

FCC Element-1

1- What is the Global Maritime Distress and Safety System (GMDSS)?

- a) An automated ship-to-shore distress alerting system using satellite and advanced terrestrial communications systems.
- b) An emergency radio service employing analog and manual safety apparatus.
- c) An association of radio officers trained in emergency procedures.
- d) The international organization charged with the safety of ocean-going vessels.

2- What authority does the Marine Radio Operator Permit confer?

- a) Grants authority to operate commercial broadcast stations and repair associated equipment.
- b) Allows the radio operator to maintain equipment in the Business Radio Service.
- c) Confers authority to operate licensed radio stations in the Aviation, Marine and International Fixed Public Radio Services.
- d) The non-transferable right to install, operate and maintain any type-accepted radio transmitter.

3- Which of the following persons are ineligible to be issued a commercial radio operator license?

- a) Individuals who are unable to send and receive correctly by telephone spoken messages in English.
- b) Handicapped persons with uncorrected disabilities which affect their ability to perform all duties required of commercial radio operators.
- c) Foreign maritime radio operators unless they are certified by the International Maritime Organization.
- d) U.S. Military radio operators who are still on active duty.

4- Who is required to make entries on a required service or maintenance log?

- a) The licensed operator or a person whom he or she designates.
- b) The operator responsible for the station operation or maintenance.
- c) Any commercial radio operator holding at least a Restricted Radiotelephone Operator Permit.
- d) The technician who actually makes the adjustments to the equipment.

5- What is a requirement of every commercial operator on duty and in charge of a transmitting system?

- a) A copy of the Proof-of-Passing Certificate (PPC) must be on display at the transmitter location.
- b) The original license or a photocopy must be posted or in the operator's personal possession and available for inspection.
- c) The FCC Form 756 certifying the operator's qualifications must be readily available at the transmitting system site.
- d) A copy of the operator's license must be supplied to the radio station's supervisor as evidence of technical qualification.

6- What is distress traffic?

- a) In radiotelegraphy, SOS sent as a single character; in radiotelephony, the speaking of the word, "Mayday."
- b) Health and welfare messages concerning the immediate protection of property and safety of human life.
- c) Internationally recognized communications relating to emergency situations.
- d) All messages relative to the immediate assistance required by a ship, aircraft or other vehicle in imminent danger.

7- What is a maritime mobile repeater station?

- a) A fixed land station used to extend the communications range of ship and coast stations.
- b) An automatic on-board radio station which facilitates the transmissions of safety communications aboard ship.
- c) A mobile radio station which links two or more public coast stations.
- d) A one way low-power communications system used in the maneuvering of vessels.

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8- What is an urgency transmission?

- a) A radio distress transmission affecting the security of humans or property.
- b) Health and welfare traffic which impacts the protection of on-board personnel.
- c) A communications alert that important personal messages must be transmitted.
- d) A communications transmission concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight.

9- What is a ship earth station?

- a) A maritime mobile-satellite station located at a coast station.
- b) A mobile satellite station located on board a vessel.
- c) A communications system which provides line-of-sight communications between vessels at sea and coast stations.
- d) An automated ship-to-shore distress alerting system.

10- What is the internationally recognized urgency signal?

- a) The letters "TTT" transmitted three times by radiotelegraphy.
- b) Three oral repetitions of the word "safety" sent before the call.
- c) The word "PAN" spoken three times before the urgent call.
- d) The pronouncement of the word "Mayday."

11- What is a safety transmission?

- a) A radiotelephony warning preceded by the words "PAN."
- b) Health and welfare traffic concerning the protection of human life.
- c) A communications transmission which indicates that a station is preparing to transmit an important navigation or weather warning.
- d) A radiotelegraphy alert preceded by the letters "XXX" sent three times.

12- What is a requirement of all marine transmitting apparatus used aboard United States vessels?

- a) Only equipment that has been type accepted by the FCC for Part 80 operations is authorized.
- b) Equipment must be approved by the U.S. Coast Guard for maritime mobile use.
- c) Certification is required by the International Maritime Organization (IMO).
- d) Programming of all maritime channels must be performed by a licensed Marine Radio Operator.

13- Where do you submit an application for inspection of a ship radio station?

- a) To a Commercial Operator Licensing Examination Manager (COLE Manager).
- b) To the Federal Communications Commission, Washington, DC 20554.
- c) To the Engineer-in-Charge of the FCC District Office nearest the proposed place of inspection.
- d) To the nearest International Maritime Organization (IMO) review facility.

14- What are the antenna requirements of a VHF telephony coast, marine utility or ship station?

- a) The shore or on-board antenna must be vertically polarized.
- b) The antenna array must be type accepted for 30-200 MHz operation by the FCC.
- c) The horizontally polarized antenna must be positioned so as not to cause excessive interference to other stations.
- d) The antenna must be capable of being energized by an output in excess of 100 watts.

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15- What regulations govern the use and operation of FCC-licensed ship stations operating in international waters?

- a) The regulations of the International Maritime Organization (IMO) and Radio Officers Union.
- b) Part 80 of the FCC Rules plus the international Radio Regulations and agreements to which the United States is a party.
- c) The Maritime Mobile Directives of the International Telecommunication Union.
- d) Those of the FCC's Private Wireless Division, WTB, Washington, DC 20554.

16- Which of the following transmissions are not authorized in the Maritime Service?

- a) Communications from vessels in dry dock undergoing repairs.
- b) Message handling on behalf of third parties for which a charge is rendered.
- c) Needless or superfluous radiocommunications.
- d) Transmissions to test the operating performance of on-board station equipment.

17- What are the highest priority communications from ships at sea?

- a) All critical message traffic authorized by the ship's master.
- b) Navigation and meteorological warnings.
- c) Distress calls, and communications preceded by the international urgency and safety signals.
- d) Authorized government communications for which priority right has been claimed.

18- What is the best way for a radio operator to minimize or prevent interference to other stations?

- a) By using an omni-directional antenna pointed away from other stations.
- b) Reducing power to a level that will not affect other on-frequency communications.
- c) By changing frequency when notified that a radiocommunication causes interference.
- d) Determine that a frequency is not in use by monitoring the frequency before transmitting.

19- Under what circumstances may a ship or aircraft station interfere with a public coast station?

