessel's course and speed.
- C. Can include the nature of the distress if time permits and operator selects it
- D. Will always contain accurate positions from GPS units and correct MMSI numbers.

18C6 A VHF-DSC Distress alert will always be transmitted on what channel?

- A. Ch-16
- B. Ch-22A
- C. Ch-6
- D. Ch-70

Answers: 18C1 - D 18C2 - A 18C3 - B 18C4 - C 18C5 - C 18C6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #19: Follow-on Voice Transmission:

19D1 If a VHF-DSC Distress alert is transmitted what channel is used for follow-on voice transmission?

- A. Ch-12
- B. Ch-70
- C. Ch-16
- D. Ch-13

19D2 Why should you always follow on with a voice transmission after sending a DSC Distress alert?

- A. A voice follow on transmission is always necessary in a genuine Distress.
- B. To provide more information than is contained in the DSC message.
- C. To confirm for coast stations and other mariners that the Distress is genuine.
- D. All of these answers are correct.

19D3 You receive a VHF-DSC Distress alert. What Channel should you monitor for further information?

- A. Ch-16
- B. Ch-06
- C. Ch-22A
- D. Ch-70

19D4 What is the proper format for a Distress follow on voice transmission? (3x is three times),

- A. All Ships 3x, this is Ship's Name/Call Sign 3x, Ship's position, nature of distress and assistance requested.
- B. Mayday 3x, this is Ship's Name/Call Sign 3x, Ship's position, nature of distress and assistance requested.
- C. Mayday 3x, this is Ship's Name/Call Sign once, Ship's position, nature of distress and assistance requested.
- D. All Stations 3x, this is Ship's Name/Call Sign 3x, Ship's position, nature of distress and assistance requested.

19D5 What information should be included in a Distress follow on voice transmission after a DSC Alert?

- A. Ship's Name and Call Sign, MMSI number, DSC frequency used and any other information that might facilitate rescue.
- B. Ship's Name and Call Sign, MMSI number & position, the nature of distress and assistance requested.
- C. Ship's position, Ship's IMN, the nature of distress and assistance requested.
- D. Ship's Name and Call sign, repeat IMN, provide any other information that might facilitate rescue.

19D6 What information is not vital in a Distress follow on voice transmission after a DSC Alert?

- A. Ship's position, nature of distress and assistance requested.
- B. Ship's Name, Call Sign and MMSI number.
- C. Company emergency contact information.
- D. Physical description of the vessel and number of POB.

Answers: 19D1 - C 19D2 - D 19D3 - A 19D4 - B 19D5 - B 19D6 - C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #20: Response to a Distress Alert:

20D1 Which statement is true regarding the receipt and acknowledgement of Distress alerts by ship stations?

- A. Ship stations in receipt of a Distress alert should acknowledge it immediately to assist the coast station in responding to the Distress alert.
- B. A ship station that receives a Distress alert must, as soon as possible, inform the Master or person responsible for the ship of the contents of the Distress alert.
- C. Ship stations that receive a Distress alert from a vessel in their vicinity must immediately send a DSC relay to inform the RCC.
- D. Alerts concerning navigational hazards are second only to Safety traffic.

20D2 What is meant by the acronym "EOS" in a DSC message?

- A. Error Of Sequence
- B. End Of Signals
- C. End Of Sequence
- D. Equal Operating Signals

20D3 What is the proper procedure to be followed upon receipt of a Distress alert transmitted by use of Digital Selective Calling techniques?

- A. Set watch on the DSC alerting frequency in the band of frequencies the alert was received.
- B. Set a continuous watch on VHF-FM Channel 13, 16 and DSC on Channel 70.
- C. Ship stations equipped with narrow-band direct-printing equipment should respond to the Distress alert as soon as practicable by this means.
- D. Set watch on the radiotelephone Distress and Safety frequency associated with the Distress and Safety calling frequency on which the Distress alert was received.

20D4 What is meant by the acronym "ECC" in a DSC message?

- A. Error Check Character
- B. Every Cipher Counted
- C. Error Cannot Confirm
- D. Even Characters Counted

20D5 What action should be taken on receipt of a VHF Distress alert?

- A. Read the display screen and/or printout and call the Master to verify if the Distress is genuine.
- B. Silence the alarm, examine the display screen and acknowledge the DSC alert via DSC.
- C. Silence the alarm and listen for any follow on voice transmission on Ch-70 .
- D. Silence the alarm and set up watch on Ch-16 to determine if the Distress is genuine.

20D6 What precautions should be taken when viewing an incoming DSC Distress alert message?

- A. Be careful not to activate a DSC acknowledgement or relay.
- B. If the message is not clear make a DSC call to all ships requesting clarification.
- C. No precautions are necessary – the unit will auto-acknowledge an incoming DSC Distress alert.
- D. If there are errors in the call the unit didn't auto-acknowledge via DSC and the watch officer must do so instead.

Answers: 20D1 - B 20D2 - C 20D3 - D 20D4 - A 20D5 - D 20D6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #21: Distress Relays:

21D1 A DSC Distress Relay should always be made under the following circumstances:

- A. When a DSC response to a Distress alert from a Coast/Ship Station hasn't been received and the Master approves.
- B. When the MMSI of the vessel in Distress cannot be determined.
- C. After there is an acknowledgement from a coast station.
- D. DSC Distress Relays do not need to be made if your vessel is too far away to assist.

21D2 Your ship received a Distress relay from a coast station on DSC VHF channel 70. What action should the watch officer take?

- A. Retransmit the DSC call on Ch-70 to other vessels in the vicinity.
- B. Monitor Ch-16 to determine if there are any genuine Distress communications.
- C. Monitor Ch-06 to determine if there are any genuine Distress communications.
- D. Transmit a voice "Mayday Relay" call on Ch-13.

21D3 Under what condition would you not 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 of the alert is observed.
- C. A coast station DSC acknowledgment of the original Distress alert was received by your vessel.
- D. No distress traffic has been heard and the DSC alert is unacknowledged via DSC.

21D4 The relay of DSC Distress alerts:

- A. Was not originally an intended function of the GMDSS system but now is the preferred method to notify an RCC.
- B. Remains the preferred method for passing Distress message traffic to an RCC or Coast Station.
- C. Should always be done immediately to ensure a Coast Station receives the DSC Distress Alert.
- D. Can quickly overburden the GMDSS systems in the vicinity with improperly transmitted or inappropriately relayed DSC calls.

21D5 Transmission of a Distress alert by a station on behalf of another vessel actually in Distress should not occur:

- A. When communications between the Distress vessel and a Coast station are already in progress.
- B. When the mobile unit actually in Distress is not itself in a position to transmit the Distress alert.
- C. When the Master or responsible person on the mobile unit not in Distress so decides.
- D. When the responsible person at the Coast Station determines further help is necessary.

21D6 You are in voice communication on Ch-16 with a vessel in Distress that advises you they are unable to contact a Coast Station. What action would you take?

- A. Send a DSC Distress Relay transmission on Ch-16.
- B. Attempt to contact a Coast Station using voice on Ch-16 with a Mayday Relay.
- C. Make an all ships call with Urgency priority.
- D. Call the Coast Station on Ch-70 with Distress priority giving the other vessel's position.

Answers: 21D1 - A 21D2 - B 21D3 - C 21D4 - D 21D5 - A 21D6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #22: False Distress Alert Action:

22D1 What action should you take after sending a false Distress alert on VHF?

- A. Send a DSC cancellation message on Ch-70.
- B. Make a voice announcement to cancel the alert on Ch-13.
- C. Make a voice announcement to cancel the alert on Ch-22A.
- D. Make a voice announcement to cancel the alert on Ch-16.

22D2 A crewmember has accidentally transmitted a VHF-DSC Distress alert. What action should be taken?

- A. Stop the radio from repeating the alert then make an all stations call on Ch-16 canceling the inadvertent alert.
- B. Send a DSC call canceling the Distress alert.
- C. No specific action is necessary.
- D. Turn off the power and make a voice announcement to cancel the alert on Ch-70.

22D3 What action is not applicable in preventing transmissions of false Distress alerts?

- A. Proper watch officer instruction and training.
- B. Disabling the unit's ability to perform DSC Relays & acknowledgments.
- C. Ensure that the protective cover over the "Distress Hot Key" is secure.
- D. Ensure that all officers read the operating manuals and are familiar with the menus.

22D4 The EPIRB on the bridge wing is observed with the strobe light flashing and the control switch in the "ON" position. What action(s) should be taken?

