



Report on multiple-choice Question Paper

Paper: 7730-001 Novice Radio Amateurs Examination

Examination date: 4 June 2001

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
1 Receivers and receiving techniques	5	<p>The questions in this section were generally well answered by most of the candidates, just one question requiring comment:</p> <p>Only 31% of the candidates answered correctly that it is usual for the i.f. amplifier to immediately follow the mixer stage in a super-heterodyne receiver. Most of the other candidates thought that the mixer was followed by either the r.f. amplifier or the demodulator.</p>
2 Components, applications and units	3	<p>All questions were very well answered.</p>
3 Measurements	4	<p>A question on an absorption wavemeter caused some difficulty, many candidates thinking that its purpose was to measure accurately the output power of a transmitter.</p> <p>The other three questions were well answered.</p>
4 Propagation and antennas	5	<p>Of the five questions on propagation and antennas, three of them were not well answered:</p> <p>Given four novice bands, 77% of candidates did not recognise the 3.5 MHz band as being the one most suitable for communication with stations at a distance of 500 km during daylight hours.</p> <p>In a question that asked which type of antenna is known as a 'beam', fewer than half of the candidates recognised the Yagi. 37% of the candidates thought the dipole was a beam.</p> <p>72% of candidates did not know that an antenna tuning unit (a.t.u.) should be adjusted for minimum standing wave ratio.</p>
5 Transmitters and transmitting techniques	10	<p>Most candidates had a good knowledge of this section of the syllabus and obtained good marks. The question on calculating the power input of a transmitter was well answered and candidates had a good understanding of harmonics and sidebands.</p> <p>39% of candidates were confused as to the action to be taken when a neighbour reported television interference. One third of the candidates said they would report the matter to the Radiocommunications Agency rather than approach the neighbour with a view to carrying out tests.</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>All the questions on operating techniques were very well answered. Candidates had a good understanding of the procedures involved.</p> <p>Very well answered.</p> <p>Most candidates understood the reason for using solder with a resin core.</p> <p>Nearly all candidates knew to switch the power off and disconnect the mains before investigating or repairing equipment. Similarly, the wearing of eye protection when drilling was well understood.</p> <p>All the questions on the Licensing conditions were very well answered by most candidates.</p>
<p>General comments on the paper</p>	<p>Candidates were generally well prepared for the examination and received high marks. In only six of the questions did more than a quarter of the candidates answer one or more of the distractors instead of the correct answer. It was encouraging that the question on the calculation of the d.c. power input was well answered; this topic has caused much difficulty in the past. Propagation and antennas was the section of the syllabus in which candidates were the weakest.</p> <p>Of the 126 candidates whose results were available at the time of this report, 103 (81.7%) of them were successful. In addition, there were twelve candidates who were known to be absent and six others whose answer papers were not available for inclusion in the analysis.</p> <p>The next Novice Radio Amateurs Examination is scheduled for Monday, 10 September 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>	
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