

Intermediate Amateur Radio Licence

building on the success of the BRATS FLC

Mock written assessment paper No. 1 -- one hour duration


Please note that at the present time no question papers have been seen so this is a representation of what the written assessment paper might be like, thus no responsibility can be accepted for errors in content or style.

Anticipated pass level 75% correct --- 30 out of 40 !!!

Move your mouse over the section to check your answer, page automatically re-sets answer indicator on loading.

Q.1	In total how many different grades of Amateur Radio Licence are there in UK ?
A	Three
B	Four
Right	Five
D	Six
Q.2	An Intermediate licence holder's station may be used by ?
A	Anyone under the supervision of the licence holder.
B	Anyone who holds an Amateur Radio licence and signs the log book of the station
C	Anyone with a valid current UK Amateur Radio licence of higher grade to that the licensee of the station and signs the log book of the station.
D	The licensee personally
Q.3	What is the validation document's importance ?
A	It sets out the schedule of frequencies that may be operated upon.
B	It gives the callsign that must be used by the licence holder when making CQ calls, and at the start and finish of all period of transmissions.
C	Because is the same as BR68I.
D	It explains in details about unattended operation.

Q.4	How many days notice must be given to the local office of the Radiocommunications agency prior to unattended operation ?.
A	None
B	Three
C	Five
D	Seven
Q.5	If your station is known to be causing interference what must you do?
A	Stop operating for a period of no less than 28 days.
B	Reduce emission causing the interference to the satisfaction of an officer authorised by the Secretary of State.
C	Reduce emission causing interference to the satisfaction of a representative of the Radiocommunications Agency
D	Check out your station and if your are satisfied all is well continue to operate normally.
Q.6	Who issues the Amateur Radio licence on behalf of the Secretary of State ?
A	The Post Office
B	The Radio Society of Great Britain
C	The Radiocommunications Agency
D	The local magistrates courts
Q.7	What particular limitation is there to operating on 51.50Mhz ?
A	May only be used on a secondary basis.
B	May only be used on a secondary basis of non-interference to other services.
C	May only be used on a secondary basis of non-interference to other services outside UK.
D	May only be used on a secondary basis of non-interference to other services outside UK with an antenna limited top 20 meters above ground.
Q.8	Between which frequencies is written consent of the Secretary of State required to operate ?

A	there is no such restriction.
B	2400 - 2450 Mhz
C	5820 - 5830 Mhz
D	24050 - 24150 Mhz
Q.9	What is the total value of the resistance of a resistor of 1200 ohms and 200 ohms linked in series?
A	2200 ohms
B	12200 ohms
C	1000 ohms
D	1400 ohms
Q.10	Inductance is ?
A	The ability to store energy in a coil.
B	The name given to the coil that stores energy.
C	What happens when a magnetic field in a coil collapses.
D	Another name for a non conductor.
Q.11	<p>The diagram represents what part of a circuit ?</p> 
A	A capacitor and inductor in parallel.
B	A capacitor and resistor in parallel.
C	A series tuned circuit
D	A parallel tuned circuit
Q.12	Transfer of electrical energy from one coil of a transformer to another can take place ?
A	With AC.
B	With DC.
C	With AC but only if a diode is in the circuit
D	With DC but only if a diode is in the circuit

D	With either AC or DC.
Q.13	When a diode conducts it is said to be ?
A	Working
B	Reverse Bias
C	On bias
D	Forward Bias
Q.14	What is the basis of amplification in a transistor circuit ?
A	That a small current on the collector will cause a large current in the base.
B	That a small current on the base will cause a large current in the collector.
C	That a small current on the emitter will cause a large current in the base.
D	That a small current on the collector will cause a large current in the emitter
Q.15	When using an analogue multimeter, you sometimes need to be careful with the polarity of the probes. Why?
A	Not true the probes can always be used either way round.
B	Incorrect polarity only means that you will not get a reading
C	Confusing reading and possibility of damage to components can occur.
D	Confusing reading may occur but no possibility of damage to components can occur.
Q.16	When two frequencies are mixed together the result is ?
A	A single frequency at the sum of the two individual frequencies.
B	A single frequency at the difference of the two individual frequencies.
C	A single frequency at the product of the two individual frequencies.
D	New frequencies which are at both the sum and difference of the original frequencies together with the original frequency.

Q.17	Approximately how wide is the bandwidth of an SSB signal ?
A	About 1.5kHz
B	About 3 kHz
C	About 4 kHz
D	About 5 kHz
Q.18	A filter is a device that ?
A	Blocks DC
B	Blocks AC and DC
C	Blocks some DC frequencies
D	Blocks some frequencies and passes others.
Q.19	The IF amplifier is used to ?
A	Provide amplification to the RF signal.
B	Provide main amplification and good filtering to remove adjacent signals.
C	Provide initial amplification to a microphone input.
D	Provides filtering of the initial RF signal
Q.20	The intermediate frequency is the ?
A	Difference between the RF and the local oscillator frequencies
B	Sum of the the RF and the local oscillator frequencies
C	The product of the RF and the local oscillator frequencies.
D	The audio filter frequency.
Q.21	A discriminator is used to ?
A	Recover the FM audio signal
B	Recover the CW signal
C	Recover the SSB signal
D	Recover FM and SSB signals
Q.22	How do the fields around a twin feeder system cancel each other out ?

	each other out :
A	Because the RF current flows in the same direction in each part of the system.
B	Because the RF current only flows in one part of the system.
C	Because the RF current flows in one part of the system and the other is connected to earth.
D	Because the RF current flows in the opposite directions in each part of the system.

