

Report on multiple-choice Question Paper

Paper: **7730-001 Novice Radio Amateurs' Examination**

Examination date: **9 December 2002**

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
1 Receivers and receiving techniques	5	Some candidates were unable to locate the position of the demodulator stage in a block diagram of a simple superheterodyne receiver. The other questions in this section were quite well answered.
2 Components, applications and units	3	Very well answered. Candidates were able to recognise the circuit symbol for a rectifier diode and resistors connected in parallel.
3 Measurements	4	Three of the questions were well answered, but over half of the candidates found difficulty in working out how a current meter reading would be affected when a resistor in a circuit was disconnected.
4 Propagation and antennas	5	There was some confusion with the differences between h.f., v.h.f., u.h.f. and microwaves. 27% of the candidates thought that the elements of a Yagi antenna would be shorter for u.h.f. than they would be for microwaves. Also, 47% of the candidates did not recognise that a frequency of 3800 MHz was in the microwave band.
5 Transmitters and transmitting techniques	10	<p>Most of the questions in this section were well answered but two of them require comment.</p> <p>33% of the candidates thought that a balanced modulator would be found in an f.m. transmitter rather than in an s.s.b. transmitter.</p> <p>In a question on interference to a neighbour's hi-fi system, 55% of the candidates thought that its likely cause would be due to harmonic radiation from the transmitter, not realising that the problem would be poor e.m.c. of the hi-fi system.</p>
6 Operating techniques	6	<p>The questions on operating techniques were very well answered.</p> <p>Some candidates did not know the meaning of 'selectivity', several of them thinking that its purpose was to stabilise the pitch of the incoming signal.</p>
7 Station layout	1	Most candidates knew that 300Ω feeder may be used to connect an antenna to an antenna tuning unit (a.t.u.).
8 Construction	1	The need to make soldered joints as quickly as possible was recognised in order to avoid damage to components.

continued overleaf

Syllabus Topic or Objective	Number of items	Comments on performance of candidates
<p>continued</p> <p>9 Safety</p> <p>10 Licensing conditions</p>	<p>2</p> <p>8</p>	<p>Candidates answered well questions on the connections to a mains plug and the first steps to take in the event of a person receiving an electric shock.</p> <p>All the questions on the Licensing conditions were very well answered, most of the candidates obtaining high scores.</p>
<p>General comments on the paper</p>	<p>Most of the candidates did exceptionally well in this examination. As a result of the success of their instructional courses, the candidates were evidently very well prepared and they and their instructors are to be congratulated.</p> <p>Of the 55 candidates who took the examination, 53 (96.4%) of them were successful.</p> <p>Due to the small number of candidates, this was the final examination for the Amateur Radio (Intermediate) Licence being offered by City and Guilds. Examinations from 2003 are being arranged by the Radiocommunications Agency.</p> <p>City and Guilds wishes to thank all radio amateurs and others who have assisted and cooperated in the administration of the Novice Radio Amateurs' Examination since its introduction in June 1991. Their valuable help is acknowledged and greatly appreciated.</p>	