- A. Disabling the EPIRB is all that is necessary.
- B. Contact the nearest USCG Coast Station and request that they send the alert reset signal.
- C. Contact the nearest coast station or RCC to cancel the distress alert and subsequently disable the EPIRB.
- D. Disable the EPIRB and wait for the USCG to advise that the transmission has stopped.

22D5 You have been monitoring your 3-cm radar screen and a series of 12 concentric circles suddenly appears centered on the screen. What is the most likely cause of this situation?

- A. There is a survival craft within 3 nm distance.
- B. There is a fault in the radar.
- C. Your own vessel's SART has been activated.
- D. Your own vessel's EPIRB homing beacon has been activated.

22D6 The EPIRB on the bridge wing is observed with the strobe light flashing and the control switch in the "OFF" position. What action should be taken?

- A. Place the control switch in the "OFF" position.
- B. No action is needed – the strobe light indicates the automatic monthly self test is in progress.
- C. Wait for the USCG or NOAA to confirm that the unit is actually transmitting.
- D. Assume the unit is transmitting and follow the recommended procedures to properly cancel a false distress alert being broadcast from an EPIRB.

Answers: 22D1 - D 22D2 - A 22D3 - B 22D4 - C 22D5 - C 22D6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #23: Radio Silence & Resumption of Traffic:

23D1 What is the fundamental purpose for imposing radio silence?

- A. To ensure that interference to proprietary communications is minimized.
- B. To ensure that only voice communications can be effected on the Distress frequency or channel.
- C. To mitigate the risk of interference on a frequency or channel being used for emergency communications.
- D. To ensure that a Distressed vessel will have a "window" twice each hour for transmitting routine messages.

23D2 When can routine communications be resumed when radio silence has been imposed?

- A. After determining that the frequency or channel appears to be no longer in use.
- B. After determining that geographic distance from the Distress situation will prohibit any other signal from interfering with emergency communications.
- C. If, in the master's opinion, communications on that frequency will interfere with emergency communications.
- D. Routine communications can resume after the Rescue Coordination Center transmits a message on the frequency or channel being used for emergency communications stating that such traffic has concluded.

23D3 What is meant by the term "Seelonce Mayday"?

- A. Stations not directly involved with the on-going Distress communications may not transmit on the Distress frequency or channel.
- B. Stations remaining off the air to safeguard proprietary information.
- C. Two three-minute silent periods, at 15 and 45 minutes after the hour, that provide a transmitting "window" for distressed vessels to transmit Distress alerts using J3E.
- D. Communications on a Distress frequency or channel is banned for 24 hours following the cessation of the Distress traffic.

23D4 How is "radio silence" imposed?

- A. By the Land Earth Station (LES) controlling the Distress communications on that frequency.
- B. By the On Scene Coordinator (OSC) or the RCC chosen by the SAR Mission Coordinator.
- C. By the nearest Public Correspondence Coast Station.
- D. By the vessel first responding to the Distress call.

23D5 What is the reason for imposing radio silence?

- A. To keep a clear channel open for Safety broadcasts.
- B. To prevent interference to Distress communications.
- C. To allow individual vessels to carry out direct communications.
- D. To listen periodically for other vessels sending Distress alerts on Ch-70.

23D6 How are normal working conditions restored after radio silence has been imposed?

- A. All of these answers are correct.
- B. The Land Earth Station (LES) that imposed the radio silence must transmit a voice message on the Distress frequency stating "SILENCE FINI".
- C. The Rescue Coordination Center (RCC) that imposed the radio silence must transmit a voice message on the Distress frequency stating "SEELONCE FEENEE".
- D. The Public Correspondence Station (PCS) that imposed the radio silence must transmit a voice message on the Distress frequency stating "SILENCE FINI".

Answers: 23D1 - C 23D2 - D 23D3 - A 23D4 - B 23D5 - B 23D6 - C

Section-D: Distress, Urgency & Safety Comms: Key Topic #24: Urgency Traffic:

24D1 The Radiotelephone Urgency signal is:

- A. Mayday
- B. Pan Pan
- C. Securite
- D. Seelonce Feenee

24D2 Which of the following situations would normally use the Urgency priority?

- A. A crewmember falling over the side.
- B. A serious medical situation involving a crewmember with potential loss of life.
- C. A cargo shift or weather situation considered to be of greater hazard than would justify a Safety priority designation.
- D. An important meteorological warning concerning hazardous weather.

24D3 Which of the following situations would not properly use the Urgency priority?

- A. Treatment of a crewmember breaking a leg in a cargo hold.
- B. Leaking oil from a minor tank fracture requiring a mandatory pollution report.
- C. An unexpected deviation in the forecast track line of a typhoon.
- D. Abandoning the vessel just before sinking.

24D4 Which of the following situations would normally use the Urgency priority?

- A. A serious medical situation involving a crewmember.
- B. A collision with the ship taking on water.
- C. Important company communications related to an itinerary change.
- D. Scenarios concerning the Safety of navigation or important meteorological warnings.

24D5 The Urgency Priority should be used for:

- A. Messages concerning the Safety of Life At Sea (SOLAS).
- B. Messages detailing important navigational warnings.
- C. Messages concerning On-scene communications.
- D. Messages containing information concerning the Safety of a mobile unit or person.

24D6 If the Watch Officer hears "PAN PAN" spoken 3 times it means:

- A. None of these answers is correct.
- B. A navigation or important meteorological warning should follow.
- C. The station is preparing to transmit a Safety message possibly concerning the safety of a mobile unit or person.
- D. A mobile unit is in need of immediate assistance.

Answers: 24D1 - B 24D2 - C 24D3 - D 24D4 - A 24D5 - D 24D6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #25: Safety Traffic:

25D1 When the GMDSS Radio Operator on watch hears "Securite" spoken three times, he can expect to receive the following information:

- A. A message concerning the Safety of navigation.
- B. The safety of vessel or person is in jeopardy.
- C. A vessel is in need of immediate assistance.
- D. A Coast Station sending an important traffic list.

25D2 Which of the following situations would normally use the Voice designation "Securite"?

- A. Messages concerning the Safety of Life At Sea (SOLAS).
- B. Messages detailing important navigational warnings.
- C. Messages containing information concerning the Safety of a mobile unit or person.
- D. Messages concerning On-scene communications.

25D3 Which of the following situations would normally use the Safety priority?

- A. Treatment of a crewmember with a broken leg that is not life-threatening.
- B. Treatment of a crewmember with a serious cardiac emergency.
- C. Loss of 5 containers with lashing gear over the side.
- D. A fire in the generator flat/spaces.

25D4 Which of the following situations would normally use the Safety priority?

- A. A serious medical situation involving a crewmember.
- B. An unanticipated warning related to piracy or terrorism.
- C. Grounding in a way that could lead to imminent danger to the ship ' s crew.
- D. Important navigational or meteorological warnings.

25D5 The Radiotelephone Safety signal is:

- A. "Securite" repeated 3 times
- B. "Safety Safety Safety"
- C. "Pan Pan" repeated 3 times
- D. "Securite Securite" repeated 3 times

25D6 Which of the following situations would normally use the Safety priority?

- A. A serious medical situation involving a crewmember.
- B. A scenario concerning an important navigational or meteorological warning.
- C. A crewmember falling over the side.
- D. Important company communications involving weather routing.

Answers: 25D1 - A 25D2 - B 25D3 - C 25D4 - D 25D5 - A 25D6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-D: Distress, Urgency & Safety Comms: Key Topic #26: Other Procedures:

26D1 Which of the following steps should be taken, if possible, when the vessel must be abandoned because of a Distress situation?

- A. Alert the U.S. Coast Guard by using the survival craft's portable Inmarsat unit.
- B. Program the SART and EPIRB to transmit the vessel's location and situation.
- C. No additional steps are needed as the SART and EPIRB will both automatically float free and operate properly.
- D. Secure the EPIRB to the survival craft and mount the SART in a position to maximize its elevation.

26D2 If your vessel has suffered a casualty severe enough to disable both ship's power and the GMDSS console RSE you should:

- A. Activate the EPIRB and/or use the SCT to make a "Mayday" call on Ch-16.
- B. Use UHF Transceivers to contact other vessels.
- C. Activate the EPIRB and/or use the SCT to make a "Mayday" call on Ch-70.
- D. Make a "Mayday" call on Ch-70 and Ch-06 using the Survival Craft Transceiver.

26D3 DSC is used primarily to:

- A. Receive weather warnings, navigational notices and other Maritime Safety Information.
- B. Transmit and receive Distress, Urgency and Safety alerts and routine calls to and from other ships and coast radio stations.
- C. Provide routine communications with the ship owner.
- D. Report ship's position to search-and-rescue authorities via satellite.

