

Syllabus 2019. Sample Questions - Foundation Level

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Syllabus Ref	Question Num	Chapter Description	Section Description	Mock Questions	Stem Graphic	D1 Graphic	D2 Graphic	D3 Graphic	D4 Graphic
1A1	1	Nature of amateur radio, types of licence and call signs	Section 1 – Licensing conditions and station identification	<p>An amateur radio licence may be used for</p> <p>A. advertising a retailer of amateur radio equipment</p> <p>B. controlling a fleet of taxis</p> <p>C.* testing propagation between two amateurs in different countries</p> <p>D providing radio communications for a commercial fairground operator</p>					
1A2	1	Nature of amateur radio, types of licence and call signs	Section 1 – Licensing conditions and station identification	<p>Which, of the items listed below, is NOT a type of Amateur licence?</p> <p>A. Intermediate</p> <p>B. Foundation</p> <p>C.* Beginner</p> <p>D. Full</p>					
1A3	1	Nature of amateur radio, types of licence and call signs	Section 1 – Licensing conditions and station identification	<p>Which of the following is a foundation licence holder NOT allowed to do?</p> <p>A.* Operate a radio transmitter that the licence holder has designed themselves.</p> <p>B. Design and operate a radio receiver.</p> <p>C. Assemble and operate a transmitter designed by an intermediate licence holder</p> <p>D. Assemble and operate a radio deigned by a commercial company</p>					
1A4	1	Nature of amateur radio, types of licence and call signs	Section 1 – Licensing conditions and station identification	<p>An amateur radio licence holder must, when changing the main station address, immediately notify</p> <p>A. the local police</p> <p>B. the local council</p> <p>C. the RSGB</p> <p>D.* Ofcom</p>					
1A5	2	Nature of amateur radio, types of licence and call signs	Section 1 – Licensing conditions and station identification	<p>When transmitting, you must give your call sign</p> <p>A. when establishing contact and at least every 5 minutes</p> <p>B.* when establishing contact and as frequently as is practicable.</p> <p>C. during CQ calls and at the beginning and end of the contact</p> <p>D. at the beginning and end of the contact.</p>					
1B1	3	Operators and supervision	Section 1 – Licensing conditions and station identification	<p>A Foundation licence holder, operating under the supervision of a Full licence holder and using the Full licence holders callsign, must</p> <p>A. operate subject to the restrictions of the Foundation licence.</p> <p>B.* operate in accordance with the supervisor's licence.</p> <p>C. ensure that any contacts are recorded in the log.</p> <p>D. reduce the transmitter's power to 10 watts.</p>					

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1C1	3	Messages	Section 1 – Licensing conditions and station identification	<p>You are talking to M3ABC by amateur radio and friends enter his room. You may also address remarks to these friends</p> <p>A. if they are family members B. if M3ABC gives permission C.* if they are also licenced radio amateurs D. but only on the calling channel</p>					
1C2	3	Messages	Section 1 – Licensing conditions and station identification	<p>Which of the following may NOT be used in an amateur radio transmission?</p> <p>A. A message sent in Morse code B. A message sent containing Q codes. C.* A message using secret codes known only to the sender and recipient. D. A message containing data.</p>					
1C3	3	Messages	Section 1 – Licensing conditions and station identification	<p>Which transmission is regarded as ‘transmitting for general reception’?</p> <p>A. Being overheard by other amateurs you are not talking to. B. Talking to a group of more than six amateurs. C.* Talking to anybody who happens to be listening. D. Talking in a language other than English.</p>					
1D1	4	Apparatus, inspection and closedown	Section 1 – Licensing conditions and station identification	<p>When must you carry out tests on your station to ensure that it is not causing undue interference to other radio users?</p> <p>A. If you receive a complaint from a neighbour B.* From time to time C. Every week D. When the warranty expires on your transceiver</p>					
1D2	4	Apparatus, inspection and closedown	Section 1 – Licensing conditions and station identification	<p>Who may require a radio amateur to keep a log of transmissions to assist in identifying interference?</p> <p>A. The local police. B.* A person authorised by Ofcom. C. A person authorised by the RSGB. D. A county councillor.</p>					
1F1	4	CEPT and international	Section 1 – Licensing conditions and station identification	<p>A Foundation licence holder may operate in a foreign country if</p> <p>A. this is within the European Union. B. operating in that countries coastal waters C. the country recognises UK amateur radio licences D.* given permission by the appropriate authority of that country</p>					

