



Report on multiple-choice Question Paper

Paper: 7730-001 Novice Radio Amateurs Examination

Examination date: 12 March 2001

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
1 Receivers and receiving techniques	5	Most of the questions on receivers were very well answered, only one causing difficulty with some candidates; they did not appreciate that it is the tuned circuit of a t.r.f. receiver that selects the required incoming signal.
2 Components, applications and units	3	One third of the candidates thought that the purpose of a transformer was to convert a.c. to d.c. Perhaps the confusion is due to the commonly available power packs provided with much low power domestic equipment. Some of these transformer units include rectifiers to convert the a.c. output from the transformer to d.c.
3 Measurements	3	A circuit was given of two equal resistors, connected in series, across a 12V battery. Only 38% of the candidates knew that the voltage across one of the resistors would be 6V. The other questions on measurements were well answered.
4 Propagation and antennas	5	All the questions on propagation and antennas were very well answered by most of the candidates.
5 Transmitters and transmitting techniques	11	Many candidates were not able to calculate the frequency of the lower sideband of a 1.960MHz carrier modulated with a 3000Hz tone. In a question that asked where an r.f. power control would be found, 60% of candidates thought that it would be on a receiver rather than on a c.w. transmitter. 57% of candidates did not recognise a variable frequency oscillator as being used on a single band low power transmitter. Many candidates thought that the transmitter would contain a b.f.o. On e.m.c. and interference matters, 26% of candidates would have reported breakthrough on a BT telephone to the Radio Investigation Service rather than to British Telecom. The importance of keeping a transmitting antenna away from a TV aerial was not appreciated by 29% of the candidates who chose other means of reducing television interference.

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<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>Most questions were well answered. There was some confusion on the use of the Mode control on a transceiver, one third of the candidates thinking that its purpose was to change bands rather than to select the type of transmission to be used.</p> <p>All the questions on station layout, construction and safety were very well answered by most of the candidates.</p> <p>Most candidates had an excellent knowledge of the licensing conditions in booklet BR68a/N. All the questions were very well answered.</p>
<p>General comments on the paper</p>	<p>The overall performance of candidates for the March 2001 NRAE paper was well above average. Most of them had prepared well for the examination. The candidates and their tutors are to be commended for the overall results.</p> <p>This report was prepared from a detailed analysis of each of the questions on the paper and the performance of 123 candidates. There were five other candidates whose results were not available at the time of writing the report, and nine other entrants were absent. Of the 123 candidates, 108 (87.8%) of them were successful.</p> <p>The next Novice Radio Amateurs Examination is scheduled for Monday, 4 June 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>	