26D4 The vessel's GMDSS operator fails to properly record the particulars of an incoming DSC Distress alert. Which statement is true?

- A. The details of the DSC alert are obtainable from the DSC address book.
- b. The details of the DSC Distress alert are irrevocably lost.
- C. The details of the DSC alert should be obtainable by accessing the DSC call data directory.
- D. The details of the DSC Distress alert are never stored for later review.

26D5 What action(s) should be taken when abandoning ship?

- A. Send a VHF-DSC Distress alert on Ch-16 before going to the boats.
- B. Activate the EPIRB and leave it secured to the mounting bracket.
- C. Take EPIRB, SART and SCT units to the survival craft and use as circumstances dictate.
- D. Once in the survival craft – activate the EPIRB and send a VHF-DSC Distress alert on Ch-16

26D6 What is the best method of determining whether a Distress situation is genuine?

- A. Check your 3-cm radar for a SART signal from the Distress vessel.
- B. Monitor the 406 MHz EPIRB signal to locate the vessel in Distress.
- C. Check the NAVTEX for U.S.C.G. confirmation of the Distress from the RCC.
- D. Monitor the follow on frequency for actual voice Distress communications.

Answers: 26D1 - D 26D2 - A 26D3 - B 26D4 - C 26D5 - C 26D6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic #27: SART: Activation & Survival Craft Operations:

27E1 What indication is given to the personnel in a survival craft of the approach of SAR craft?

- A. The Satellite EPIRB will change its strobe light pattern to indicate radar interrogation.
- B. The SART informs survivors when the SART switches to the "standby" mode.
- C. The SART may provide a visual or audible indication of interrogation by a 3-cm radar.
- D. The AIS SART will alarm to indicate that SAR craft with radars are getting close.

27E2 Which of the following would most likely not prevent a SART's signal from being detected?

- A. The rescue personnel were monitoring the 3-CM radar and the SART was mounted improperly in the lifeboat.
- B. The SART was mounted improperly in the survival craft and rescue personnel were monitoring the 10-CM radar.
- C. The rescue personnel were monitoring the 10-CM radar and the SART was properly mounted in the lifeboat.
- D. The SART was properly mounted in the lifeboat and rescue personnel were monitoring the 3-CM radar.

27E3 How can a SART's detection and effective range be maximized?

- A. The SART should be held or mounted as high as possible and in a vertical position.
- B. The SART should be placed in water immediately so it will begin transmitting.
- 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.

27E4 Which statement is NOT true regarding the SART?

- A. Responds to interrogations by a vessel's X-Band radar and transmits a signal.
- B. This is a 6 GHz transponder capable of being received by a vessel's X-band navigational radar system.
- C. This is a 9 GHz transponder capable of being received by a vessel's X-band navigational radar system.
- D. Transmits a distinctive 12-blip signal for easy recognition.

27E5 At what point does a SART begin transmitting?

- A. It immediately begins radiating when placed in the "on" position.
- B. If it has been placed in the "on" position, it will respond when it has been interrogated by a 9-GHz radar signal.
- C. It must be manually activated or water activated before radiating.
- D. If it has been placed in the "on" position, it will begin transmitting immediately upon detecting that it is in water.

27E6 A SART's signal cannot be detected:

- A. In poor visibility, or at night.
- B. In heavy seas.
- C. By a search vessel's 10 cm Radar.
- D. By a search vessel's 3 cm Radar.

Answers: 27E1 - C 27E2 - D 27E3 - A 27E4 - B 27E5 - B 27E6 - C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic #28: SART – Radar Display – SAR – AIS SART:

28E1 How does the searching vessel's radar interrogate a survival craft SART?

- A. Activate the IFF interrogation system.
- B. The SART responds automatically and transmits the 12-blip signal when it detects the search craft or other vessels' X-Band radar signal.
- C. Maintains watch on VHF-FM Ch-70 for the SART's unique identifier.
- D. The SART responds automatically when it detects the search craft or other vessel's 10-cm radar signal.

28E2 What radar display changes indicate the correct approach to a SART and what care should be taken in a SAR situation?

- A. The line of dots indicate the SART's position, the dots become increasing arcs as the distance to the SART lessens, rescuing vessels should increase speed to reach Distress more quickly.
- B. A line of dots on a radar screen rotates to indicate the SART's position along its line of bearing; rescuing vessels should steer for the center of the line of dots.
- C. The line of dots indicate the SART's position, the dots become increasing arcs as the distance to the SART lessens, rescuing vessels should reduce speed as the arcs get greater in degree.
- D. The line of dots indicate the SART's position, the dots become decreasing arcs as the distance to the SART lessens, rescuing vessels should reduce speed as the arcs lessen in degree.

28E3 How can rescue personnel detect that a SART is transmitting in the immediate vicinity?

- A. The DSC unit will react to the SART's signal and respond with the two-tone auto alarm.
- B. The SART can provide an approximate location to within a two nautical mile radius, per IMO standards.
- C. The SART signal appears as a target which comes and goes; the effect of heavy swells on a SART.
- D. The SART's dots on the PPI will become arcs and then eventually become concentric circles.

28E4 What signal is detected as originating from an AIS SART and how is the signal displayed?

- A. An AIS SART signal is shown on any AIS receiver as a special MMSI-like coded symbol.
- B. The 3-cm radar reflections are converted to AIS signals and displayed on ECDIS/ARPA screens.
- C. An AIS SART transmits on AIS frequencies and the signals are converted to 3-cm radar targets for display on 3-cm radars.
- D. An AIS SART transmits on 9 GHz so that a 3-cm radar can display the signals.

28E5 How can vessel personnel detect the operation of a SART in its vicinity?

- A. A unique two-tone "warbling" signal heard on VHF-FM Ch-70.
- B. It will activate an AIS new signal alarm on the AIS receiver.
- C. The SART signal appears as a target that comes and goes--due to the effect of heavy swells on a SART.
- D. A unique 3-cm signal consisting of a 12 dot pattern radiating outward from a SART's position along its line of bearing.

28E6 What is not an advantage of an AIS SART signal when compared to a radar-based SART signal?

- A. The AIS SART can be detected much farther away than radar SART models.
- B. Not every AIS transmission needs to be received to achieve an accurate presentation of the location.
- C. The AIS SART position has GPS accuracy and transmits on AIS VHF frequencies.
- D. AIS SART units may be easier to find in poor radar target conditions.

Answers: 28E1 - B 28E2 - C 28E3 - D 28E4 - A 28E5 - D 28E6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic #29: SART: Testing and Battery Parameters:

29E1 Which of the following statements concerning testing and maintenance of SARTs is true?

- A. Testing a SART should be done in a consistent manner & location to ensure a baseline history of proper results.
- B. Testing of the SART should never be done in port to prevent interference to other vessel's radars.
- C. A SART's battery must be replaced within ninety (90) days after the expiration date imprinted on the unit.
- D. An at-sea GMDSS maintainer is not able to test a SART because it is hermetically sealed.

29E2 Why is it important to limit the duration of testing a SART?

- A. Excessive testing causes "burn in" on the vessel's radar display.
- B. Testing in port or even at sea may cause interference to other radars or a test signal may be misinterpreted as a genuine Distress situation.
- C. To prevent overheating, a SART requires sufficient ventilation that is significantly reduced when the SART is being tested.
- D. If another SART is testing at the same time, the two signals will cause damage to the unit that transmitted them.

29E3 What statement is true regarding tests and maintenance that could be provided for the SART?

- A. Full verification within manufacturer's specifications by the on-board maintainer would be a requirement for all vessels in the A3 & A4 sea areas using measuring equipment to generate 9 GHz signals.
- B. Battery should be replaced within the 90 day grace period following the manufacturer's expiration date shown on the SART and the SART should only be tested at-sea to reduce interference to other vessels.
- C. Extreme care should be exercised because testing of the SART may be received by other vessels, may be interpreted as a Distress condition, or it may interfere with other vessels' safe navigation.
- D. Battery should be replaced with a new one before the manufacturer's expiration date shown on the SART and the SART should only be tested in port to reduce interference to other vessels.

29E4 Why should functional testing of a SART be minimized?

- A. Potential interference with safe navigation, notifying other vessels of an actual Distress and minimize power consumption.
- B. Minimize power consumption of the battery and only test at sea to reduce potential interference or confusion.
- C. Possibility of misinterpretation by other vessels as a Distress situation and only test in port to prevent potential interference with safe navigation or at-sea vessels.
- D. Potential interference with safe navigation, possible misinterpretation of an actual Distress, minimizes draining the battery.