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1G1	5	Licence schedule	Section 1 – Licensing conditions and station identification	On which of the frequencies below may a Foundation licensee transmit? A.* 1.825MHz B. 7.5MHz C. 15MHz D. 21.5MHz					
1G2	6	Licence schedule	Section 1 – Licensing conditions and station identification	Which part of an amateur band is not permitted within 100km of Charing Cross, London? A. 1.810-1.830MHz B. 51.00-52.00MHz C.* 431.0-432.0MHz D. 438.0-440.0MHz					
2A1	7	Fundamental theory	Section 2 – Technical aspects	Which of the following is a good conductor of an electric current? A. Rubber B. Plastic C. Glass D.* Aluminium					
2A2	7	Fundamental theory	Section 2 – Technical aspects	In a circuit of resistors in series that are connected to a battery, the current flowing each resistor will A. be the same as the battery voltage. B. be different depending on the voltage of the battery. C. be different depending on the value of the resistor. D.* be same in each resistor.					
2B1	7	Power	Section 2 – Technical aspects	A 12V mobile transceiver consumes 10W on receive and 100W on transmit. The highest current drawn will be A. 0.83A B. 0.83Ω C.* 8.3A D. 8.3Ω					
2C1	7	Resistance	Section 2 – Technical aspects	The correct formula relating the voltage, V, the current, I, and the resistance R is A. $R = V - I$ B. $R = V \times I$ C. $R = I / V$ D.* $R = V / I$					

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2C2	7	Resistance	Section 2 – Technical aspects	<p>The voltage across three resistors connected in series is 5 volts, 10 volts and 20 volts respectively. The total voltage across all three resistors is</p> <p>A. 5 volts. B. 10 volts. C. 20 volts. D.* 35 volts.</p>					
2C4	7	Resistance	Section 2 – Technical aspects	<p>Which of the following will work normally when connected to a battery of the correct voltage regardless of battery polarity?</p> <p>A.* Incandescent lamp B. Radio receiver C. LED lamp D. Pocket Calculator</p>					
2E1	8	AC theory	Section 2 – Technical aspects	<p>What is the significant difference between AC and DC?</p> <p>A. Direct currents are always greater than alternating currents. B. Direct currents take a long time to change direction. C.* Alternating currents are continually changing direction. D. Alternating currents have a fixed polarity</p>					
2E2	8	AC theory	Section 2 – Technical aspects	<p>The frequency 50MHz is</p> <p>A. LF B. HF C.* VHF D. UHF</p>					
2E7	8	AC theory	Section 2 – Technical aspects	<p>A frequency of 100 MHz has a wavelength of</p> <p>A.* 3 metres. B. 30 metres. C. 0.3 metres. D. 300 metres.</p>					
2F1	9	Digital signals	Section 2 – Technical aspects	<p>Digital signals are</p> <p>A. constantly changing in amplitude, frequency or both. B.* a stream of finite values at a specific sampling interval. C. totally immune to interference. D. created by a Digital to Analogue converter.</p>					

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2F2	9	Digital signals	Section 2 – Technical aspects	An Analogue to Digital converter (ADC) A. represents a digital signal in analogue format B.* samples an analogue signal and creates a digital representation of it C. changes audio signals to RF D. is an optional component in a Software defined radio					
2J1	8	Cells and power supplies	Section 2 – Technical aspects	A secondary battery A. cannot be recharged. B.* may be recharged. C. undergoes a chemical process that cannot be reversed. D. consists of a single cell.					
3A1	10	Transmitter concepts	Section 3 – Transmitters and receivers	Adding information to a radio frequency carrier is known as A. transmission. B. tuning. C. amplification. D.* modulation.					
3A2	10	Transmitter concepts	Section 3 – Transmitters and receivers	Audio or data information is combined with a radio frequency carrier in which stage of a transmitter? A. Microphone Amplifier. B.* Modulator. C. RF Power amplifier. D. AF power amplifier.					
3A3	10	Transmitter concepts	Section 3 – Transmitters and receivers	When radio frequencies are mixed with audio frequencies, the new frequencies that are generated are called A. fundamentals B. harmonics C.* sidebands D. carriers					
3A4	10	Transmitter concepts	Section 3 – Transmitters and receivers	The bottom waveform in the diagram shows A. an audio wave. B. a carrier wave. C. an amplitude modulated wave. D.* a frequency modulated wave.					