- a) Under no circumstances during on-going radiocommunications.
- b) During periods of government priority traffic handling.
- c) When it is necessary to transmit a message concerning the safety of navigation or important meteorological warnings.
- d) In cases of distress.

20- Who determines when a ship station may transmit routine traffic destined for a coast or Government station in the maritime mobile service?

- a) Shipboard radio officers may transmit traffic when it will not interfere with on-going radiocommunications.
- b) The order and time of transmission and permissible type of message traffic is decided by the licensed on-duty operator.
- c) Ship stations must comply with instructions given by the coast or Government station.
- d) The precedence of conventional radiocommunications is determined by FCC and international regulation.

21- Who is responsible for payment of all charges accruing to other facilities for the handling or forwarding of messages?

- a) The licensee of the ship station transmitting the messages.
- b) The third party for whom the message traffic was originated.
- c) The master of the ship jointly with the station licensee.
- d) The licensed commercial radio operator transmitting the radiocommunication.

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22- Ordinarily, how often would a station using a telephony emission identify?

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

23- When does a maritime radar transmitter identify its station?

- a) By radiotelegraphy at the onset and termination of operation.
- b) At 20 minute intervals using an automatic transmitter identification system.
- c) Radar transmitters must not transmit station identification.
- d) By a transmitter identification label (TIL) secured to the transmitter.

24- What is the general obligation of a coast or marine-utility station?

- a) To accept and dispatch messages without charge which are necessary for the business and operational needs of ships.
- b) To acknowledge and receive all calls directed to it by ship or aircraft stations.
- c) To transmit lists of call signs of all fixed and mobile stations for which they have traffic.
- d) To broadcast warnings and other information for the general benefit of all mariners.

25- How does a coast station notify a ship that it has a message for the ship?

- a) By making a directed transmission on 2182 kHz or 156.800 MHz.
- b) The coast station changes to the vessel's known working frequency.
- c) By establishing communications using the eight digit maritime mobile service identification.
- d) The coast station may transmit at intervals lists of call signs in alphabetical order for which they have traffic.

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

- a) Under no circumstances.
- b) When announcing or preceding the transmission of distress, urgency, safety or other important messages.
- c) When the vessels are located in international waters beyond 12 miles.
- d) When identical traffic is destined for multiple mobile stations within range.

27- Who has ultimate control of service at a ship's radio station?

- a) The master of the ship.
- b) A holder of a First Class Radiotelegraph Certificate with a six months service endorsement.
- c) The Radio Officer-in-Charge authorized by the captain of the vessel.
- d) An appointed licensed radio operator who agrees to comply with all Radio Regulations in force.

28- What is the power limitation of associated ship stations operating under the authority of a ship station license?

- a) The power level authorized to the parent ship station.
- b) Associated vessels are prohibited from operating under the authority granted to another station licensee.
- c) The minimum power necessary to complete the radiocommunications.
- d) Power is limited to one watt.

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29- How is an associated vessel operating under the authority of another ship station license identified?

- a) All vessels are required to have a unique call sign issued by the Federal Communications Commission.
- b) With any station call sign self-assigned by the operator of the associated vessel.
- c) By the call sign of the station with which it is connected and an appropriate unit designator.
- d) Client vessels use the call sign of their parent plus the appropriate ITU regional indicator.

30- On what frequency should a ship station normally call a coast station when using a radiotelephony emission?

- a) On a vacant radio channel determined by the licensed radio officer.
- b) Calls should be initiated on the appropriate ship-to-shore working frequency of the coast station.
- c) On any calling frequency internationally approved for use within ITU Region 2.
- d) On 2182 kHz or 156.800 MHz at any time.

31- On what frequency would a vessel normally call another ship station when using a radiotelephony emission?

- a) Only on 2182 kHz in ITU Region 2.
- b) On the appropriate calling channel of the ship station at 15 minutes past the hour.
- c) On 2182 kHz or 156.800 MHz unless the station knows the called vessel maintains a simultaneous watch on another intership working frequency.
- d) On the vessel's unique working radio-channel assigned by the Federal Communications Commission.

32- What is required of a ship station which has established initial contact with another station on 2182 kHz or 156.800 MHz?

- a) The stations must check the radio channel for distress, urgency and safety calls at least once every ten minutes.
- b) The stations must change to an authorized working frequency for the transmission of messages.
- c) Radiated power must be minimized so as not to interfere with other stations needing to use the channel.
- d) To expedite safety communications, the vessels must observe radio silence for two out of every fifteen minutes.

33- What type of communications may be exchanged by radioprinter between authorized private coast stations and ships of less than 1600 gross tons?

- a) Public correspondence service may be provided on voyages of more than 24 hours.
- b) All communications providing they do not exceed 3 minutes after the stations have established contact.
- c) Only those communications which concern the business and operational needs of vessels.
- d) There are no restrictions.

34- What are the service requirements of all ship stations?

- a) Each ship station must receive and acknowledge all communications with any station in the maritime mobile service.
- b) Public correspondence services must be offered for any person during the hours the radio operator is normally on duty.
- c) All Ship stations must maintain watch on 500 kHz, 2182 kHz and 156.800 MHz.
- d) Reserve antennas, emergency power sources and alternate communications installations must be available.

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35- When may the operator of a ship radio station allow an unlicensed person to speak over the transmitter?

- a) At no time. Only commercially licensed radio operators may modulate the transmitting apparatus.
- b) When the station power does not exceed 200 watts peak envelope power.
- c) When under the supervision of the licensed operator.
- d) During the hours that the radio officer is normally off duty.

36- What are the radio operator requirements of a cargo ship equipped with a 1000 watt peak-envelope-power radiotelephone station?

- a) The operator must hold a General Radiotelephone Operator License or higher class license.
- b) The operator must hold a Restricted Radiotelephone Operator Permit or higher class license.
- c) The operator must hold a Marine Radio Operator Permit or higher class license.
- d) The operator must hold a GMDSS Radio Maintainer's License.

37- What are the radio operator requirements of a small passenger ship carrying more than six passengers equipped with a 1000 watt carrier power radiotelephone station?

- a) The operator must hold a General Radiotelephone Operator or higher class license.
- b) The operator must hold a Marine Radio Operator Permit or higher class license.
- c) The operator must hold a Restricted Radiotelephone Operator Permit or higher class license.
- d) The operator must hold a GMDSS Radio Operator's License.