29E5 Which is NOT a valid maintenance and testing function for a SART?

- A. Operational test with several vessels to determine effective transmitting range.
- B. Inspection of container for apparent damage.
- C. Inspect battery expiration date and the lanyard condition.
- D. Brief operational test utilizing own ship's radar.

29E6 The SART is required to have sufficient battery capacity to operate in the stand-by mode for what period of time?

- A. Three days
- B. Four days
- C. Eight hours
- D. Forty-eight hours

Answers: 29E1 - A 29E2 - B 29E3 - C 29E4 - D 29E5 - A 29E6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic #30: EPIRB System Structure and Operation:

30E1 Which is not 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 and the EPIRB's position is calculated.
- C. Information received from EPIRBs is time-tagged and transmitted to any Local User Terminal in the satellite's view.
- D. After the EPIRB's position is calculated using the Doppler shift COSPAS-SARSAT satellites provide follow-on SAR communications.

30E2 Which of the following satellite systems is of particular & dedicated importance to search and rescue missions under GMDSS?

- A. COSPAS/SARSAT
- B. Inmarsat
- C. GPS
- D. Iridium

30E3 Which of the following statements concerning COSPAS-SARSAT is false?

- A. 406 MHz EPIRBs are units that are used as alerting devices.
- B. Doppler frequency measurements provide more precise locations than GPIRB signals.
- C. The Doppler frequency measurement concept is used to determine the EPIRB's location.
- D. Satellites in a low-earth polar orbit detect EPIRB beacons on 406 MHz and relay the information to a Local User Terminal (LUT).

30E4 Which of the following statements concerning COSPAS-SARSAT is false?

- A. EPIRBs, ELTs, and PLBs use the system primarily for Distress alerting.
- B. These satellites monitor 406 MHz for EPIRB signals.
- C. After initiating a call request and selecting the LES, these satellites may be used for commercial messages.
- D. These satellites use Doppler shift measurement to determine the location of the beacons.

30E5 Which of the following statements concerning the EPIRB system is true?

- A. GOES weather satellites will provide alerting with complete worldwide coverage.
- B. COSPAS-SARSAT satellites always provides an alert and position report within 10 minutes of reception.
- C. The Inmarsat system will not provide alerts and position report for 406 MHz EPIRBs equipped with GPS receivers.
- D. The GPS satellite system will relay an alert and position report within 20 minutes of reception.

30E6 Which of the following statements concerning satellite EPIRBs is true?

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

Answers: 30E1 - D 30E2 - A 30E3 - B 30E4 - C 30E5 - C 30E6 - D

Section-E: Survival Craft Equip & S.A.R.: Key Topic #31: EPIRB Alerting and Features:

31E1 What features may be found on GMDSS satellite EPIRB units?

- A. Strobe light, Distress homing transmission on 406 MHz, float-free release bracket.
- B. Emergency transmission on 406 MHz, hydrostatic release, AIS homing frequency.
- C. Float-free release bracket, strobe light & Distress alert transmission on 406 MHz.
- D. Hydrostatic release, Distress alert transmission on 121.5 MHz, strobe light.

31E2 What feature is not a component of a 406 MHz satellite EPIRB?

- A. 121.5 MHz emergency homing transmitter.
- B. Emergency transmission on 406.025 MHz.
- C. Float-free release bracket.
- D. Aural locator signal.

31E3 What statement is true regarding 406 MHz EPIRB transmissions?

- A. Transmits a unique hexadecimal identification number.
- B. Allows immediate voice communications with the RCC.
- C. Coding permits the SAR authorities to know if manually or automatically activated.
- D. GMDSS Radio Operator programs an I.D. into the SART immediately prior to activation.

31E4 Which of the following is normally part of 406 MHz satellite EPIRBs?

- A. A strobe light, automatic float-free bracket, 1-watt 406-MHz alert beacon.
- B. A 5-watt 406-MHz alert beacon, Automatic Hydrostatic Release (ARM), strobe light.
- C. Automatic float-free bracket, 5-watt 121.5 MHz homing beacon, strobe light.
- D. Automatic Hydrostatic Release (ARM), 1-watt 121.5 MHz alerting beacon, strobe light.

31E5 Which of the following statements concerning EPIRBs is false?

- A. The COSPAS-SARSAT system may take a full hour or more to provide an alert.
- B. The Inmarsat system provides worldwide coverage for Distress alerts.
- C. The GOES weather satellites are in a geostationary orbit.
- D. 406 MHz EPIRB units may be equipped with GPS receivers.

31E6 Which of the following EPIRBs is most likely to be used to transmit a Distress alert signal?

- A. S-Band EPIRBs
- B. X-Band EPIRBs
- C. 406 MHz EPIRBs
- D. 121.5/243 MHz EPIRBs

Answers: 31E1 - C 31E2 - D 31E3 - A 31E4 - B 31E5 - B 31E6 - C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic #32: Homing and Locating Signals:

32E1 Which of the following would best be used for visual detection of a distressed vessel?

- A. A 9-GHz SART's beacon.
- B. An EPIRB's strobe light.
- C. A 121.5-MHz EPIRB beacon.
- D. A 406-MHz EPIRB beacon.

32E2 Which piece of required GMDSS equipment is the primary source of transmitting locating signals?

- A. Radio Direction Finder (RDF).
- B. Survival Craft Transceiver.
- C. An EPIRB transmitting on 406 MHz.
- D. A SART transmitting on 406 MHz.

32E3 What may be used as a homing signal by the search and rescue vessels in the immediate vicinity of the ship in Distress?

- A. Flare gun
- B. Strobe Light
- C. 406 MHz signal from a satellite EPIRB.
- D. A 121.5 MHz emergency transmitter in a satellite EPIRB.

32E4 What part of a satellite EPIRB may function as a visual aid to rescue vessels?

- A. Strobe light
- B. A 121.5 MHz emergency transmitter in a satellite EPIRB.
- C. 406 MHz signal from a satellite EPIRB.
- D. Loud beeping tone emitted by the unit, once activated.

32E5 What is an example of a locating signal?

- A. SSB phone traffic
- B. Ship to shore transmissions
- C. Loran C
- D. A float-free EPIRB

32E6 Which device provides the best method to locate a ship in Distress or survival craft in the GMDSS?

- A. Satellite EPIRBs
- B. Radio Direction Finder
- C. MF/HF DSC
- D. VHF homing device

Answers: 32E1 - B 32E2 - C 32E3 - D 32E4 - A 32E5 - D 32E6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic #33: Survival Craft Transceivers:

33E1 With what other stations may portable survival craft transceivers not communicate?

- A. Communication between the ship and survival craft transceivers ashore.
- B. Communication between the ship and its survival craft.
- C. Communication between rescue units and survival craft.
- D. Communication between multiple survival craft and with aircraft.

33E2 Equipment for radiotelephony use in survival craft stations under GMDSS must have what capability?

- A. Operation on 457.525 MHz.
- B. Operation on Ch-16.
- C. Operation on 121.5 MHz.
- D. Operation on Ch-70.

33E3 Equipment for radiotelephony use in survival craft stations under GMDSS must have what characteristic(s)?

- A. Permanently-affixed antenna, watertight, power 1W or 25W.
- B. Watertight, power a minimum of 1W, operation on CH-16, Ch-13 & Ch-70.
- C. Operation on Ch-16, watertight, permanently-affixed antenna.
- D. Operation on Ch-16, Ch-13 & Ch-70, power 1W, permanently-affixed antenna.

33E4 Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?

- A. Operation on Ch-16
- B. Antenna must be permanently-affixed.
- C. Simplex (single frequency) voice communications only.
- D. Effective radiated power should be a minimum of 2.0 Watts.

33E5 Which statement is NOT true regarding the requirements of VHF Survival Craft Transceivers?

- A. Operation on Ch-13 is mandatory.
- B. Effective radiated power should be a minimum of 0.25 Watts.
- C. Simplex (single frequency) voice communications only.
- D. Operation on Ch-16 is mandatory.

33E6 Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?

- A. Watertight to a depth of 1 meter for 5 minutes.
- B. Operates simplex on Ch-70 and at least one other channel.
- C. Effective radiated power should be a minimum of 0.25 Watts.
- D. The antenna is fixed and non-removable.

Answers: 33E1 - A 33E2 - B 33E3 - C 33E4 - D 33E5 - A 33E6 - B

Section-E: Survival Craft Equip & S.A.R.: Key Topic #34: On Scene Communications:

34E1 The "On Scene Coordinator" may be which of the following?

