

§ 13.203 Examination elements.

(a) A written examination (written Element) must prove that the examinee possesses the operational and technical qualifications to perform the duties required by a person holding that class of commercial radio operator license. Each written examination must be comprised of a question set as follows:

(1) Element 1 (formerly Elements 1 and 2): Basic radio law and operating practice with which every maritime radio operator should be familiar. 24 questions concerning provisions of laws, treaties, regulations, and operating procedures and practices generally followed or required in communicating by means of radiotelephone stations. The minimum passing score is 18 questions answered correctly.

(2) Element 3: General radiotelephone. 76 questions concerning electronic fundamentals and techniques required to adjust, repair, and maintain radio transmitters and receivers at stations licensed by the FCC in the aviation, maritime, and international fixed public radio services. The minimum passing score is 57 questions answered correctly.

(3) Element 5: Radiotelegraph operating practice. 50 questions concerning radio operating procedures and practices generally followed or required in communicating by means of radiotelegraph stations primarily other than in the maritime mobile services of public correspondence. The minimum passing score is 38 questions answered correctly.

(4) Element 6: Advanced radiotelegraph. 100 questions concerning technical, legal and other matters applicable to the operation of all classes of radiotelegraph stations, including operating procedures and practices in the maritime mobile services of public correspondence, and associated matters such as radio navigational aids, message traffic routing and accounting, etc. The minimum passing score is 75 questions answered correctly.

(5) Element 7: GMDSS radio operating practices. 76 questions concerning GMDSS radio operating procedures and practices sufficient to show detailed practical knowledge of the operation of all GMDSS sub-systems and

equipment; ability to send and receive correctly by radio telephone and narrow-band direct-printing telegraphy; detailed knowledge of the regulations applying to radio communications, knowledge of the documents relating to charges for radio communications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio; sufficient knowledge of English to be able to express oneself satisfactorily both orally and in writing; knowledge of and ability to perform each function listed in § 80.1081; and knowledge covering the requirements set forth in IMO Assembly Resolution on Training for Radio Personnel (GMDSS), Annex 3. The minimum passing score is 57 questions answered correctly.

(6) Element 8: Ship radar techniques. 50 questions concerning specialized theory and practice applicable to the proper installation, servicing and maintenance of ship radar equipment in general use for marine navigational purposes. The minimum passing score is 38 questions answered correctly.

(7) Element 9: GMDSS radio maintenance practices and procedures. 50 questions concerning the requirements set forth in IMO Assembly on Training for Radio Personnel (GMDSS), Annex 5 and IMO Assembly on Radio Maintenance Guidelines for the Global Maritime Distress and Safety System related to Sea Areas A3 and A4. The minimum passing score is 38 questions answered correctly.

(b) A telegraphy examination (telegraphy Elements) must prove that the examinee has the ability to send correctly by hand and to receive correctly by ear texts in the international Morse code at not less than the prescribed speed, using all the letters of the alphabet, numerals 0–9, period, comma, question mark, slant mark, and prosigns *AR*, *BT*, and *SK*.

(1) Telegraphy Element 1: 16 code groups per minute.

(2) Telegraphy Element 2: 20 words per minute.

(3) Telegraphy Element 3: 20 code groups per minute.

(4) Telegraphy Element 4: 25 words per minute.