38- Which commercial radio operator license is required to operate a fixed tuned ship radar station with external controls?

- a) A radio operator certificate containing a Ship Radar Endorsement.
- b) A Marine Radio Operator Permit or higher.
- c) Either a First or Second Class Radiotelegraph certificate or a General Radiotelephone Operator License.
- d) No radio operator authorization is required.

39- Which commercial radio operator license is required to install a VHF transmitter in a voluntarily equipped ship station?

- a) A Marine Radio Operator Permit or higher class of license.
- b) None, if installed by, or under the supervision of, the licensee of the ship station and no modifications are made to any circuits.
- c) A Restricted Radiotelephone Operator Permit or higher class of license.
- d) A General Radiotelephone Operator License.

40- What transmitting equipment is authorized for use by a station in the maritime services?

- a) Transmitters that have been certified by the manufacturer for maritime use.
- b) Unless specifically excepted, only transmitters type accepted by the Federal Communications Commission for Part 80 operations.
- c) Equipment that has been inspected and approved by the U.S. Coast Guard.
- d) Transceivers and transmitters that meet all ITU specifications for use in maritime mobile service.

41- What is the Communication Act's definition of a "passenger ship"?

- a) Any ship which is used primarily in commerce for transporting persons to and from harbors or ports.
- b) A vessel that carries or is licensed or certificated to carry more than 12 passengers.
- c) Any ship transporting more than six passengers for hire.
- d) A vessel of any nation that has been inspected and approved as a passenger carrying vessel.

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42- What is a distress communication?

- a) An internationally recognized communication indicating that the sender is threatened by grave and imminent danger and requests immediate assistance.
- b) Communications indicating that the calling station has a very urgent message concerning safety.
- c) Radiocommunications which, if delayed, will adversely affect the safety of life or property.
- d) An official radiocommunications notification of approaching navigational or meteorological hazards.

43- Who may be granted a ship station license in the maritime service?

- a) Anyone, including foreign governments.
- b) Only FCC licensed operators holding a First or Second Class Radiotelegraph Operator's Certificate or the General Radiotelephone Operator License.
- c) Vessels that have been inspected and approved by the U.S. Coast Guard and Federal Communications Commission.
- d) The owner or operator of a vessel, or their subsidiaries.

44- Who is responsible for the proper maintenance of station logs?

- a) The station licensee and the radio operator in charge of the station.
- b) The station licensee.
- c) The commercially licensed radio operator in charge of the station.
- d) The ship's master and the station licensee.

45- How long should station logs be retained when there are entries relating to distress or disaster situations?

- a) Until authorized by the Commission in writing to destroy them.
- b) Indefinitely, or until destruction is specifically authorized by the U.S. Coast Guard.
- c) For a period of three years from the date of entry unless notified by the FCC.
- d) For a period of one year from the date of entry.

46- Where must ship station logs be kept during a voyage?

- a) At the principal radiotelephone operating position.
- b) They must be secured in the vessel's strongbox for safekeeping.
- c) In the personal custody of the licensed commercial radio operator.
- d) All logs are turned over to the ship's master when the radio operator goes off duty.

47- What is the antenna requirement of a radiotelephone installation aboard a passenger vessel?

- a) The antenna must be located a minimum of 15 meters from the radiotelegraph antenna.
- b) An emergency reserve antenna system must be provided for communications on 156.8 MHz.
- c) The antenna must be vertically polarized and as non-directional and efficient as is practicable for the transmission and reception of ground waves over seawater.
- d) All antennas must be tested and the operational results logged at least once during each voyage.

48- Where must the principal radiotelephone operating position be installed in a ship station?

- a) At the principal radio operating position of the vessel.
- b) In the room or an adjoining room from which the ship is normally steered while at sea.
- c) In the chart room, master's quarters or wheel house.
- d) At the level of the main wheel house or at least one deck above the ship's main deck.

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49- What are the technical requirements of a VHF antenna system aboard a vessel?

- a) The antenna must provide an amplification factor of at least 2.1 dbi.
- b) The antenna must be vertically polarized and non-directional.
- c) The antenna must be capable of radiating a signal a minimum of 150 nautical miles on 156.8 MHz.
- d) The antenna must be constructed of corrosion-proof aluminum and capable of proper operation during an emergency.

50- How often must the radiotelephone installation aboard a small passenger boat be inspected?

- a) Equipment inspections are required at least once every 12 months.
- b) When the vessel is first placed in service and every 2 years thereafter.
- c) At least once every five years.
- d) A minimum of every 3 years, and when the ship is within 75 statute miles of an FCC field office.

51- How far from land may a small passenger vessel operate when equipped only with a VHF radiotelephone installation?

- a) No more than 20 nautical miles from the nearest land if within the range of a VHF public coast or U.S. Coast Guard station.
- b) No more than 100 nautical miles from the nearest land.
- c) No more than 20 nautical miles unless equipped with a reserve power supply.
- d) The vessel must remain within the communications range of the nearest coast station at all times.

52- What is the minimum transmitter power level required by the FCC for a medium frequency transmitter aboard a compulsorily fitted vessel?

- a) At least 100 watts single side band suppressed carrier power.
- b) At least 60 watts PEP.
- c) The power predictably needed to communicate with the nearest public coast station operating on 2182 kHz.
- d) At least 25 watts delivered into 50 ohms effective resistance when operated with a primary voltage of 13.6 volts DC.

53- What is a Class "A" EPIRB?

- a) An alerting device notifying mariners of imminent danger.
- b) A satellite-based maritime distress and safety alerting system.
- c) An automatic, battery-operated emergency position indicating radiobeacon that floats free of a sinking ship.
- d) A high efficiency audio amplifier.

54- What are the radio watch requirements of a voluntary ship?

- a) While not required to operate the ship radio station, general purpose watches must be maintained if they do.
- b) Radio watches must be maintained on 500 kHz, 2182 kHz and 156.800 MHz, but no station logs are required.
- c) Radio watches are optional but logs must be maintained of all medium, high frequency and VHF radio operation.
- d) Radio watches must be maintained on the 156-158 MHz, 1600-4000 KHz and 4000-23000 kHz bands.

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55- What is the Automated Mutual-Assistance Vessel Rescue System?