- A. The vessel in Distress will always be the "On Scene Coordinator" for itself.
- B. The first search vessel to arrive on the scene is always designated as the OSC.
- C. Only shore authorities, Coast Station or RCC's can be the "On Scene Coordinator."
- D. Any involved vessel so designated by the Search and Rescue Mission Coordinator.

34E2 Which of the following channels is designated as the VHF follow-on communications channel and is required in all portable survival craft equipment?

- A. Ch-16
- B. Ch-6
- C. Ch-13
- D. Ch-70

34E3 The determination that the Distress traffic is over is usually made by whom?

- A. The vessel in Distress.
- B. The "On Scene Coordinator" and/or the RCC controlling the Distress traffic.
- C. The first Coast Station to receive the DSC Distress alert.
- D. Other vessels after nothing has been heard for some time.

34E4 On Scene communications are usually initiated using what equipment?

- A. EPIRB on 121.5 MHz
- B. SART on 9 GHz
- C. VHF on Ch-16
- D. VHF on Ch-70

34E5 On Scene communications should be conducted on which of the following channels?

- A. 406 MHz
- B. VHF Ch-22A
- C. VHF Ch-16/06
- D. VHF Ch-70

34E6 Passenger vessel "On Scene" communications should be conducted with aircraft on which of the following channels or frequencies?

- A. 9 GHz
- B. VHF Ch-13
- C. VHF Ch-26
- D. VHF 121.5 MHz

Answers: 34E1 - D 34E2 - A 34E3 - B 34E4 - C 34E5 - C 34E6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic 35: SAR-MCC-RCC: Systems & Procedures-1:

35E1 Which action should the GMDSS radio operator take in a Distress situation when embarking in survival craft?

- A. EPIRB and SART switched on manually prior to embarking; remain aboard vessel in Distress.
- B. Notify RCC (Rescue Coordination Center) through VHF DSC in portable equipment.
- C. Switch on EPIRB and SART immediately and leave on.
- D. Communicate via Inmarsat-C from the survival craft.

35E2 Which of these would be vital to a GMDSS SAR situation in polar regions?

- A. GOES satellites to receive Distress Alerts and HF Voice for follow-on and SAR activity.
- B. GOES satellites to receive Distress Alerts and Inmarsat Voice for follow-on and SAR activity.
- C. Inmarsat satellites to receive Distress Alerts and HF Voice for follow-on and SAR activity.
- D. COSPAS/SARSAT satellites to receive Distress Alerts and VHF-HF Voice for follow-on and SAR activity.

35E3 Which statement is NOT true regarding the COSPAS-SARSAT system?

- A. The position of the EPIRB is always transmitted in the outgoing transmission (unless the unit is a GPIRB).
- B. Signals received by low altitude, near-polar orbiting satellites are relayed to a ground receiving station (LUT).
- C. Doppler shift is used to locate the position of the EPIRB.
- D. EPIRBs are satellite beacons used as alerting & homing devices.

35E4 Which statement is NOT true regarding the COSPAS-SARSAT system?

- A. EPIRBs are satellite beacons used as alerting/locating devices.
- B. May be used to transmit public correspondence.
- C. Locates Distress beacons transmitting on 406 MHz.
- D. Doppler shift is used to locate the beacons.

35E5 What information is transmitted by a 406 MHz EPIRB alert?

- A. Vessel position and nature of Distress.
- B. A unique Hexadecimal I.D. number.
- C. Vessel name and identification.
- D. Vessel MMSI number and position.

35E6 Which statement is false regarding the COSPAS-SARSAT system and EPIRB operations?

- A. The EPIRB's position is calculated by the system and passed to the MCC.
- B. The EPIRB transmits a unique Hex I.D. and vessel position that may be passed to the RCC.
- C. The EPIRB's position and Hex I.D. is passed instantaneously to the RCC.
- D. The EPIRB transmits a unique Hex I.D. that is passed to the RCC if it cannot be determined to be inadvertent by the MCC.

Answers: 35E1 - C 35E2 - D 35E3 - A 35E4 - B 35E5 - B 35E6 - C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-E: Survival Craft Equip & S.A.R.: Key Topic 36: SAR-MCC-RCC: Systems & Procedures-2:

36E1 What actions should the GMDSS radio operator take prior to any potential Distress situation?

- A. Create a table or chart of all the DSC coast stations that might be used during the vessel's itinerary.
- B. All of these answers are good operational practice and should be consistently done.
- C. Prepare a detailed Distress message file on both satellite & MF-HF SITOR (NBDP) equipment containing all information needed in a Distress so it will be available for last-minute editing.
- D. Ensure all LES choices are correct and then updated properly as the vessel transits different SAR jurisdictions.

36E2 What information should be contained in a detailed Distress message that was not transmitted by an initial Distress "hot-key" alert?

- A. Vessel position, course & speed and the nature of Distress.
- B. The distress vessel's IMN and position at the time of alert.
- C. Vessel name & call sign, POB and all potential means to communicate with the vessel.
- D. Vessel name & call sign, distress vessel's IMN & vessel position.

36E3 Which GMDSS equipment is best suited to simultaneous long-range communications with an RCC/coast station and OSC vessels or SAR aircraft?

- A. MF-HF SITOR (NBDP) transmitters using telex follow on frequencies.
- B. Inmarsat Signals routed via the RCC to the SAR vessels & aircraft under their control.
- C. VHF transmitters to reach SAR aircraft and OSC vessels as well as the RCC/coast station.
- D. MF-HF SSB transmitters using voice follow-on frequencies.

36E4 Which statement is NOT true regarding an Inmarsat Distress Alert?

- A. USCG coast stations will receive the alert and immediately notify the correct RCC.
- B. The operator selection of LES will determine which associated RCC will receive the alert.
- C. If the operator selects an invalid or inoperative LES code the NCS for that service will intercept the call and reroute the alert.
- D. If the LES choice is not updated properly the Distress Alert might be routed to a non-optimum RCC, introducing delays and confusion into the Distress situation.

36E5 What are the best resources for researching and planning equipment setups and updates prior to any potential Distress situation?

- A. NGA Pub. 117, Inmarsat handbook or manufacturer's equipment manuals.
- B. Inmarsat handbook, FCC Part 80 or ITU List of Coast stations.
- C. ITU List of Coast stations, IMO GMDSS handbook, FCC Part 80.
- D. Inmarsat handbook, NGA Pub. 117 or ITU List of Coast stations.

36E6 Which statement is true regarding Inmarsat "hot-key" Distress Alerts?

- A. The LES programmed by the watch officers into the Distress Alert Update menu determines which RCC will receive your initial Distress Alert.
- B. The vessel's position is checked against the SAR jurisdictions and the proper LES updated as the vessel changes NAVAREAS.
- C. The GPS position updates the Distress Alert Update menu to the correct LES choice to ensure proper communications with an RCC.
- D. The Distress Alert defaults are set correctly by the manufacturer and then automatically updated.

Answers: 36E1 - B 36E2 - C 36E3 - D 36E4 - A 36E5 - D 36E6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-F: Maritime Safety Information (M.S.I.): Key Topic-37: Navtex-1: Operations:

37F1 How is mutual interference on 518 kHz among NAVTEX stations avoided?

- A. Transmissions scheduled on a time-sharing basis, power limited and station assignment codes are geographically separated.
- B. All stations transmit at the same time but stations are limited to daytime operation only to reduce the radius of propagation.
- C. Transmitter power is limited, station assignment codes are not shared by other NAVAREAS and stations alternate between daytime and nighttime operations.
- D. Station codes are not shared by other NAVAREAS, transmissions scheduled on a time-sharing basis and power is limited.

37F2 When do NAVTEX broadcasts typically achieve maximum transmitting range?

- A. Local noontime
- B. Middle of the night
- C. Afternoon
- D. Sunset

37F3 What should a GMDSS Radio Operator do if a NAVTEX warning message is received but it contains too many errors to be usable?

- A. Contact the NAVAREA coordinator and request a repeat broadcast.
- B. Initiate a request for Category A, B, L and D messages.
- C. Do nothing. Vital NAVTEX messages will be repeated on the next scheduled broadcast.
- D. Listen to appropriate VHF weather channel for repeat warnings.

37F4 Which of these cannot happen when a paper model NAVTEX receiver runs out of paper?

- A. The unit is unable to print messages and all subsequent MSI broadcasts may be missed until the paper is replaced.
- B. It may give off either an audible and/or visual alarm.
- C. MSI messages may be missed because the unit cannot print them out.
- D. The system will automatically change from receiving MSI by NAVTEX to receiving it by SafetyNET™ so that no messages will be lost.

37F5 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.