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3B1	11	Transmitter architecture	Section 3 – Transmitters and receivers	<p>What is the function of the box marked 2 in the diagram?</p> <p>A. RF power amplifier. B. Oscillator. C.* Modulator. D. AF Amplifier</p>					
3C1	11	Oscillators	Section 3 – Transmitters and receivers	<p>Incorrect setting of the oscillator in a transmitter may cause</p> <p>A. damage to the power supply. B. distortion to the transmitted signal. C. damage to the antenna. D.* transmitting on the wrong frequency.</p>					
3E1	11	Microphone amplifiers and modulators	Section 3 – Transmitters and receivers	<p>If the microphone gain is set too high on a transmitter</p> <p>A. the antenna could be damaged. B.* interference could be caused on adjacent channels. C. the supply fuse will fail D. the operator could get an electric shock from the microphone</p>					
3F1	11	RF power amplifiers	Section 3 – Transmitters and receivers	<p>The RF power amplifier</p> <p>A. takes the signal from the microphone and amplifies it to a suitable level B.* amplifies the low power modulated radio signal to suitable level to feed the antenna C. converts the mains supply to a suitable voltage to be used by the transmitter D. ensures the transmitter is radiating on the correct frequency</p>					
3F3	11	RF power amplifiers	Section 3 – Transmitters and receivers	<p>If the transmitter's RF power amplifier output is not connected to a correctly matched antenna</p> <p>A. the antenna can be damaged. B. SWR will be too low. C. interference will be caused on adjacent channels. D.* the transmitter can be damaged.</p>					
3G1	11	Transmitter interference	Section 3 – Transmitters and receivers	<p>Too much audio gain is likely to cause a transmitter to</p> <p>A. stop working. B. Increase the SWR. C. interfere with other bands. D.* interfere with adjacent frequencies.</p>					

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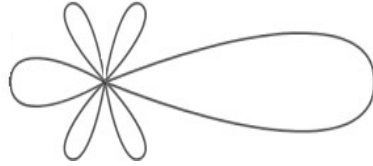


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3H1	12	Receiver concepts	Section 3 – Transmitters and receivers	Recovering the original information from a received radio signal is called A.* demodulation. B. modulation. C. filtering. D. oscillating.					
3H2	12	Receiver concepts	Section 3 – Transmitters and receivers	In the diagram shown, which block recovers the audio signal from the RF carrier A. Block 1. B.* Block 2. C. Block 3 D. Block 4.					
3K1	12	Demodulation	Section 3 – Transmitters and receivers	In a receiver the demodulator A.* recovers the original information from the received signal B. amplifies the received signal so that it can be heard through the loudspeaker C. mixes the audio signal with a frequency from the local oscillator D. matches the antenna to the transmitter.					
3M1	12	SDR transmitters and receivers	Section 3 – Transmitters and receivers	In a Software Defined Radio, demodulation is carried out by A. a diode detector B. the RF amplifier C. the local oscillator D.* mathematical processes					
4A1	13	Feeders	Section 4 – Feeders and antennas	A twin feeder cable A. can be buried underground to prevent interference. B.* is balanced having equal and opposite signals in each wire. C. is unbalanced with one wire at ground and the other carrying the signal. D. has greater loss than coaxial cable.					
4A2	13	Feeders	Section 4 – Feeders and antennas	Loss in feeders increases with A. the modulation used B.* length of the feeder cable C. lower transmit frequencies D. higher gain antennas					

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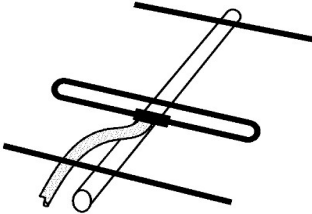
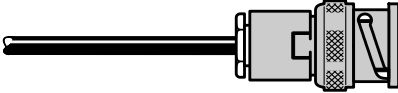


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4B1	13	Baluns	Section 4 – Feeders and antennas	<p>A balun is primarily used to</p> <p>A. increase the power fed to the antenna</p> <p>B. decrease the power fed to the antenna</p> <p>C.* connect an unbalanced feeder to a balanced antenna</p> <p>D. protect against damage caused by static electricity</p>					
4C1	14	Antenna concepts	Section 4 – Feeders and antennas	<p>A vertical half wave dipole will radiate</p> <p>A.* equally in all horizontal directions.</p> <p>B. a maximum signal in a vertical direction.</p> <p>C. a minimum signal at right-angles to the antenna.</p> <p>D. a maximum signal off the ends of the antenna.</p>					
4C2	14	Antenna concepts	Section 4 – Feeders and antennas	<p>The polar diagram shown is from</p> <p>A* a Yagi antenna</p> <p>B. a half wave dipole antenna</p> <p>C. a quarter wave vertical antenna</p> <p>D. a 5/8 vertical dipole antenna</p>					
4C3	14	Antenna concepts	Section 4 – Feeders and antennas	<p>The gain of an antenna is measured in</p> <p>A. Watts.</p> <p>B. Volts.</p> <p>C. Amps.</p> <p>D.* dB.</p>					
4C4	14	Antenna concepts	Section 4 – Feeders and antennas	<p>For best reception of UHF or VHF signals the antennas of both receiver and transmitter should both be:</p> <p>A. vertical.</p> <p>B. horizontal.</p> <p>C.* in the same orientation.</p> <p>D. in any orientation.</p>					
4C5	14	Antenna concepts	Section 4 – Feeders and antennas	<p>The feed point impedance of an antenna is related to</p> <p>A. the cable used to connect to the antenna.</p> <p>B. the mode of transmission.</p> <p>C. the output power of the transmitter.</p> <p>D.* the dimensions of the antenna and the wavelength of the applied signal.</p>					