- a) A voluntary organization of mariners who maintain radio watch on 500 kHz, 2182 kHz and 156.800 MHz.
- b) An international system operated by the Coast Guard providing coordination of search and rescue efforts.
- c) A coordinated radio direction finding effort between the Federal Communications Commission and U.S. Coast Guard to assist ships in distress.
- d) A satellite-based distress and safety alerting program operated by the U.S. Coast Guard.

56- What is a bridge-to-bridge station?

- a) An internal communications system linking the wheel house with the ship's primary radio operating position and other integral ship control points.
- b) A inland waterways and coastal radio station serving ship stations operating within the United States.
- c) A portable ship station necessary to eliminate frequent application to operate a ship station on board different vessels.
- d) A VHF radio station located on a ship's navigational bridge or main control station that is used only for navigational communications.

57- Which of the following statements is true as to ships subject to the Safety Convention?

- a) A cargo ship participates in international commerce by transporting goods between harbors.
- b) Passenger ships carry six or more passengers for hire as opposed to transporting merchandise.
- c) A cargo ship is any ship that is not licensed or certificated to carry more than 12 passengers.
- d) Cargo ships are FCC inspected on an annual basis while passenger ships undergo U.S. Coast Guard inspections every six months.

58- What is a "passenger carrying vessel" when used in reference to the Great Lakes Radio Agreement?

- a) A vessel that is licensed or certificated to carry more than twelve passengers.
- b) Any ship carrying more than six passengers for hire.
- c) Any ship, the principal purpose of which is to ferry persons on the Great Lakes and other inland waterways.
- d) A ship which is used primarily for transporting persons and goods to and from domestic harbors or ports.

59- How do the FCC's Rules define a power-driven vessel?

- a) A ship that is not manually propelled or under sail.
- b) Any ship propelled by machinery.
- c) A watercraft containing a motor with a power rating of at least 3 HP.
- d) A vessel moved by mechanical equipment at a rate of 5 knots or more.

60- How do the rules define "navigational communications"?

- a) Safety communications pertaining to the maneuvering or directing of vessels movements.
- b) Important communications concerning the routing of vessels during periods of meteorological crisis.
- c) Telecommunications pertaining to the guidance of maritime vessels in hazardous waters.
- d) Radio signals consisting of weather, sea conditions, notices to mariners and potential dangers.

61- What traffic management service is operated by the U.S. Coast Guard in certain designated water areas to prevent ship collisions, groundings and environmental harm?

- a) Water safety management bureau (WSMB).
- b) Vessel traffic service (VTS).
- c) Ship movement and safety agency (SMSA).
- d) Interdepartmental harbor and port patrol (IHPP).

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62- What action must be taken by the owner or operator of a vessel who changes its name?

- a) A Request for Ship License Modification (RSLM) must be submitted to the FCC's licensing facility.
- b) The Engineer-in-Charge of the nearest FCC field office must be informed.
- c) The Federal Communications Commission in Gettysburg, PA, must be notified in writing.
- d) Written confirmation must be obtained from the U.S. Coast Guard.

63- When may a shipboard radio operator make a transmission in the maritime services not addressed to a particular station or stations?

- a) General CQ calls may only be made when the operator is off duty and another operator is on watch.
- b) Only during the transmission of distress, urgency or safety signals or messages, or to test the station.
- c) Only when specifically authorized by the master of the ship.
- d) When the radio officer is more than 12 miles from shore and the nearest ship or coast station is unknown.

64- What is the order of priority of radiotelephone communications in the maritime services?

- a) Distress calls and signals, followed by communications preceded by urgency and safety signals.
- b) Alarm, radio-direction finding, and health and welfare communications.
- c) Navigation hazards, meteorological warnings, priority traffic
- d) Government precedence, messages concerning safety of life and protection of property and traffic concerning grave and imminent danger.

65- What should a station operator do before making a transmission?

- a) Transmit a general notification that the operator wishes to utilize the channel.
- b) Except for the transmission of distress calls, determine that the frequency is not in use by monitoring the frequency before transmitting.
- c) Check transmitting equipment to be certain it is properly calibrated.
- d) Ask if the frequency is in use.

66- What is the proper procedure for testing a radiotelephone installation?

- a) Transmit the station's call sign, followed by the word "test" on the radio channel being used for the test.
- b) A dummy antenna must be used to insure the test will not interfere with ongoing communications.
- c) Permission for the voice test must be requested and received from the nearest public coast station.
- d) Short tests must be confined to a single working frequency and must never be conduct

67- What is the minimum radio operator requirement for ships subject to the Great Lakes Radio Agreement?

- a) Third Class Radiotelegraph Operator's Certificate.
- b) General Radiotelephone Operator License.
- c) Marine Radio Operator Permit.
- d) Restricted Radiotelephone Operator Permit.

68- What FCC authorization is required to operate a VHF transmitter on board a vessel voluntarily equipped with radio and sailing on a domestic voyage?

- a) No radio operator license or permit is required.
- b) Marine Radio Operator Permit.
- c) Restricted Radiotelephone Operator Permit.
- d) General Radiotelephone Operator License.

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69- On what frequencies does the Communications Act require radio watches by compulsory radiotelephone stations?

- a) Watches are required on 500 kHz and 2182 kHz.
- b) Continuous watch is required on 2182 kHz only.
- c) On all frequencies between 405-535 kHz, 1605-3500 kHz and 156-162 MHz.
- d) Watches are required on 2182 kHz and 156.800 MHz.

70- What is the purpose of the international radiotelephone alarm signal?

- a) To notify nearby ships of the loss of a person or persons overboard.
- b) To call attention to the upcoming transmission of an important meteorological warning.
- c) To alert radio officers monitoring watch frequencies of a forthcoming distress, urgency or safety message.
- d) To actuate automatic devices giving an aural alarm to attract the attention of the operator where there is no listening watch on the distress frequency.

71- What is the proper procedure for making a correction in the station log?

- a) The ship's master must be notified, approve and initial all changes to the station log.
- b) The mistake may be erased and the correction made and initialled only by the radio operator making the original error.
- c) The original person making the entry must strike out the error, initial the correction and indicate the date of correction.
- d) Rewrite the new entry in its entirety directly below the incorrect notation and initial the change.