Q.23	An antenna has a feed point impedance which is the ratio of ?
A	The RF potential difference and the current at that point.
B	The RF potential difference and the resistance at that point.
C	The RF potential difference and the voltage at that point.
D	The RF potential difference and the power at that point.
Q.24	Of what is a dummy load constructed ?
A	Wire wound resistors.
B	A single or several carbon resistors
C	An inductor and capacitor as a parallel tuned circuit
D	An inductor and capacitor as a series tuned circuit

Q.25	Typical distance for UHF to travel is ?
A	10kms
B	40 kms
C	60kms
D	80kms
Q.26	The basic structure of the ionosphere is ?
A	The A, B, C ,& D layers
B	The B, C, D, E layers
C	The C, D, E , F layers
D	The D, E, F1 and F2 layers

Q.27	What frequency bands penetrate the ionosphere which allows satellite communication ?
A	HF
B	VHF & HF
C	UHF & HF
D	VHF & UHF
Q.28	Is it true that amateur transmitters may give rises to higher fields than the limits prescribed in the EMC regulation ?
A	Yes
B	No, is it not permissible to exceed EMC regulations
C	No all amateur equipment is immune to EMC
D	No unless power levels outside the maximum permitted are used.
Q.29	Where is a band pass filter placed in the link between the transmitter and the antenna ?
A	At the antenna
B	Between the ATU and the antenna
C	Between the Transmitter and the SWR unit before the SWR unit links to the ATU.
D	Between the SWR Unit and the ATU
Q.30	Does the direct pickup of interference in affected devices tend to be independent of the transmitted frequency ?
A	Yes.
B	Only below 30 MHz.
C	Only above 30 MHz.
D	No.

Q.31	Your neighbour has a TV masthead amplifier does this:- -?
A	Reduce your chance of causing TVI to his system.
B	Makes no difference to your chance of causing TVI to his system.
C	Greatly increases your chance of causing TVI to his system.
D	Greatly reduces your chance of causing TVI to his system.
Q.32	What are the merits in the amateur and the complainant keeping a log of the instances of interference ?
A	There are none but it is just something that has to be done so that it appears you are compassionate about the problem.
B	So that when the complaint is looked into further you know that you have kept to your licence conditions.
C	You do not need to keep a log except when running near to maximum power so it is just best to make log entries.
D	So that when the complaint is looked into further you know that you have kept to your licence conditions, and that those investigating can look for similarities in operating times to times of interference.
Q.33	What is the meaning of the "Q" Code QRL ?
A	Busy - the frequency is in use
B	You are being called by
C	Change frequency
D	Close down (stop sending)
Q.34	Which country prefix is JA ?
A	South Africa
B	North Africa
C	China
D	Japan

Q.35	Why must a soldering bench area be kept well ventilated ?
A	To ensure a steady flow of air to aid cooling of the solder joints.
B	To reduce contamination from the vapours of the flux onto the circuit board.
C	To reduce likelihood of solder splashes.
D	To prevent if possible the inhalation of solder and flux fumes which can cause breathing problems.
Q.36	What is the use of a centre punch ?
A	To cut a neat hole in the centre of a pre-drilled holes for a switch mounting.
B	To removed the metal tabs sometimes found in metal construction cases.
C	To ensure alignment of components on a PCB.
D	To make a small indentation which help stop a drill bit from slipping when drill holes in metal cases.
Q.37	What is the correct angle to try and ensure the safe use of a ladder ?
A	One out from the wall for 2 up (2:1)
B	One out from the wall for 3 up (3:1)
C	One out from the wall for 4 up (4:1)
D	One out from the wall for 5 up (5:1)
Q.38	By calculation and assuming that you are operating on a mains supply of 230v, which does not vary, with an appliance having power consumption of 460 watts what is current rating of the fuse that should to be used for safety?
A	1 amp
B	3 amp
C	5 amp
D	13 amp

Q.39	What is meant by "tinning" the tip of a soldering iron ?
A	Cleaning it ready for the next joint.
B	Applying a little solder to the tip ready for the next joint.
C	The term tinning is not applied to the tip of a soldering iron only to the application of solder to a connecting wire.
D	Cleaning the tip and the application of a small amount of solder ready to make the next joint.
Q.40	From the three band colour code what is the value of a resistor with the bands Red Red Red and tolerance of gold ?
A	22 ohms 5%
B	220 ohms 5%
C	2200 ohms 5%
D	22000 ohms 5%



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