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4D1	14	Types of antenna	Section 4 – Feeders and antennas	<p>The antenna shown in the diagram is</p> <p>A.* a Yagi. B. a half wave dipole. C. a 5/8 dipole D. an end fed antenna</p>	 A diagram of a Yagi antenna, showing a long boom with several parallel elements. One element is longer than the others and is positioned at the front, while the others are shorter and positioned along the boom.				
4E1	15	Standing waves	Section 4 – Feeders and antennas	<p>An amateur changes band of operation but does not check the antenna is still matched. This might cause</p> <p>A.* high levels of Standing Waves in the feeder B. distortion of the transmitted signal C. antenna overloading D. Interference to be caused on other bands</p>					
4E2	15	Standing waves	Section 4 – Feeders and antennas	<p>In a well designed and matched antenna system, measured SWR at the transceiver will be</p> <p>A. > 5:1 B. > 3:1 C. 2:1 D.* < 1.5:1</p>					
4F1	15	Antenna matching units	Section 4 – Feeders and antennas	<p>If an antenna is being used on a frequency for which it has not been designed</p> <p>A. measured SWR will be very low. B.* antenna matching will be required. C. interference may be caused to adjacent channels D. the antenna could be damaged.</p>					
4G1	15	Dummy loads	Section 4 – Feeders and antennas	<p>A dummy load is</p> <p>A. a weight used to obtain the correct tension on a long wire antenna B.* a screened resistor that may be connected to the transmitter output without radiating C. a suitable resistor to connect to the power supply when the transmitter is disconnected D. used instead of the microphone when using a transceiver to receive only</p>					
4H1	15	Plugs and sockets	Section 4 – Feeders and antennas	<p>The connector shown is a</p> <p>A. jack plug. B. PL259. C. SO238. D.* BNC.</p>	 A diagram of a BNC connector, showing a coaxial cable with a BNC plug and a BNC socket.				

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5A1	16	Radio propagation: key concepts	Section 5 – Propagation	<p>Radio waves</p> <p>A. maintain their power as they propagate.</p> <p>B.* normally travel in straight lines.</p> <p>C. always pass through the ionosphere.</p> <p>D. never pass through the ionosphere.</p>					
5A2	16	Radio propagation: key concepts	Section 5 – Propagation	<p>Propagation of VHF and UHF frequencies is normally</p> <p>A. decreased with sporadic E</p> <p>B. refracted back to earth by the troposphere.</p> <p>C.* not much beyond the line of sight.</p> <p>D. not possible beyond the ionosphere.</p>					
5B1	16	Ionosphere	Section 5 – Propagation	<p>The lowest layer of the ionosphere is at a height of about</p> <p>A. 800km</p> <p>B. 700m</p> <p>C.* 70km</p> <p>D. 10km</p>					
5B2	16	Ionosphere	Section 5 – Propagation	<p>HF propagation is NOT affected by the</p> <p>A. sun.</p> <p>B. time of day.</p> <p>C.* day of the week.</p> <p>D. frequency used.</p>					
5C1	17	VHF and above	Section 5 – Propagation	<p>VHF/UHF signals</p> <p>A. are unaffected by buildings</p> <p>B.* become weaker as they pass through buildings.</p> <p>C. become stronger at higher frequencies</p> <p>D. are unaffected by atmospheric conditions.</p>					
5C2	17	VHF and above	Section 5 – Propagation	<p>Snow, ice and rain have the most detrimental effect on which frequency range?</p> <p>A. LF</p> <p>B. HF</p> <p>C. VHF</p> <p>D.* UHF</p>					