72- What authorization is required to operate a 350 watt PEP maritime voice station on frequencies below 30 MHz aboard a small non-commercial pleasure vessel?

- a) Third Class Radiotelegraph Operator's Certificate.
- b) General Radiotelephone Operator License.
- c) Restricted Radiotelephone Operator Permit.
- d) Marine Radio Operator Permit.

73- What is selective calling?

- a) A coded transmission directed to a particular ship station.
- b) A radiotelephony communication directed at a particular ship station.
- c) An electronic device which uses a discriminator circuit to filter out unwanted signals.
- d) A telegraphy transmission directed only to another specific radiotelegraph station.

74- In the International Phonetic Alphabet, the letters D, N, and O are represented by the words:

- a) Delta, November, Oscar.
- b) Denmark, Neptune, Oscar.
- c) December, Nebraska, Olive.
- d) Delta, Neptune, Olive.

75- When is it legal to transmit high power on channel 13?

- a) Failure of vessel being called to respond.
- b) In a blind situation such as rounding a bend in a river.
- c) During an emergency.
- d) All of these.

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76- What must be in operation when no operator is standing watch on a compulsory radio equipped vessel while out at sea?

- a) An auto alarm.
- b) Indicating Radio Beacon signals.
- c) Distress-Alert signal device.
- d) Radiotelegraph transceiver set to 2182 kHz.

77- When may a bridge-to-bridge transmission be more than 1 watt?

- a) When broadcasting a distress message.
- b) When rounding a bend in a river or traveling in a blind spot.
- c) When calling the Coast Guard.
- d) When broadcasting a distress message and rounding a bend in a river or traveling in a blind spot.

78- When are EPIRB batteries changed?

- a) After emergency use; after battery life expires.
- b) After emergency use; as per manufacturers instructions marked on outside of transmitter with month and year replacement date.
- c) After emergency use; every 12 months when not used.
- d) Whenever voltage drops to less than 50% of full charge.

79- The radiotelephone distress message consists of:

- a) MAYDAY spoken three times, call sign and name of vessel in distress.
- b) Particulars of its position, latitude and longitude, and other information which might facilitate rescue, such as length, color and type of vessel, number of persons on board.
- c) Nature of distress and kind of assistance desired.
- d) All of these.

80- If a ship sinks, what device is designed to float free of the mother ship, is turned on automatically and transmits a distress signal?

- a) EPIRB on 121.5 MHz/243 MHz or 406.025 MHz.
- b) EPIRB on 2182 kHz and 405.025 kHz.
- c) Bridge-to-bridge transmitter on 2182 kHz.
- d) Auto alarm keyer on any frequency.

81- International laws and regulations require a silent period on 2182 kHz:

- a) For three minutes immediately after the hour.
- b) For three minutes immediately after the half-hour.
- c) For the first minute of every quarter-hour.
- d) For three minutes immediately after the hour and the half-hour.

82- How should the 2182 kHz auto-alarm be tested?

- a) On a different frequency into antenna.
- b) On a different frequency into dummy load.
- c) On 2182 KHz into antenna.
- d) Only under U.S. Coast Guard authorization.

83- What is the average range of VHF marine transmissions?

- a) 150 miles.
- b) 50 miles.
- c) 20 miles.
- d) 10 miles.

FCC Element-1

84- A ship station using VHF bridge-to-bridge Channel 13:

- a) May be identified by call sign and country of origin.
- b) Must be identified by call sign and name of vessel.
- c) May be identified by the name of the ship in lieu of call sign.
- d) Does not need to identify itself within 100 miles from shore.

85- When using a SSB station on 2182 kHz or VHF-FM on Channel 16:

- a) Preliminary call must not exceed 30 seconds.
- b) If contact is not made, you must wait at least 2 minutes before repeating the call.
- c) Once contact is established you must switch to a working frequency.
- d) All of these.

86- By international agreement which ships must carry radio equipment for the safety of life at sea?

- a) Cargo ships of more than 300 gross tons and vessels carrying more than 12 passengers.
- b) All ships traveling more than 100 miles out to sea.
- c) Cargo ships of more than 100 gross tons and passenger vessels on international deep-sea voyages.
- d) All cargo ships of more than 100 gross tons.

87- What is the most important practice that a radio operator must learn?

- a) Monitor the channel before transmitting.
- b) Operate with lowest power necessary.
- c) Test a radiotelephone transmitter daily.
- d) Always listen to 121.5 MHz.

88- Portable ship radio transceivers operated as associated ship units:

- a) Must be operated on the safety and calling frequency 156.8 MHz (Channel 16) or a VHF intership frequency.
- b) May not be used from shore without a separate license.
- c) Must only communicate with the ship station with which it is associated or with associated portable ship units.
- d) All of these.

89- Which is a radiotelephony calling and distress frequency?

- a) 500 kHz.
- b) 2182 kHz.
- c) 156.3 MHz.
- d) 3113 kHz.

90- What is the priority of communications?

- a) Distress, urgency, safety and radio direction finding.
- b) Safety, distress, urgency and radio direction finding.
- c) Distress, safety, radio direction finding, search and rescue.
- d) Radio direction finding, distress and safety.

91- Cargo ships of 300 to 1600 gross tons should be able to transmit a minimum range of:

- a) 75 miles.
- b) 150 miles.
- c) 200 miles.
- d) 300 miles.

FCC Element-1

92- Radiotelephone stations required to keep logs of their transmissions must include:

- a) Station, date and time.
- b) Name of operator on duty.
- c) Station call signs with which communication took place.
- d) All of these.

93- Each cargo ship of the United States which is equipped with a radiotelephone station for compliance with Part II of Title III of the Communications Act shall while being navigated outside of a harbor or port keep a continuous and efficient watch on:

- a) 2182 kHz.
- b) 156.8 MHz.
- c) 2182 kHz and 156.8 MHz.
- d) Monitor all frequencies within the 2000 kHz to 27500 kHz band used for communications.

94- What call should you transmit on channel 16 if your ship is sinking?

- a) SOS three times.
- b) MAYDAY three times.
- c) PAN three times.
- d) URGENCY three times.

95- Under normal circumstances, what do you do if the transmitter aboard your ship is operating off-frequency, overmodulating or distorting?

