



## Report on multiple-choice Question Paper

Paper: 7730-001 Novice Radio Amateurs' Examination

Examination date: 10 June 2002

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
1 Receivers and receiving techniques	5	<p>In this section there were three questions that were not well answered. Only half of the candidates knew that the Receiver Incremental Tuning (RIT) control of a transceiver is used to adjust the receive frequency without changing the transmit frequency. 36% of the candidates thought that it adjusted the transmit frequency, evidently confusing it with the XIT control.</p> <p>44% of the candidates did not realise that it is the tuned circuit between the antenna and the detector stage that selects the frequency of the incoming signal in a simple two-stage t.r.f. receiver.</p> <p>When asked from a list of options which stage of a receiver determines its selectivity, most candidates chose the frequency changer or the detector rather than the i.f. amplifier.</p>
2 Components, applications and units	3	All of the questions were very well answered by most of the candidates.
3 Measurements	4	The only question that caused some candidates difficulty asked on which range a moving-coil multimeter should be switched when not in use. 32% of the candidates chose an ohms range instead of a high d.c. voltage range. Leaving the meter on an ohms range would cause the internal battery to run down if the leads were accidentally shorted.
4 Propagation and antennas	5	All of the questions on propagation and antennas were well answered. Most of the candidates had a good understanding of the topic.
5 Transmitters and transmitting techniques	10	<p>This section was generally well done by most of the candidates. Some candidates did not understand the term 'keyed stage', referring to the buffer stage in the block schematic diagram of a simple transmitter.</p> <p>About a quarter of the candidates thought that interference caused to radio, computers, audio systems and telephones is referred to as TVI rather than as RFI.</p>
6 Operating techniques	6	<p>A question that regularly causes many candidates difficulty was on the action to take when called by an unidentified station that uses bad language and abuse. 62% of the candidates said they would tell the station he would be reported to the Radiocommunications Agency. To communicate with such a station would be unlawful as the Licence only permits communication between other licensed amateur stations and it cannot be known whether the station is licensed. The correct action to take in such situations is to totally ignore the occurrence and continue operating without comment.</p> <p>48% of the candidates did not recognise the call sign 2M1ZZZ/M as operating from a vehicle in Scotland. Many candidates thought the station was on the Isle of Man.</p>

continued overleaf

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
7 Station layout	1	Well done. 90% of the candidates knew to plug the Morse key into the transmitter.
8 Construction	1	Nearly all of the candidates were able to recognise a good soldered joint.
9 Safety	2	Very well done, although 8% of the candidates said they would first call an ambulance instead of turning off the power if they found an electric shock victim.
10 Licensing conditions	8	<p>The questions on licensing conditions were not as well attempted in the examination as they have been in previous papers, four of the eight questions requiring comment.</p> <p>40% of the candidates did not know that it is only the Licensee of an Intermediate Licence who may operate the station [BR68/I ¶2(8)]. Note: this limitation also applies to the Foundation Licence.</p> <p>In a question about the type of messages that may be sent, 44% of the candidates correctly knew that they should be about technical investigations or remarks of a personal character [BR88/I ¶1(2)(a)]. 32% of the candidates thought that the language they used had to be approved by the Secretary of State.</p> <p>38% of candidates thought that it was the frequency, rather than the frequency band that was required to be entered in the station log [BR68/I ¶6(1)(c)].</p> <p>In a question on the location of the station when operating from a Temporary Location, 30% of the candidates thought that it was only necessary to give the name of the nearest town. Of the options in the question, the full post code of the location was the correct choice [BR68/I ¶7(2)(a) &amp; Note (v)].</p>
General comments on the paper		<p>The candidates' overall performance in the examination was a little better than the average. The question on d.c. input transmitter power is now being answered correctly by most candidates, but the lower performance on the section on the licence conditions causes some concern.</p> <p>This report is prepared from a detailed analysis of the results of 50 candidates of whom 43 (86%) were successful. There were three additional candidates who entered for the examination but were absent.</p> <p>The next Novice Radio Amateurs' Examination is scheduled to take place on Monday, 9 September 2002. The City and Guilds fee for the examination is £14.00. The final opportunity to take the Novice Radio Amateurs' Examination as a City and Guilds qualification will be on Monday, 9 December 2002. It is regretted that the present small and decreasing number of candidates does not justify further examinations in this subject being administered by City and Guilds.</p> <p>Reports for the Radio Amateurs' Examination (7650) and the Novice Radio Amateurs' Examination (7730) are normally available on the Internet about three weeks after the date of each examination at</p> <p style="text-align: center;"><a href="http://www.g4dmp.co.uk/">http://www.g4dmp.co.uk/</a></p>