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5C3	17	VHF and above	Section 5 – Propagation	<p>A VHF transmitting antenna should be located</p> <p>A. indoors, protected from the rain, wind and sun.</p> <p>B.* outdoors, as high as practicable to avoid obstructions.</p> <p>C. close to the transmitter so you can easily adjust it to the correct length.</p> <p>D. at ground level to minimise interference</p>					
6A1	18	EMC concepts	Section 6 – Electro magnetic compatibility (EMC)	<p>Electromagnetic compatibility (EMC) means:</p> <p>A. the antenna is properly matched to the transmitter</p> <p>B.* the avoidance of interference between electronic equipment</p> <p>C. ensuring electronic equipment generates small electromagnetic fields</p> <p>D. a microphone will work correctly when connected to a transmitter</p>					
6A2	18	EMC concepts	Section 6 – Electro magnetic compatibility (EMC)	<p>A radio amateur’s transmission is LEAST likely to cause interference to</p> <p>A. other amateurs</p> <p>B. other radio users</p> <p>C.* an electric drill</p> <p>D. an electronic security alarm</p>					
6A3	18	EMC concepts	Section 6 – Electro magnetic compatibility (EMC)	<p>An amateur radio transmitter can cause electromagnetic interference to</p> <p>A. electric drills.</p> <p>B. vacuum cleaners.</p> <p>C. lawn mowers.</p> <p>D.* electronic equipment</p>					
6A4	18	EMC concepts	Section 6 – Electro magnetic compatibility (EMC)	<p>Which of the following will NOT cause interference with the operation of a radio receiver?</p> <p>A. A lawn mower.</p> <p>B. An electric drill.</p> <p>C. Central heating controls.</p> <p>D.* A SWR meter.</p>					
6B1	19	Sources of interference and their effects	Section 6 – Electro magnetic compatibility (EMC)	<p>Which of the following will NOT lead to an increase in risk of causing electromagnetic interference?</p> <p>A.* Changing from SSB to FM transmission.</p> <p>B. Increasing the transmit power.</p> <p>C. Changing from PSK to Morse code transmission.</p> <p>D. Increasing the microphone gain.</p>					

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6C1	19	Routes of entry	Section 6 – Electro magnetic compatibility (EMC)	<p>Which of the following is least likely to provide a route of entry of interference into domestic TV equipment.</p> <p>A. Feeder from the antenna to the transmitter</p> <p>B. Electronic components inside the TV.</p> <p>C. Audio speaker leads.</p> <p>D.* RF earth rod.</p>					
6D1	19	Filtering and remedial measures	Section 6 – Electro magnetic compatibility (EMC)	<p>Immunity to interference from most sources can be increased by</p> <p>A.* Fitting chokes and filters in mains or antenna leads.</p> <p>B. Using longer mains leads to the TV.</p> <p>C. Fitting a preamplifier to the TV antenna input.</p> <p>D. Fitting a higher rated fuse to the TV plug.</p>					
6D4	19	Filtering and remedial measures	Section 6 – Electro magnetic compatibility (EMC)	<p>A dummy load is used</p> <p>A.*to test if RF signals are being conducted out of a transmitter through its power cables.</p> <p>B. to test the power being sent to the headphones in a receiver</p> <p>C. to match an aerial to a feeder</p> <p>D to test the setting of the microphone gain on the transmitter.</p>					
6E1	19	Station design and antenna placement/general principles	Section 6 – Electro magnetic compatibility (EMC)	<p>EMC problems can be minimised by</p> <p>A. using end fed long wire antennas.</p> <p>B. locating antennas as close as possible to houses.</p> <p>C.* siting antennas as high and as far away from houses as possible.</p> <p>D. using loft antennas.</p>					
6E2	19	Station design and antenna placement/general principles	Section 6 – Electro magnetic compatibility (EMC)	<p>An RF earth terminal of a transmitter should be connected to</p> <p>A. the metal pipework in the central heating system.</p> <p>B. the earth pin of the mains plug.</p> <p>C. the mains earth at the fuse box .</p> <p>D.* a long copper rod buried in damp ground.</p>					
6F1	19	Station design and antenna placement/mobile installations	Section 6 – Electro magnetic compatibility (EMC)	<p>When fitting a transceiver in a vehicle, whose reasonability is it to ensure that the installation is in accordance with vehicles electrical and management systems?</p> <p>A.* The vehicle owner.</p> <p>B. The police.</p> <p>C. The driver's insurance company.</p> <p>D. The transceiver manufacturer.</p>					