37F6 What is the transmitting range of most NAVTEX stations?

- A. Typically 50-100 nautical miles (90-180 km) from shore.
- B. Typically 200-400 nautical miles (360-720 km).
- C. Typically upwards of 1000 nautical miles (1800 km) during the daytime.
- D. It is limited to line-of-sight or about 30 nautical miles (54 km).

Answers: 37F1 - A 37F2 - B 37F3 - C 37F4 - D 37F5 - A 37F6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-F: Maritime Safety Information (M.S.I.): Key Topic-38: Navtex-2: Programming:

38F1 How is a NAVTEX receiver programmed to reject certain messages?

- A. The transmitting station's two-digit identification can be entered to de-select reception of its broadcasts.
- B. By entering the SELCAL of the NAVTEX transmitting station.
- C. By pressing "00" in the transmitter's ID block.
- D. By choosing a message category's single letter (A-Z) identifier and then deselecting or deactivating.

38F2 How can reception of certain NAVTEX broadcasts be prevented?

- A. The receiver can be programmed to reject certain stations and message categories.
- B. Stations are limited to daytime operation only.
- C. Coordinating reception with published broadcast schedules.
- D. Automatic receiver desensitization during night hours.

38F3 Which of the following statements is true?

- A. No NAVTEX receiver can be programmed to reject category A, B, D and L messages since they are mandatory to be received via NAVTEX.
- B. A GMDSS Radio Operator may choose to program certain NAVTEX receivers to reject category A, B, D and L messages if they are being received by another MSI system.
- C. Upon entering a new NAVTEX station's broadcast range, the GMDSS Radio Operator enters the station's SELCAL number.
- D. The GMDSS Radio Operator can select the "None" option in the message category menu.

38F4 What means are used to prevent the reception of unwanted broadcasts by vessels utilizing the NAVTEX system?

- A. Operating the receiver only during daytime hours.
- B. Coordinating reception with published broadcast schedules.
- C. Programming the receiver to reject certain stations and message categories.
- D. Automatic receiver de-sensitization during night hours.

38F5 What statement is true regarding the control the operator can exercise over the NAVTEX receiver's operation?

- A. The operator can set the unit to automatically reject any and all categories of messages if the ship desires to not receive them.
- B. Upon entering a coastal area for the first time, the operator enters code KK to indicate "ready to receive NAVTEX".
- C. The operator can set most units to reject all messages except navigation, meteorological warnings, and search and rescue messages. If the unit will reject such messages it may be unsafe to do so.
- D. To reduce the number of messages, the operator can select code 00 to indicate "not in coastal passage".

38F6 Which messages are mandatory to be received and should not typically be rejected or disabled by the operator of a NAVTEX receiver?

- A. Meteorological warnings, SAR information, Pilot Service Messages.
- B. Meteorological warnings, meteorological forecasts, navigational warnings.
- C. SAR information, navigational warnings, ice reports.
- D. Navigational warnings, meteorological warnings, SAR information.

Answers: 38F1 - D 38F2 - A 38F3 - B 38F4 - C 38F5 - C 38F6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-F: Maritime Safety Information (M.S.I.): Key Topic-39: Navtex-3: Message Format:

39F1 The NAVTEX message header contains the following?

- A. A two-digit number (01-99) indicates the NAVTEX message category.
- B. Message numbers include a date/time group, along with the transmitting station's numerical ID.
- C. The first letter (from A to Z) indicates the NAVTEX transmitting station.
- D. None of these answers is correct.

39F2 If the Inmarsat-C terminal is inoperative but the vessel remains within NAVTEX coverage -- which of the following message categories should not be disabled by the GMDSS Radio Operator?

- A. Navigational warnings, meteorological warnings and metrological forecasts.
- B. Search and Rescue information, navigational warnings and other electronic navaid messages.
- C. Search and Rescue information, Meteorological warnings and ice reports.
- D. Meteorological warnings, Search and Rescue information and Navigational warnings.

39F3 How are NAVTEX broadcasts transmitted?

- A. Using FEC techniques.
- B. NAVTEX is transmitted by commercial coast radio stations following their traffic lists.
- C. NAVTEX is transmitted only when an Urgency or Distress broadcast is warranted.
- D. No more often than every two hours and should immediately follow the radiotelephone silent periods.

39F4 What determines whether a NAVTEX receiver prints a particular type of message content from a programmed NAVTEX station?

- A. The serial number and type of message have already been received but additional printouts are generated to ensure receipt aboard the vessel.
- B. The serial number and type of message has not been previously received or the subject indicator has not been programmed for rejection.
- C. The subject indicator has been programmed for rejection by the operator but the message contains a priority override print command.
- D. The transmitting station ID covering your area has been programmed for rejection by the operator or has not been previously received.

39F5 Which information determines if a NAVTEX message is to be rejected?

- A. Transmitter identity (numerals from 1 to 26 identifying transmitting station within the NAVAREA).
- B. The second letter (from A to Z) in the header indicating the type of message.
- C. The Answerback of the receiving station has not been entered in the NAVTEX receiver.
- D. Only messages having a serial number 00 are rejected.

39F6 NAVTEX broadcasts are sent:

- A. Immediately following traffic lists.
- B. On request of maritime mobile stations.
- C. In categories of messages indicated by a single letter or identifier.
- D. Regularly, after the radiotelephone silent periods.

Answers: 39F1 - C 39F2 - D 39F3 - A 39F4 - B 39F5 - B 39F6 - C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-F: Maritime Safety Information (M.S.I.): Key Topic-40: SafetyNET™ -1: Operations:

40F1 Where NAVTEX cannot be feasibly established, what system can be implemented to provide an automated service in coastal waters to receive MSI?

- A. AMVER
- B. SafetyNET™
- C. VHF DSC
- D. ARQ SITOR (NBDP)

40F2 What action should a GMDSS Radio Operator take when SafetyNET™ Distress or Urgency messages are received by the vessel's EGC receiver?

- 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. No immediate action is required by the operator, since the transmission will be automatically acknowledged by the receiving vessel.
- C. Aural and/or visual alarms are activated and require manual deactivation.
- D. A periodic alarm tone will be heard until the radio operator prints the message from the unit's memory.

40F3 What system can provide an automated service in coastal waters where it may not be feasible to establish the NAVTEX service or where shipping density is too low to warrant its implementation?

- A. AMVER
- B. VHF DSC
- C. ARQ SITOR (NBDP)
- D. SafetyNET™

40F4 Aboard ship, SafetyNET™ messages can be received by which equipment/methods?

- A. EGC receiver of the vessel's Inmarsat-C SES.
- B. VHF DSC on the weather channels.
- C. NAVTEX Receiver on 518 kHz or the Tropical Navtex frequency
- D. HF SITOR (NBDP) MSI frequencies.

40F5 SafetyNET™ messages can be received by which of the following shipboard equipment?

- A. NAVTEX
- B. MF and HF SITOR (NBDP)
- C. Inmarsat F77 EGC receiver
- D. Inmarsat-C EGC receiver

40F6 Maritime Safety Information is promulgated via satellite through which system?

- A. SafetyNET™
- B. AMVER
- C. NAVTEX
- D. Inmarsat-M SES

Answers: 40F1 - B 40F2 - C 40F3 - D 40F4 - A 40F5 - D 40F6 - A

Section-F: Maritime Safety Information (M.S.I.): Key Topic-41: SafetyNET™ -2: Information:

41F1 SafetyNET™ promulgates what type of information?

- A. MSI
- B. Traffic Lists
- C. News advisories
- D. MARAD

41F2 What kind(s) of broadcasts are not available through SafetyNET™?

- A. MSI and messages to specific geographic areas.
- B. Vessel traffic lists
- C. Storm warnings
- D. Distress and Urgency bulletins

41F3 Which satellite system promulgates Maritime Safety Information?

- A. AMVER
- B. NAVTEX
- C. Inmarsat-C SafetyNET™
- D. Inmarsat-M SES

41F4 What information is promulgated by the international SafetyNET™?

- A. Traffic Lists
- B. Priority Messages
- C. MARAD
- D. MSI

41F5 To receive all mandatory MSI using the SafetyNET™ system the vessel must:

- A. Log-in and ensure the position is accurate to receive MSI for the NAVAREA the vessel is currently within.
- B. Notify the NAVAREA coordinator you are using SafetyNET™ for the receipt of MSI (Maritime Safety Information).
- C. Set the receiver to your destination Inmarsat Ocean Region.
- D. Notify the NAVAREA coordinator you are using SafetyNET™ for the receipt of MSI (Maritime Safety Information) and set the receiver to your destination Ocean Region.