- a) Reduce to low power.
- b) Stop transmitting.
- c) Reduce audio volume level.
- d) Make a notation in station operating log.

96- The urgency signal has lower priority than:

- a) Direction finding.
- b) Distress.
- c) Safety.
- d) Security.

97- The primary purpose of bridge-to-bridge communications is:

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

98- What is the international VHF digital selective calling channel?

- a) 2182 kHz.
- b) 156.35 MHz.
- c) 156.525 MHz.
- d) 500 kHz.

99- When your transmission is ended and you expect no response, say:

- a) BREAK.
- b) OVER.
- c) ROGER.
- d) CLEAR.

FCC Element-1

100- When attempting to contact other vessels on Channel 16:

- a) Limit calling to 30 seconds.
- b) If no answer is received, wait 2 minutes before calling vessel again.
- c) Channel 16 is used for emergency calls only.
- d) Limit calling to 30 seconds and if no answer is received, wait 2 minutes before calling vessel again.

101- When a message has been received and will be complied with, say:

- a) MAYDAY.
- b) OVER.
- c) ROGER.
- d) WILCO.

102- The FCC may suspend an operator license upon proof that the operator:

- a) Has assisted another to obtain a license by fraudulent means.
- b) Has willfully damaged transmitter equipment.
- c) Has transmitted obscene language.
- d) Any of these.

103- What channel must compulsorily equipped vessels monitor at all times in the open sea?

- a) Channel 8, 156.4 MHz.
- b) Channel 16, 156.8 MHz.
- c) Channel 22A, 157.1 MHz.
- d) Channel 6, 156.3 MHz.

104- When testing is conducted on 2182 kHz or 156.8 MHz testing should not continue for more than ?? in any 5 minute period.

- a) 10 seconds.
- b) 1 minute.
- c) 2 minutes.
- d) None of these.

105- Which VHF channel is used only for digital selective calling?

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

106- VHF ship station transmitters must have the capability of reducing carrier power to:

- a) 1 watt.
- b) 10 watts.
- c) 25 watts.
- d) 50 watts.

107- The system of substituting words for corresponding letters is called:

- a) International code system.
- b) Phonetic system.
- c) Mnemonic system.
- d) 10 codes.

FCC Element-1

108- How long should station logs be retained when there are no entries relating to distress or disaster situations?

- a) For a period of three years from the date of entry unless notified by the FCC.
- b) Until authorized by the Commission in writing to destroy them.
- c) Indefinitely, or until destruction is specifically authorized by the U.S. Coast Guard.
- d) For a period of one year from the date of entry.

109- The auto alarm device for generating signals shall be:

- a) Tested monthly using a dummy load.
- b) Tested every three months using a dummy load.
- c) Tested weekly using an dummy load.
- d) None of these.

110- Licensed radiotelephone operators are not required on board ships for:

- a) Voluntarily equipped ship stations on domestic voyages operating on VHF channels.
- b) Ship radar, provided the equipment is non-tunable, pulse type magnetron and can be operated by means of exclusively external controls.
- c) Installation of a VHF transmitter in a ship station where the work is performed by or under the immediate supervision of the licensee of the ship station.
- d) Any of these.

111- Under what license are hand-held transceivers covered when used on board a ship at sea?

- a) The ship station license.
- b) Under the authority of the licensed operator.
- c) Walkie-talkie radios are illegal to use at sea.
- d) No license is needed.

112- What should an operator do to prevent interference?

- a) Turn off transmitter when not in use.
- b) Monitor channel before transmitting.
- c) Transmissions should be as brief as possible.
- d) Monitor channel before transmitting and make transmissions as brief as possible.

113- Identify a ship station's radiotelephone transmissions by:

- a) Country of registration.
- b) Call sign.
- c) Port of registry.
- d) Name of vessel operator.

114- Maritime emergency radios should be tested:

- a) Before each voyage.
- b) Weekly while the ship is at sea.
- c) Every 24 hours.
- d) Before each voyage and weekly while the ship is at sea.

115- The URGENCY signal concerning the safety of a ship, aircraft or person shall be sent only on authority of:

- a) Master of ship.
- b) Person responsible for mobile station.
- c) Either Master of ship or person responsible for mobile station.
- d) An FCC licensed operator.

FCC Element-1

116- Survival craft emergency transmitter tests may NOT be made:

- a) For more than 10 seconds.
- b) Without using station call sign, followed by the word "test."
- c) Within 5 minutes of a previous test.
- d) All of these.

117- International laws and regulations require a silent period on 2182 kHz:

- a) For three minutes immediately after the hour.
- b) For three minutes immediately after the half-hour.
- c) For the first minute of every quarter-hour.
- d) For three minutes immediately after the hour and half-hour.

118- How should the 2182 kHz auto alarm be tested?

- a) On a different frequency into antenna.
- b) On a different frequency into dummy load.
- c) On 2182 kHz into dummy load.
- d) On 2182 kHz into antenna.

119- Each cargo ship of the United States which is equipped with a radiotelephone station for compliance with the Safety Convention shall, while at sea:

- a) Not transmit on 2182 kHz during emergency conditions.
- b) Keep the radiotelephone transmitter operating at full 100% carrier power for maximum reception on 2182 KHz.
- c) Reduce peak envelope power on 156.8 MHz during emergencies.
- d) Keep continuous watch on 2182 kHz using a watch receiver having a loudspeaker and auto alarm distress frequency watch receiver.

120- What is the procedure for testing a 2182 kHz ship radiotelephone transmitter with full carrier power while out at sea?

- a) Reduce to low power, then transmit test tone.
- b) Switch transmitter to another frequency before testing.
- c) Simply say: "This is (call letters) testing." If all meters indicate normal values, it is assumed transmitter is operating properly.
- d) It is not permitted to test on the air.

121- If your transmitter is producing spurious harmonics or is operating at a deviation from the technical requirements of the station authorization:

- a) Continue operating until returning to port.
- b) Repair problem within 24 hours.
- c) Cease transmission.
- d) Reduce power immediately.

122- As an alternative to keeping watch on a working frequency in the band 1600-4000 kHz, an operator must tune station receiver to monitor 2182 kHz:

- a) At all times.
- b) During distress calls only.
- c) During daytime hours of service.
- d) During the silence periods each hour.

