
FCC Element 7R - Restricted GMDSS

1. What is the fundamental concept of the GMDSS?

- **GMDSS utilizes automated systems and satellite technology to improve emergency communications for the world 's shipping industry .**
- It is intended to automate and improve existing digital selective calling procedures and techniques.
- It is intended to provide more effective but lower cost commercial communications.
- 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.

Note:
GMDSS is a global system utilizing automated systems and satellite technology to improve emergency communications for the world's shipping industry.

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2. The primary purpose of the GMDSS is:

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

Note:
The GMDSS was established to automate and improve emergency communications for the global shipping industry.

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3. What is the basic concept of GMDSS?

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

Note:
GMDSS ensures rapid alerting of shore-based SAR authorities and nearby ships to facilitate coordinated rescue operations.

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4. GMDSS is primarily a system based on:

- Ship-to-ship Distress communications using MF or HF radiotelephony.
- VHF digital selective calling from ship to shore.
- Distress, Urgency and Safety communications carried out by the use of narrow-band direct printing telegraphy.
- **The linking of search and rescue authorities ashore with shipping in the immediate vicinity of a ship in Distress or in need of assistance .**

Note:
GMDSS primarily connects shore-based search and rescue authorities with distressed ships and nearby vessels, utilizing various communication technologies.

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5. What is the responsibility of compulsory GMDSS vessels?

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

Note:
Compulsory GMDSS vessels must be capable of performing essential radio communications functions for their own safety and the safety of other vessels.

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6. GMDSS is required for which of the following?

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

Note:
GMDSS is mandated by SOLAS Chapter IV for ships of 300 gross tonnage or more on international voyages.

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7. Which GMDSS system utilizes terrestrial radio techniques?

- F-77
- Inmarsat-C
- GPS
- **VHF-MF-HF-DSC**

Note:
VHF-MF-HF-DSC utilizes terrestrial radio techniques by communicating directly between ships and shore stations, unlike satellite-based systems like Inmarsat (F-77, Inmarsat-C) or the navigation system GPS.

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8. What equipment utilizes satellite communications?

- **Inmarsat-C**
- VHF-MF-HF
- NAVTEX
- SART

Note:
Inmarsat-C utilizes the Inmarsat satellite network for communication, distinguishing it from VHF-MF-HF, NAVTEX, and SART, which rely on terrestrial radio or radar systems.

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9. What equipment is used in or near the survival craft?

- NAVTEX
- **EPIRB**
- Fathometer
- COSPAS-SARSAT

Note:
An EPIRB is the required emergency distress beacon designed to be used in or near survival craft to alert rescuers after abandonment.

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10. What equipment is programmed to initiate transmission of Distress alerts and calls to individual stations?

- NAVTEX
- GPS
- **DSC Controller**
- DSC Scanning Watch Receiver

Note:
The DSC controller is programmed with the ship's MMSI and initiates Digital Selective Calling (DSC) distress alerts and individual calls.