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6F2	19	Station design and antenna placement/mobile installations	Section 6 – Electro magnetic compatibility (EMC)	<p>After fitting a transceiver in a vehicle, testing of the installation</p> <p>A.* should be done with the vehicle stationary and all vehicle electrical systems running.</p> <p>B. should be done with the vehicle moving on the road with all vehicle electrical systems running.</p> <p>C. Is not required.</p> <p>D. Is only required if specified by the vehicles insurers.</p>					
6F3	19	Station design and antenna placement/mobile installations	Section 6 – Electro magnetic compatibility (EMC)	<p>Which of the following is most likely to cause problems to an amateur radio receiver in a vehicle?</p> <p>A.* Ignition Systems.</p> <p>B. Headlights control.</p> <p>C. Brake Lights.</p> <p>D. Automatic gearbox.</p>					
6G1	20	Social aspects and testing	Section 6 – Electro magnetic compatibility (EMC)	<p>Your neighbour comes to your door and complains that the interference he is getting on his TV is being caused by your radio transmissions. You should</p> <p>A.* offer to carry out test transmissions with his co-operation to verify his allegation.</p> <p>B. explain that it cannot be your radio transmissions as your equipment is 'CE' approved</p> <p>C. advice him to contact Ofcom for advice</p> <p>D. request that he comes to you with proof of his allegation.</p>					
6G2	20	Social aspects and testing	Section 6 – Electro magnetic compatibility (EMC)	<p>A good reason for keeping a log of all transmission is because</p> <p>A.* It will make it easier to check allegations of interference.</p> <p>B. it is required by Ofcom.</p> <p>C. it is a requirement of the amateur radio licence.</p> <p>D. it will help support an application for planning permission for an antenna.</p>					
6G3	20	Social aspects and testing	Section 6 – Electro magnetic compatibility (EMC)	<p>Information regarding EMC and Interference is available from</p> <p>A.* The RSGB.</p> <p>B. The local authority.</p> <p>C. Ofcom.</p> <p>D. The BBC.</p>					
7A1	21	Good operating practices and procedures	Section 7 – Operating practices and procedures	<p>Before transmitting you should first listen on a frequency and then ask if the frequency is clear because</p> <p>A.* the frequency may be in use but one of the stations may be in a location where you can receive their signal.</p> <p>B. it is a requirement of the amateur radio licence.</p> <p>C. this lets other amateur radio operators know that you are about to commence a QSO.</p> <p>D. it is considered to be polite to commence all new QSO's in this way.</p>					

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7A2	21	Good operating practices and procedures	Section 7 – Operating practices and procedures	<p>When calling "CQ, this is M7ABC calling CQ on 20 meters" you should</p> <p>A.* repeat the sequence several times in quick succession over a period of 20 - 30 seconds, then listen for several seconds</p> <p>B. call the sequence once and then listen for several seconds in between each</p> <p>C. repeat the sequence several times in quick succession, moving the transmit frequency up a few kHz each time.</p> <p>D. repeat the sequence several times in quick succession, moving the transmit frequency down a few kHz each time</p> <p>Once you have contacted another station on a VHF FM calling channel you should</p> <p>A. remain on the frequency until another station wishes to use it.</p> <p>B. remain on the frequency as long as the contact takes.</p> <p>C. ask if the frequency is clear.</p> <p>D.* change frequency to a suitable clear channel.</p>					
7A3	21	Good operating practices and procedures	Section 7 – Operating practices and procedures	<p>The correct phonetic spelling of 'SIGNAL' is</p> <p>A. SIERRA ITALY GOLF NOVEMBER APPLE LIMA</p> <p>B. SIERRA ITALY GOLF NORWAY ALPHA LIMA</p> <p>C.* SIERRA INDIA GOLF NOVEMBER ALPHA LIMA</p> <p>D. SUGAR INDIA GOLF NOVEMBER ALPHA LIMA</p>					
7A4	21	Good operating practices and procedures	Section 7 – Operating practices and procedures	<p>If a log is recorded for obtaining a QSL or contest confirmation it should contain at least</p> <p>A.* date, time (UTC), mode, callsign of station worked.</p> <p>B. date, time (UTC), mode, radio model, antenna type</p> <p>C. date, time (Local Time), mode, callsign of station worked.</p> <p>D. date, time (Local Time), mode, radio model, antenna type</p>					
7A5	21	Good operating practices and procedures	Section 7 – Operating practices and procedures	<p>If hearing bad language or inappropriate behaviour on air you should</p> <p>A.* ignore it without comment and do not refer to it on air.</p> <p>B. ignore it and warn people on air on other frequencies to avoid it.</p> <p>C. reprimand the person responsible over the air.</p> <p>D. complain to the local council.</p>					
7A6	21	Good operating practices and procedures	Section 7 – Operating practices and procedures	<p>Band plans are used because</p> <p>A. using them is a condition of the licence.</p> <p>B. they help prevent on-air abuse.</p> <p>C.* they enable efficient use of the band for different modes.</p> <p>D. they are required for radio competitions</p>					
7B1	22	Band plans	Section 7 – Operating practices and procedures						

