

Syllabus for Second class Certificate with Proficiency/ Competency in Marine Radio Operation. Recognized by Govt. of India with Global Maritime Distress and Safety System (GMDSS) certification issued by the Ministry of Communication (MoC)

Concept

Concept of the GMDSS, Non GMDSS , Functional Requirements ,Availability of Equipment

Digital selective calling (DSC)

Digital/Analogue Encoding, Decoding, DSC Testing , DSC Distress Alerting Procedure

ITU Regulation

Ship's Radio Licence, Operators' Certificates: Four Categories, Documents carried on board Ship Stations, GMDSS Log Book, Order of Priority of Communications, Testing, Use of Radio Equipment in Territorial Waters, Duration and control of working, EPIRBs, Routine DSC Frequencies, on Board Communications

Solas

GMDSS Watch keeping, Distress Alert, Distress Communication: Terrestrial, Acknowledgement Of Distress Call/Message And Distress Alert, Distress Relay, Distress Relay Acknowledgement, Details Contained In Distress Relay Alert, Urgency Communication, Urgency Communication: Terrestrial, Urgency Communication : Satellite, Medical Advice Or Assistance, Safety Communications, Master Plan For The GMDSS

Propagation

Ionization, Ionosphere, Ground wave, Sky wave, Skip Distance, Skip Zone , Critical Frequency, Fading, Space Wave, Direct Wave or Line of Sight Propagation, Antenna

Basic transmitters & receivers

Basic Transmitter, Basic Receiver

Maritime Mobile Satellite Service

Satellite acquisition, Space Segment, Ground Segment, Network Co-ordination Stations, Essential Functions of the NCS, Land Earth Station (LES) or Coast Earth Station (CES), Ship Earth Stations (SES) or Mobile Earth Stations (MES), INMARSAT MOBILE

NUMBERS (IMN), INMARSAT system comparisons, INMARSAT – C, enhanced group call, distress communication via INMARSAT-C and INMARSAT-B

Maritime Safety Information

NAVAREAS / METAREAS, SafetyNet, EGC Service

EPIRBs & SARTs

Types of EPIRBs. Automatic Operation, Manual Operation, Search and Rescue Transponder (SART), Performance Standard for SART

Telex over Radio (TOR)

Automatic Repeat Request (ARQ), Forward error Correction (Collective), Forward error Correction (Selective), Telex Service Abbreviations

Batteries

Power Supply, Battery Charging Capacity, types of charging, Battery condition, Battery Maintenance & Safety precautions

Basic Electrical Theory

Ohm's Law, Resistors, Power and Energy, Fuses, Automatic Identification System-Search and Rescue Transmitter

Note: The above syllabus is indicative and the questions in the test may include similar other topics pertaining to the level and content of essential qualification.