



Report on multiple-choice Question Paper

Paper: 7730-001 Novice Radio Amateurs Examination

Examination date: 11 December 2000

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
1 Receivers and receiving techniques	5	<p>Generally well answered, but some candidates were unfamiliar with the effect of trying to receive an s.s.b. signal with the mode switch set to the wrong sideband.</p> <p>In a question that showed the circuit diagram of a crystal receiver, only 31% of the candidates recognised that this type of receiver does not need a power supply.</p>
2 Components, applications and units	3	<p>All the questions in this section were very well answered by most of the candidates.</p>
3 Measurements	4	<p>A circuit diagram of an ohmmeter caused difficulty with some candidates, many of them identifying the device as an ammeter or milliammeter.</p> <p>In another circuit diagram, some candidates did not know which of the meters would be used to calculate the power input.</p>
4 Propagation and antennas	5	<p>The questions on the sky wave and on the sunspot cycle were very well answered.</p> <p>In a question about feeders, most candidates chose to use coaxial cable to connect directly to centre of a half wave dipole antenna. Candidates did not realise that, in the absence of a balun, twin feeder should be used.</p> <p>When asked about the frequency spectrum, 31% of the candidates thought that the 432-440MHz band was VHF, rather than UHF.</p>
5 Transmitters and transmitting techniques	10	<p>One third of the candidates did not know the purpose of the MODE switch on a transceiver. Many of them thought it was used to switch bands.</p> <p>A question on the selection of a suitable filter to reduce unwanted emissions above and below the transmitter frequency was not well answered. Over half the candidates chose to use a low pass instead of a band pass filter.</p> <p>30% of candidates said they would use an s.w.r. meter to check for second and third harmonics. Of the choices available, the general coverage receiver was the instrument to use. The other seven question in this section were very well answered.</p>

continued overleaf

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
<p>continued</p> <p>6 Operating techniques</p> <p>7 Station layout</p> <p>8 Construction</p> <p>9 Safety</p> <p>10 Licensing conditions</p>	<p>6</p> <p>1</p> <p>1</p> <p>2</p> <p>8</p>	<p>Candidates had a good understanding of operating techniques. Two of the questions require comment.</p> <p>It was not generally understood that a licensee with a Wales call sign (2W0...) should change their prefix to 2E0 when operating mobile in England.</p> <p>The meaning of 'selectivity' was not understood by about half of the candidates. Instead of good selectivity reducing the strength of unwanted signals on nearby frequencies, many candidates thought that its purpose was to stabilise the pitch of the incoming signal.</p> <p>The question on the location of an s.w.r. meter in the station was well answered.</p> <p>Most candidates recognised how to connect a coaxial antenna feeder to a transceiver by using a PL259 plug.</p> <p>Although 80% of the candidates answered the question correctly, the remaining 20% of them did not know the colour of the neutral wire of a mains cable.</p> <p>Most candidates had a good knowledge of the conditions for the Amateur Radio (Novice) Licence. There are two questions that require comment.</p> <p>Many candidates did not know what action to take after changing their transmission frequency. The correct answer was that they should identify themselves, but 45% of the candidates said they would log the specific frequency. [BR68a/N: 7(1)(c)]</p> <p>In another question, 37% of candidates thought that it was not necessary to enter unanswered CQ calls in their log. It is. [6(1)(f)]</p>
<p>General comments on the paper</p>		<p>There was a total of 122 candidates for the examination. Candidates were generally well prepared and their overall performance was a little better than average.</p> <p>This report was prepared from a detailed item analysis of the results of 105 candidates of whom 91 (86.7%) of them were successful. There were 17 further candidates from three examination centres whose results were not available for inclusion in the analysis.</p> <p>The next Novice Radio Amateurs Examination is scheduled for Monday, 12 March 2001. The City and Guilds fee for the examination remains at £13.05.</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;">http://www.g4dmp.co.uk/</p>