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7B2	22	Band plans	Section 7 – Operating practices and procedures	<p>A badly setup transmitter operating on 50.1 MHz is also radiating on 150.3MHz. Which service might be affected?</p> <p>A. Broadcast Radio B. Aeronautical mobile C.* Radio Astronomy D. Maritime Mobile</p>					
7C1	22	Repeaters	Section 7 – Operating practices and procedures	<p>A 2m repeater transmits on 145.600MHz. To which frequency should you tune your transmitter in order to use this repeater?</p> <p>A. 146.200MHz B. 145.600MHz C.* 145.000MHz D. 144.000MHz</p>					
7D1	23	Connecting input devices to transmitters	Section 7 – Operating practices and procedures	<p>If using a microphone, other than the one supplied with the transceiver you should</p> <p>A.* ensure that the PTT and audio levels are correct. B. use a separate PTT switch. C. use a separate microphone pre-amplifier. D. re-check the SWR.</p>					
7E2	23	Codes and abbreviations	Section 7 – Operating practices and procedures	<p>You are having a contact (QSO) with another amateur and he reports your signal as ‘5 and 5’.</p> <p>This means that he is reading your transmission:</p> <p>A. Excellent audio and very strong signal strength B. Average audio and a very strong signal strength C.* Excellent Audio with an average signal strength D. Average Audio with an average signal strength</p>					
7F1	23	Digital interfaces	Section 7 – Operating practices and procedures	<p>Digital Voice (DV) radios</p> <p>A.* may have the owners callsign embedded in the configuration. B. are interoperable across all systems. C. automatically check to see if a channel is in use. D. cause more interference than SSB radios</p>					
7F2	23	Digital interfaces	Section 7 – Operating practices and procedures	<p>When using FM or DV at 145.550 MHz you should first</p> <p>A check if the repeater is being used for other modes. B *open the receiver squelch and check for other modes C ask if the frequency is in use and listen for a reply. D wait till you hear the repeater’s callsign and then call with your callsign.</p>					

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7G1	23	Satellites	Section 7 – Operating practices and procedures	<p>Terrestrial contacts on the portion of the amateur bands shown as allocated to satellites</p> <p>A* are strongly discouraged.</p> <p>B should be used with vertical polarisation.</p> <p>C must be used with horizontal polarisation.</p> <p>D cannot be used during daylight.</p>					
8A1	24	Electricity	Section 8 – Safety	<p>A linear amplifier has a high voltage section running at 1200 volts at 500mA the potential danger through misuse is</p> <p>A.* Electrocutation.</p> <p>B. Fire.</p> <p>C. Lightning.</p> <p>D. Interference.</p>					
8A2	24	Electricity	Section 8 – Safety	<p>When using mains powered equipment</p> <p>A.* it should be connected to a safety earth</p> <p>B. the safety earth must be connected to the RF earth.</p> <p>C. the safety earth becomes unnecessary</p> <p>D. The RF earth becomes unnecessary.</p>					
8A3	24	Electricity	Section 8 – Safety	<p>The correct way to wire a UK 3-pin plug is</p> <p>A.* Green/Yellow to Earth, Brown to Live, Blue to Neutral</p> <p>B. Brown to Earth, Red to Live, Blue to Neutral</p> <p>C. Brown to Earth, Green/Yellow to Live, Blue to Neutral</p> <p>D. Green/Yellow to Earth, Brown to Neutral, Red to Live</p>					
8A4	24	Electricity	Section 8 – Safety	<p>In the event that a fuse blows you should</p> <p>A.* find out the cause of the problem.</p> <p>B. replace the fuse with one of a higher rating.</p> <p>C. measure the voltage across the fuse.</p> <p>D. return the affected equipment to the place of purchase.</p>					
8A5	24	Electricity	Section 8 – Safety	<p>A Residual Current Circuit Breaker with Overcurrent Protection (RCBO) will stop mains power in a circuit:</p> <p>A. Only when there is a current leakage to earth above its leakage threshold</p> <p>B. Only when there is an excessive current in the circuit above the current threshold</p> <p>C. When there is both earth leakage and excessive current above the device threshold</p> <p>D.* When there is either earth leakage or excessive current above the device threshold.</p>					

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8A6	24	Electricity	Section 8 – Safety	<p>When carrying out maintenance or repair work on electronic equipment you should</p> <p>A.* follow the manufacturers guidelines for servicing equipment.</p> <p>B. ensure that the correct fuse is fitted to the mains plug.</p> <p>C. ensure that part of you is in contact with the metal chassis.</p> <p>D. have someone else present with you in the room.</p>					
8A7	24	Electricity	Section 8 – Safety	<p>The mains power switch to the radio shack should be</p> <p>A. difficult to reach.</p> <p>B. key operated to prevent use by non-licensed persons.</p> <p>C. switched off at all times.</p> <p>D.* in a clearly marked position</p>					
8A8	24	Electricity	Section 8 – Safety	<p>One feature of Nicad (NiCad), Nickel Metal Hydride (NIMH) and Lithium batteries is that</p> <p>A* they all have different charging requirements and must only be used with the recommended charger.</p> <p>B the terminal voltages are all the same allowing almost any charger to be safely used.</p> <p>C they may be safely discarded in the household waste or a litter bin in the street.</p> <p>D they must be kept fully charged at all times to ensure a long life.</p>					
8B1	25	Using tools	Section 8 – Safety	<p>When using power tools it is</p> <p>A.* advisable to wear eye protection.</p> <p>B. advisable to wear ear protection.</p> <p>C. essential to wear breathing protection.</p> <p>D. essential to wear gloves.</p>					
8B2	25	Using tools	Section 8 – Safety	<p>What safety considerations should you bear in mind when using power tools rather than hand tools?</p> <p>A* Power tools can do more damage and don't stop instantly.</p> <p>B Power tools can produce a neater and more accurate job.</p> <p>C It is a lot less effort when using power tools.</p> <p>D The job can be completed much more quickly.</p>					
8B7	25	Using tools	Section 8 – Safety	<p>Soldering work stations:</p> <p>A. Require an emergency cut off switch in case the soldering tip comes into contact with the skin</p> <p>B.* Should be well ventilated to avoid inhaling fumes</p> <p>C. Must be on an anti-static surface</p> <p>D. Must be earthed</p>					