41F6 In using SafetyNET™ for the receipt of MSI (Maritime Safety Information):

- A. Only unscheduled Urgency and Distress messages will be received if the Inmarsat-C SES is not logged in.
- B. All of these answers are correct.
- C. Both scheduled MSI and unscheduled Urgency and Distress messages will be received if the Inmarsat-C SES is logged in.
- D. The Inmarsat-C SES must have Enhanced Group Calling (EGC) capability to receive MSI.

Answers: 41F1 - A 41F2 - B 41F3 - C 41F4 - D 41F5 - A 41F6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-F: Maritime Safety Information (M.S.I.): Key Topic-42: Enhanced Group Calling (EGC):

42F1 Over what system are Enhanced Group Calls transmitted?

- A. COSPAS satellite
- B. HF SITOR (NBDP) shore stations
- C. NAVTEX shore stations
- D. Inmarsat satellite

42F2 What is the purpose of the dedicated EGC receiver for A-1 area GMDSS Vessels?

- A. To ensure receipt of MSI in areas without NAVTEX coverage.
- B. To allow monitoring of the vessels location for AMVER tracking.
- C. Simultaneous receipt and transmission of vessel SafetyNET™ messages.
- D. To track which NAVAREA the vessel is currently in for receipt of MSI.

42F3 Which of the following provides a unique automated system capable of addressing messages to pre-determined groups of ships or all vessels in both fixed and variable geographic areas?

- A. NAVTEX
- B. EGC
- C. AFRTS
- D. NAVAREAs

42F4 What system may be useful for messages, such as local storm warnings or a shore-to-ship Distress alert, for which it is inappropriate to alert all ships in the satellite coverage area?

- A. NAVTEX
- B. AMVER
- C. EGC
- D. DSC

42F5 What services are available through Enhanced Group Calls?

- A. Maritime Safety Information and vessel traffic lists.
- B. Hourly NOAA weather broadcasts from the NWS.
- C. Maritime Safety Information and messages to pre-defined groups of subscribers.
- D. Coastal weather broadcasts.

42F6 What messages originate from registered information providers anywhere in the world and are broadcast to the appropriate ocean region via a LES?

- A. AMVER broadcasts
- B. Urgency messages
- C. NAVTEX broadcasts
- D. SafetyNET™ messages

Answers: 42F1 - D 42F2 - A 42F3 - B 42F4 - C 42F5 - C 42F6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #43: VHF: Controls, Volume, Squelch, DW & Scan:

43G1 Adjusting the volume control has the following results:

- A. The higher the volume control is set the greater the sensitivity.
- B. The volume control sets the threshold for receiving signals.
- C. Adjusting the volume control has no effect on the sensitivity.
- D. The lower the volume control is set the greater the sensitivity.

43G2 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. None of the above
- D. Listening on any selected channel while periodically monitoring Ch-16.

43G3 Setting the squelch control to just beyond the point where the background noise disappears results in:

- A. Maximum sensitivity without background noise.
- B. Reduced sensitivity without background noise.
- C. Minimum background noise with reduced sensitivity.
- D. Greater bandwidth without background noise.

43G4 The "Scan" function is used to:

- A. Monitor Ch-16 continuously and switching to either Ch-70 or Ch-13 every 5 seconds.
- B. Sequentially scan all or selected channels.
- C. Scan Ch-70 for Distress alerts.
- D. None of the above

43G5 Setting the squelch control to the end of its range without any noise being heard results in:

- A. Less background noise
- B. Minimum sensitivity
- C. Maximum sensitivity
- D. Does not have any effect on the sensitivity.

43G6 Proper and legal VHF operations require all of these except?

- A. The channel must be designated as valid for the nature or type of communications desired.
- B. Simplex, duplex and alpha channel modes must be correctly selected.
- C. The correct bandwidth must be selected by the operator.
- D. The power level must be appropriately chosen by the operator.

Answers: 43G1 - C 43G2 - D 43G3 - A 43G4 - B 43G5 - B 43G6 - C

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #44: VHF: Power and Range:

44G1 Which of the following control selections may result in limited receiving range?

- A. Setting the squelch control to its minimum level.
- B. Setting the squelch control to its maximum level.
- C. The power switch is set to the "high" output position, resulting in receiver overloading.
- D. Setting the channel selection switch midway between channels 6 and 16.

44G2 While conducting routine communications using the wheelhouse VHF with a station 1 mile distant, your recommended power setting would be:

- A. 25 watts after dark.
- B. 25 watts during a clear sunny day.
- C. 1 watt, day or night.
- D. 1 watt using DSC at night.

44G3 Which of the following factors does not normally affect the range of VHF transmissions?

- A. Salt water ingress into the antenna coaxial cable.
- B. Power level setting.
- C. Vessel antenna height.
- D. Ionospheric refraction.

44G4 Much longer than normal VHF transmissions are typically caused by:

- A. Atmospheric ducting or tropospheric propagation.
- B. Changing power from 1W to 25 W.
- C. Skywave reflections from the D layer.
- D. Ionospheric activity in layers F1/F2.

44G5 Describing VHF transmissions as "line of sight" does not mean:

- A. Vessel antenna height will not affect the radius of propagation.
- B. The normal transmission range to a coast station is approximately is 10 NM.
- C. Coast station antenna height has no effect on the radius of transmission.
- D. VHF communications are effective only with nearby stations within visual range of the bridge.

44G6 The effectiveness of VHF communications is maximized by:

- A. Appropriate setting of the transmitter power, selecting an appropriate channel & adjustment of squelch for maximum receiver sensitivity.
- B. The adjustment of squelch for maximum receiver sensitivity, setting transmitter power to 1W & selecting an appropriate channel.
- C. Selecting an appropriate channel, adjustment of squelch for minimum receiver sensitivity & setting transmitter power to 1W.
- D. Selecting an appropriate channel, adjustment of squelch for minimum receiver sensitivity, setting transmitter power to 25W.

Answers: 44G1 - B 44G2 - C 44G3 - D 44G4 - A 44G5 - D 44G6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #45: VHF: Channel System and Usage:

45G1 Which channel would most likely be used for routine ship-to-ship voice traffic?

- A. Ch-08
- B. Ch-16
- C. Ch-70
- D. Ch-22A

45G2 Which channel is utilized for the required Bridge-to-Bridge watch?

- A. DSC on Ch-70
- B. VHF-FM on Ch-13 in most areas of the continental United States.
- C. VHF-FM on Ch-16
- D. The vessel's VHF working frequency.

45G3 What channel would you use for routine communications with the U.S.C.G.?

- A. Ch-16
- B. Ch-80
- C. Ch-22A
- D. Ch-13

45G4 What channel would you use to place a call to a shore telephone?

- A. Ch-16
- B. Ch-70
- C. Ch-06
- D. Ch-28

45G5 What channel is always being continuously monitored?

- A. Ch-70
- B. Ch-28
- C. Ch-80
- D. Ch-16

45G6 Which of the following channels may be used for duplex communications?

- A. Ch-70
- B. Ch-26
- C. Ch-5A
- D. Ch-22A

Answers: 45G1 - A 45G2 - B 45G3 - C 45G4 - D 45G5 - A 45G6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #46: VHF: Simplex-Duplex, USA-INT:

46G1 The nearest Coast Guard station is being called by a vessel on Ch-22. That vessel's USA-INT switch is set to INT. What will be the results?

- A. There should be no problem carrying on communications.
- B. The Coast Guard station will not hear the call due to listening on a duplex receiving frequency.
- C. Neither station will hear the other's calls.
- D. The Coast Guard station will probably hear the call and respond but the vessel called will not hear the response.

46G2 What is the reason for the USA-INT control or function?

- A. It changes some channels that are normally duplex INT channels into simplex USA channels.
- B. It changes some channels that are normally simplex INT channels into duplex USA channels.
- C. When the control is set to "INT" the range is increased.
- D. It changes duplex USA channels to simplex for International use.

46G3 Which of the following statements is true?

- A. You should always use the "INT" setting for calling a Public Correspondence station.
- B. Using the "USA" setting changes certain channels from duplex to simplex operation.
- C. You should use Ch-22 when calling the U. S. Coast Guard.
- D. Using the "INT" setting will prevent proper Ch-13 Bridge-to-Bridge operations.

46G4 The USA-INT control on VHF units:

- A. Selects duplex operations for U.S. coastal waters and simplex operations in non-U.S. waters, on the "alpha" channels.
- B. Ensures that the "alpha" channels are correctly set to duplex for use in U.S. waters & on VTS channels.
- C. Changes selected international duplex channels to simplex channels for use in U.S. waters, on the "alpha" channels.
- D. Changes selected international simplex channels to duplex channels for use in U.S. waters, on the "alpha" channels.