FCC Element-1

123- An operator or maintainer must hold a General Radiotelephone Operator License to:

- a) Adjust or repair FCC licensed transmitters in the aviation, maritime and international fixed public radio services.
- b) Operate voluntarily equipped ship maritime mobile or aircraft transmitters with more than 1,000 watts of peak envelope power.
- c) Operate radiotelephone equipment with more than 1,500 watts of peak envelope power on cargo ships over 300 gross tons.
- d) All of these.

124- What is the radiotelephony calling and distress frequency?

- a) 500 kHz.
- b) 500R122JA.
- c) 2182 kHz.
- d) 2182R2647.

125- If a ship radio transmitter signal becomes distorted:

- a) Cease operations.
- b) Reduce transmitter power.
- c) Use minimum modulation.
- d) Reduce audio amplitude.

126- Tests of survival craft radio equipment, EXCEPT EPIRBs and two-way radiotelephone equipment, must be conducted:

- a) At weekly intervals while the ship is at sea.
- b) Within 24 hours prior to departure when a test has not been conducted within a week of departure.
- c) At weekly intervals while the ship is at sea and within 24 hours prior to departure when a test has not been conducted within a week of departure.
- d) When required by the Commission.

127- Each cargo ship of the United States which is equipped with a radiotelephone station for compliance with Part II of Title III of the Communications Act shall while being navigated outside of a harbor or port keep a continuous watch on:

- a) 2182 kHz.
- b) 156.8 Mhz.
- c) 2182 kHz and 156.8 MHz.
- d) Cargo ships are exempt from radio watch regulations.

128- When may you test a radiotelephone transmitter on the air?

- a) Between midnight and 6:00 AM local time.
- b) Only when authorized by the Commission.
- c) At any time as necessary to assure proper operation.
- d) After reducing transmitter power to 1 watt.

129- What is the required daytime range of a radiotelephone station aboard a 900 ton ocean going cargo vessel?

- a) 25 miles.
- b) 50 miles.
- c) 150 miles.
- d) 500 miles.

FCC Element-1

130- What do you do if the transmitter aboard your ship is operating off-frequency, overmodulating or distorting?

- a) Reduce to low power.
- b) Stop transmitting.
- c) Reduce audio volume level.
- d) Make a notation in station operating log.

131- What is the authorized frequency for an on-board ship repeater for use with a mobile transmitter operating at 467.750 MHz?

- a) 457.525 MHz.
- b) 467.775 MHz.
- c) 467.800 MHz.
- d) 467.825 MHz.

132- Survival craft EPIRBs are tested:

- a) With a manually activated test switch.
- b) With a dummy load having the equivalent impedance of the antenna affixed to the EPIRB.
- c) With radiation reduced to a level not to exceed 25 microvolts per meter.
- d) All of these.

133- What safety signal call word is spoken three times, followed by the station call letters spoken three times, to announce a storm warning, danger to navigation, or special aid to navigation?

- a) PAN.
- b) MAYDAY.
- c) SECURITY.
- d) SAFETY.

134- When should both the call sign and the name of the ship be mentioned during radiotelephone transmissions?

- a) At all times.
- b) During an emergency.
- c) When transmitting on 2182 kHz.
- d) Within 100 miles of any shore.

135- How often is the auto alarm tested?

- a) During the 5-minute silent period.
- b) Monthly on 121.5 MHz using a dummy load.
- c) Weekly on frequencies other than the 2182 kHz distress frequency using a dummy antenna.
- d) Each day on 2182 kHz using a dummy antenna.

136- One nautical mile is approximately equal to how many statute miles?

- a) 1.61 statute miles.
- b) 1.83 statute miles.
- c) 1.15 statute miles.
- d) 1.47 statute miles.

137- A reserve power source must be able to power all radio equipment plus an emergency light system for how long?

- a) 24 hours.
- b) 12 hours.
- c) 8 hours.
- d) 6 hours.

FCC Element-1

138- Frequencies used for portable communications on board ship:

- a) 9300-9500 MHz.
- b) 1636.5-1644 MHz.
- c) 2900-3100 MHz.
- d) 457.525-467.825 MHz.

139- In the FCC rules the frequency band from 30 to 300 MHz is also known as:

- a) Very High Frequency (VHF).
- b) Ultra High Frequency (UHF).
- c) Medium Frequency (MF).
- d) High Frequency (HF).

140- What channel must VHF-FM equipped vessels monitor at all times the station is operated?

- a) Channel 8; 156.4 MHz.
- b) Channel 16; 156.8 MHz.
- c) Channel 5A; 156.25 MHz.
- d) Channel 1A; 156.07 MHz.

141- When testing is conducted within the 2170-2194 kHz and 156.75- 156.85 MHz. bands, transmissions should not continue for more than ?? in any 15 minute period.

- a) 30 seconds.
- b) 1 minute.
- c) 5 minutes.
- d) No limitation.

142- What emergency radio testing is required for cargo ships?

- a) Tests must be conducted weekly while ship is at sea.
- b) Full power carrier tests into dummy load.
- c) Specific gravity check in lead acid batteries, or voltage under load for dry cell batteries.
- d) All of these.

143- The master or owner of a vessel must apply how many days in advance for an FCC ship inspection?

- a) 60 days.
- b) 30 days.
- c) 3 days.
- d) 24 hours.

144- Marine transmitters should be modulated between:

- a) 75%-100%.
- b) 70%-105%
- c) 85%-100%
- d) 75%-120%

145- What is a good practice when speaking into a microphone in a noisy location?

- a) Overmodulation.
- b) Change phase in audio circuits.
- c) Increase monitor audio gain.
- d) Shield microphone with hands.

FCC Element-1

146- When pausing briefly for station copying message to acknowledge, say:

- a) BREAK.
- b) OVER.
- d) WILCO.
- d) STOP.

147- Overmodulation is often caused by:

- a) Turning down audio gain control.
- b) Station frequency drift.
- c) Weather conditions.
- d) Shouting into microphone.

148- To indicate a response is expected, say:

- a) WILCO.
- b) ROGER.
- c) OVER.
- d) BREAK.

149- When all of a transmission has been received, say:

- a) ATTENTION.
- b) ROGER.
- c) RECEIVED.
- d) WILCO.

150- What information must be included in a DISTRESS message?

- a) Name of vessel.
- b) Location.
- c) Type of distress and specifics of help requested.
- d) All of these.