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Syllabus Ref	Question Num	Chapter Description	Section Description	Mock Questions	Stem Graphic	D1 Graphic	D2 Graphic	D3 Graphic	D4 Graphic
8C1	25	Working at height	Section 8 – Safety	<p>Why should two people be present during antenna erection?</p> <p>A.* Because working at height is risky and someone may be needed to fetch help</p> <p>B. Because there needs to be someone on the ground who can see what needs doing</p> <p>C. Because it saves constantly going up and down the ladder to read the SWR meter</p> <p>D. Because the person doing the work will often need a hand</p>					
8C2	25	Working at height	Section 8 – Safety	<p>Overreaching when on a ladder may cause</p> <p>A. concern to passers by</p> <p>B.* the person to fall off the ladder</p> <p>C. a hard hat to give less protection</p> <p>D. a poorly constructed or loose fitting job</p>					
8C3	25	Working at height	Section 8 – Safety	<p>The main purpose of wearing a tool belt when up a ladder is to</p> <p>A. prevent the tools being damaged</p> <p>B. provide a strong belt to tie to the ladder for safety</p> <p>C. avoid having to repeatedly climb the ladder</p> <p>D.* reduce the risk of dropping tools</p>					
8D1	26	Working with RF	Section 8 – Safety	<p>What is the main health effect of exposure to electromagnetic radiation?</p> <p>A. Ringing in the ears</p> <p>B. Nervous stammer</p> <p>C. Lost voice</p> <p>D.* Heating of body tissue</p>					
8D2	26	Working with RF	Section 8 – Safety	<p>The ICNIRP is of interest to amateurs because it</p> <p>A. oversees the preparation of the International Radio Regulations</p> <p>B.* produces guidance on the safe levels of RF exposure</p> <p>C. co-ordinates the launch of amateur and other satellites</p> <p>D. produces the International version of the Amateur Band Plans</p>					
8D3	26	Working with RF	Section 8 – Safety	<p>The main risk when looking down waveguides is that</p> <p>A.* microwave radiation could overheat your eye</p> <p>B. waveguides have very sharp edges and can cut</p> <p>C. you could be accidentally stabbed in the eye</p> <p>D. dust and small particles could be blown into the eyes</p>					

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8D4	26	Working with RF	Section 8 – Safety	Antennas connected to transmitting equipment A.* should be mounted where they cannot accidentally be touched when in use. B. should be placed where they can easily be manually adjusted. C. must be connected with the shortest possible feeder. D. always require an antenna matching unit.					
8E1	26	Lightning	Section 8 – Safety	When installing antennas high above the ground or in areas of high elevation A.* measures should be taken to protect against lightning. B. warning lights should be fitted at the top to warn aircraft. C. twin feeder should be used. D. the mast should be insulated from the ground.					
8F1	26	Working mobile and portable	Section 8 – Safety	When working a portable field station, feeder cables must be A. as long as possible. B.* located away from overhead power cables. C. run along the ground to the antenna mast. D. as short as possible					
8F2	26	Working mobile and portable	Section 8 – Safety	When operating a portable station A.* care should be taken to avoid trailing wires. B. a suitable amperage fuse should be installed at the generator to avoid electrocution. C. the local council should be informed D. Residual Current Circuit Breakers are not required.					
8F3	26	Working mobile and portable	Section 8 – Safety	Using excessive volume when wearing headphones can result in A. complaints from neighbours about the noise B. damage to your transmitter C. overloading your receiver D.* damage to your hearing					
8F4	26	Working mobile and portable	Section 8 – Safety	.What of the following features should you consider when demonstrating amateur radio to a group of scouts and guides at their church hall to maximise safety? A* The location of antenna feeders and power cables. B The seating arrangements so everybody has a good view. C Sufficient club members to watch the presentation. D The use of desk microphones rather than hand held.					

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8F5	26	Working mobile and portable	Section 8 – Safety	<p>Who at a radio club meeting is responsible for the general health and safety of the club members and any visitors?</p> <p>A* All club members present. B Each is responsible for themselves. C The club chairman. D .The club safety officer</p>					