46G5 The USA-INT control on VHF units:

- A. Was made necessary by a desire for more duplex channels in the U.S.
- B. Correctly set, will result in duplex operations in U.S. Coastal waters on the "alpha" channels.
- C. Correctly set, will result in simplex operations in U.S. Coastal waters on the "alpha" channels.
- D. Was made necessary by a desire to convert simplex international channels to duplex channels in the U.S.

46G6 What would happen if your VHF is set to "INT" and you called a VTS that operates on an "alpha" channel?

- A. The coast station should hear your call and respond and you will be able to receive VTS instructions.
- B. The coast station will not hear your call but you will hear their responses to other vessels in the VTS area.
- C. You will be able to hear the coast station calling you but will not be able to hear other vessels in the VTS area.
- D. The coast station should hear your call and respond but you will not hear their response.

Answers: 46G1 - D 46G2 - A 46G3 - B 46G4 - C 46G5 - C 46G6 - D

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #47: VHF-DSC Calls: Distress, Urgency & Safety:

47G1 The quickest way to transmit a DSC Distress alert is:

- A. Select "Distress" priority from the menu and transmit an "all ships" call.
- B. Transmit a "MAYDAY" call on Ch-16.
- C. Press the "Distress Hot Key" as specified by the equipment manufacturer.
- D. Select "Distress Relay Select" from the menu and transmit the call.

47G2 A DSC Urgency priority call is usually set up in the following manner:

- A. Such calls are sent first to all coast stations and then later to all ship stations.
- B. Such calls are sent to an individual coast station.
- C. Such calls are sent to an individual ship station.
- D. Such calls are sent simultaneously to "all stations".

47G3 A DSC Safety call might be used under the following conditions:

- A. Navigation Hazard
- B. Man overboard
- C. Distress situation
- D. Serious medical request

47G4 To send a Distress alert use the following procedure:

- A. Initiate a menu call to select Ch-16 for voice communications.
- B. Use the "Distress Hot Key" in an appropriate manner.
- C. Always insert the nature of the Distress first.
- D. Make a voice Mayday call on Ch-16 before any other action.

47G5 DSC Urgency priority calls may be sent using the "Distress Hot Key" under the following circumstances:

- A. If no additional information is required to be transmitted.
- B. Under NO circumstances.
- C. Only if the position information is correct.
- D. The "Distress Hot Key" can be programmed for either Urgency or Distress as required.

47G6 A DSC Safety priority call might be used under the following circumstances:

- A. A crew member is missing and presumed lost overboard.
- B. There is a fire in the engine room.
- C. A lifeboat has been lost over the side in heavy weather and is adrift.
- D. A medical situation that did not present an imminent danger of loss of life.

Answers: 47G1 - C 47G2 - D 47G3 - A 47G4 - B 47G5 - B 47G6 - C

Section-G: VHF-DSC Equipment & Comms: Key Topic #48: VHF-DSC Calls: Routine and Ship-to-Ship:

48G1 How are Routine calls usually formatted/initiated?

- A. By pressing the "Distress Hot Key".
- B. By making the appropriate key strokes to select the appropriate menu choices.
- C. By pressing the "Alarm" button and then selecting from various options.
- D. Using Ch-70 to make Routine priority DSC calls is not permitted.

48G2 What would be the appropriate menu choice when calling another ship station?

- A. Ch-28
- B. Duplex
- C. Simplex
- D. Ch-22

48G3 What would be the appropriate channel selection for follow-on voice communications for a Routine priority call to another vessel?

- A. Ch-70
- B. Ch-16
- C. Ch-22
- D. Ch-08

48G4 If the vessel you wish to call is not listed in your VHF address book, what action would not resolve the problem?

- A. Look in the DSC Distress call data directory for the MMSI number of the other vessel.
- B. The vessel's MMSI number could be manually entered during the call setup.
- C. The vessel's name and MMSI number may be entered in the address book for use.
- D. Look the number up in the ITU books and manually call the vessel.

48G5 What conditions must exist for a completely automatic DSC acknowledgement of a Routine call and change to suggested working channel?

- A. Both stations must be monitoring Ch-16 or the sending station must be set up for automatic DSC response.
- B. The receiving station must be monitoring the suggested working frequency.
- C. All routine priority DSC calls must be manually acknowledged by the watch officer.
- D. The receiving station must be set up for automatic DSC response.

48G6 What actions will take place upon receipt of a Routine call from another vessel if both vessels are programmed for automatic response and the ECC is no good?

- A. Some portion of the call particulars will appear on the screen and the channel will not change.
- B. The ECC alarm will sound and the watch officer should call back to determine the working frequency.
- C. The ECC alarm will sound and the channel will change but the watch officer should ensure it is legal.
- D. The channel will not change because the working frequency requested is illegal.

Answers: 48G1 - B 48G2 - C 48G3 - D 48G4 - A 48G5 - D 48G6 - A

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #49: VHF-DSC: Other DSC Functions-1:

49G1 The DSC received call directory usually sorts and stores incoming calls in what manner?

- A. Received calls are typically divided into two directories distinguished by priority.
- B. All received calls are saved in a single category.
- C. Received calls are always divided into Distress and Urgency categories.
- D. Only received Distress calls are saved.

49G2 Why would you want to access your MMSI number?

- A. To call another vessel.
- B. To determine that the number is correct.
- C. To change it.
- D. There is no reason to access your MMSI number.

49G3 What precautions should be taken when reviewing previously transmitted messages?

- A. Press the "Call" key when finished.
- B. Always save the message.
- C. Take steps not to accidentally send the message again.
- D. No precautions are necessary.

49G4 How many times is it possible to change your own MMSI number in a VHF unit?

- A. It is not possible.
- B. It may be changed by the operator up to 4 times.
- C. MMSI numbers can only be changed by the manufacturer.
- D. On some units it can be changed at will if the password is known.

49G5 What precautions should be taken when reviewing received Distress messages?

- A. Take steps not to accidentally send a DSC acknowledgement or relay.
- B. Press the "Call" key when finished.
- C. Always save the message.
- D. No precautions are necessary.

49G6 Which of the following is not true regarding vessel position information?

- A. The position is normally provided from GPS input.
- B. The time of the updated position should be UTC or the correct local zone time.
- C. If the position is not automatically updated it must be manually updated every 4 hours.
- D. The position information must be periodically checked to ensure that it remains current and accurate.

Answers: 49G1 - A 49G2 - B 49G3 - C 49G4 - D 49G5 - A 49G6 - B

GMDSS-STCW-ROC-FCC-EI-7R: August 2012:

Section-G: VHF-DSC Equipment & Comms: Key Topic #50: VHF-DSC: Other DSC Functions-2:

50G1 What information is normally entered in the address book?

- A. The vessel's IMN.
- B. The vessel's call sign and name.
- C. The vessel's IMO number.
- D. Vessel's name and MMSI number.

50G2 Which of the following statements is not true concerning the DSC call data directory?

- A. All DSC units typically store all of the Transmitted and Received DSC calls in a single directory.
- B. Some DSC units have both a Transmit and Receive message directory or database.
- C. Some DSC units have different directories for received calls and sort them by priority.
- D. Calls in the directory should not be deleted – they are necessary for inspections & logkeeping.

50G3 Which of the following statements on address book entries is not correct?

- A. Shore based telephone numbers may be entered for automatic telephone calls ashore.
- B. Address book entries can only be used to call shore stations.
- C. Public Correspondence Stations may be entered.
- D. A vessel's name and MMSI number may be entered.

50G4 The VHF-DSC self-test function (if available) usually performs the following:

- A. Transmits a very weak DSC signal which is picked up by the Ch-70 receiver.
- B. Transmits a weak voice signal which is picked up on Ch-16.
- C. Makes a diagnostic test of the system without actually transmitting a signal.
- D. Does a check sum of the memory chips.

50G5 What can the operator do to adjust the audible alarm?

- A. The operator can choose to disable the audible alarm.
- B. VHF DSC units only have visual alarms.
- C. The alarm cannot be disabled for Distress and Urgency messages.
- D. The audible alarm control has the same indication for all four message priorities.

50G6 When initiating a DSC call through the menu system what is the most likely information that will be displayed after making the first correct keystroke?

- A. The Telecom-1 menu.
- B. The particulars of the previous call.
- C. The priority menu.
- D. The call setup menu.

Answers: 50G1 - D 50G2 - A 50G3 - B 50G4 - C 50G5 - C 50G6 - D