151- The maritime MF radiotelephone silence periods begin at _____ and _____ minutes past the UTC hour.

- a) :15 , :45.
- b) :00 , :30.
- c) :20 , :40.
- d) :05 , :35.

152- A marine public coast station operator may not charge a fee for what type of communication?

- a) Port Authority transmissions.
- b) Storm updates.
- c) Distress.
- d) All of these.

153- Which of the following represent the first three letters of the phonetic alphabet?

- a) Alpha Bravo Charlie.
- b) Adam Baker Charlie.
- c) Alpha Baker Crystal.
- d) Adam Brown Chuck.

FCC Element-1

154- Two way communications with both stations operating on the same frequency is:

- a) Radiotelephone.
- b) Duplex.
- c) Simplex.
- d) Multiplex.

155- When a ship is sold:

- a) New owner must apply for a new license.
- b) FCC inspection of equipment is required.
- c) Old license is valid until it expires.
- d) Continue to operate; license automatically transfers with ownership.

156- What is the second in order of priority?

- a) URGENT.
- b) DISTRESS.
- c) SAFETY.
- d) MAYDAY.

157- Portable ship units, hand-helds or walkie-talkies used as an associated ship unit:

- a) Must operate with 1 watt and be able to transmit on Channel 16.
- b) May communicate only with the mother ship and other portable units and small boats belonging to mother ship.
- c) Must not transmit from shore or to other vessels.
- d) All of these.

158- The HF (high frequency) band is:

- a) 3 - 30 MHz.
- b) 3 - 30 GHz.
- c) 30 - 300 MHz.
- d) 300 - 3000 MHz.

159- Omega operates in what frequency band?

- a) Below 3 kHz.
- b) 3 - 30 kHz.
- c) 30 - 300 kHz.
- d) 300 -3000 kHz.

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

- a) 500 watts.
- b) 250 watts.
- c) 100 watts.
- d) 25 watts.

161- Loran C operates in what frequency band?

- a) VHF; 30 -300 MHz.
- b) HF; 3 30 MHz.
- c) MF; 300 - 3000 kHz.
- d) LF; 30-300 kHz.

162- What has most priority:

- a) URGENT.
- b) DISTRESS.
- c) SAFETY.
- d) SECURITY.

FCC Element-1

163- When and how may Class A and B EPIRBs be tested?

- a) Within the first 5 minutes of the hour; tests not to exceed 3 audible sweeps or one second, whichever is longer.
- b) Within first 3 minutes of hour; tests not to exceed 30 seconds.
- c) Within first 1 minute of hour, test not to exceed 1 minute.
- d) At any time ship is at sea.

164- When is the Silent Period on 2182 kHz, when only emergency communications may occur?

- a) One minute at the beginning of every hour and half hour.
- b) At all times.
- c) No designated period; silence is maintained only when a distress call is received.
- d) Three minutes at the beginning of every hour and half hour.

165- What is the frequency range of UHF?

- a) 0.3 to 3 GHz.
- b) 0.3 to 3 MHz.
- c) 3 to 30 kHz.
- d) 30 to 300 MHz.

166- A room temperature of + 30.0 degrees Celsius is equivalent to how many degrees Fahrenheit?

- a) 104.
- b) 83.
- c) 95.
- d) 86.

167- Atmospheric noise or static is not a great problem:

- a) At frequencies below 20 MHz.
- b) At frequencies below 5 MHz.
- c) At frequencies above 1 MHz.
- d) At frequencies above 30 MHz.

168- Frequencies which have substantially straight-line propagation characteristics similar to light waves are:

- a) Frequencies below 500 kHz.
- b) Frequencies between 500 kHz and 1,000 kHz.
- c) Frequencies between 1,000 kHz and 3,000 kHz.
- d) Frequencies above 50,000 kHz.

169- In the International Phonetic Alphabet, the letters E, M, and S are represented by the words:

- a) Echo, Michigan, Sonar.
- b) Equator, Mike, Sonar.
- c) Echo, Mike, Sierra.
- d) Element, Mister, Scooter.

170- What is the international radiotelephone distress call?

- a) "SOS, SOS, SOS; THIS IS;" followed by the call sign of the station (repeated 3 times).
- b) "MAYDAY, MAYDAY, MAYDAY; THIS IS;" followed by the call sign (or name, if no call sign assigned) of the mobile station in distress, spoken three times.
- c) For radiotelephone use, any words or message which will attract attention may be used.
- d) The alternating two tone signal produced by the radiotelephone alarm signal generator.

FCC Element-1

ANSWER KEY:

1- A	44- A	87- A	130- B
2- C	45- C	88- D	131- A
3- A	46- A	89- B	132- D
4- B	47- C	90- A	133- C
5- B	48- B	91- B	134- B
6- D	49- B	92- D	135- C
7- A	50- C	93- C	136- C
8- D	51- A	94- B	137- D
9- B	52- B	95- B	138- D
10- C	53- C	96- B	139- A
11- C	54- A	97- D	140- B
12- A	55- B	98- C	141- A
13- C	56- D	99- D	142- D
14- A	57- C	100- D	143- C
15- B	58- B	101- D	144- A
16- C	59- B	102- D	145- D
17- C	60- A	103- B	146- A
18- D	61- B	104- A	147- D
19- D	62- C	105- A	148- C
20- C	63- B	106- A	149- B
21- A	64- A	107- B	150- D
22- C	65- B	108- D	151- B
23- C	66- A	109- C	152- C
24- B	67- C	110- D	153- A
25- D	68- A	111- A	154- C
26- B	69- D	112- D	155- A
27- A	70- D	113- B	156- A
28- B	71- C	114- D	157- D
29- C	72- C	115- C	158- A
30- B	73- A	116- D	159- B
31- C	74- A	117- D	160- D
32- B	75- D	118- B	161- D
33- C	76- A	119- D	162- B
34- A	77- D	120- C	163- A
35- C	78- B	121- C	164- D
36- C	79- D	122- A	165- A
37- A	80- A	123- D	166- D
38- D	81- D	124- C	167- D
39- A	82- B	125- A	168- D
40- B	83- C	126- C	169- C
41- B	84- C	127- C	170- B
42- A	85- D	128- C	
43- D	86- A	129- C	