

Intermediate Amateur Radio Licence

building on the success of the BRATS FLC

Mock written assessment paper No. 2-- 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 !!!

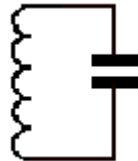
Move your mouse over the section to check your answer, page automatically re-sets answer indicator on loading.

Q.1	How many stages of Amateur Radio Licence are there in the UK ?
A	One
B	Two
Right	Three
D	Five
Q.2	Under what conditions may an Intermediate Licence holder operate a station other than their own ?
A	When under the direct supervision of a Full Licence holder and at the station of that licence holder.
Right	When under the direct supervision of a Full Licence holder and at the station of that licence holder and using the Full Licence holders callsign.
C	You can only work your own station and none other.
D	You can work any other station and use your call /P
Q.3	When using modes other than voice or morse code what are the licence requirements to identify?
A	None special all modes are the same.
Right	In addition to the normal identification in the mode of operation at least every 30 minutes you must identify in Morse code or voice.
C	In addition to the normal identification in the mode of operation at least every 15 minutes you must identify in Morse code or voice.

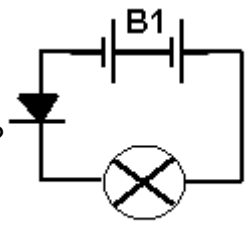
D	In addition to the normal identification in the mode of operation at the end of the QSO you must also identify in Morse code or voice.
Q.4	For what purpose is unattended operation permitted ?
A	Emergency location
B	For digital operation only.
C	For non digital only
Right	For direction finding of an unattended beacon, remote operation of the main station and for digital operation.
Q.5	Under the licence conditions of the Intermediate Licence you must ensure that ?
A	The equipment must be designed so that its use does not cause any undue interference to any wireless telegraphy.
B	The equipment must be designed and constructed so that its use does not cause any undue interference to any wireless telegraphy.
C	The equipment must be designed, maintained and used so that its use does not cause any undue interference to any wireless telegraphy.
D	The equipment must be designed, constructed, maintained and used so that its use does not cause any undue interference to any wireless telegraphy.
Q.6	How often must you conduct tests to ensure that you reduce the chance of causing interference ?
Right	From time to time
B	Monthly
C	Every six months
D	Annually on the renewal of your licence.
Q.7	Which of the following bands are shared with other services ?
Right	3.5 - 3.8 MHz
B	50.00 - 52.00 MHz.
C	2400 - 2450 MHz.
D	47000 - 47200 MHz

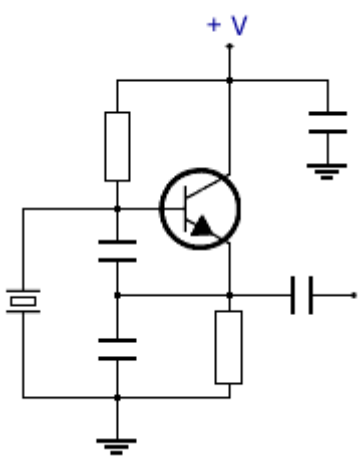
Q.8	How does the power output restriction differ between 28.500 - 29.700 MHz and 430 - 432 MHz ?
A	10 Watts
B	10 watts input to the antenna
C	10 Watts output from the antenna
Right	The 430 - 432 MHz band is restricted by erp but that of 28.500 - 29.700MHz is restricted by output power from the transmitter


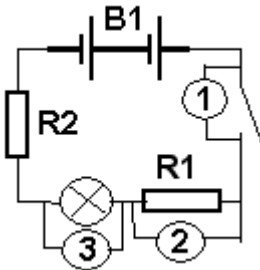
Q.9	What is the unit and abbreviation for Potential Difference ?
Right	V Volts
B	v volts
C	I Amps
D	i amps
Q.10	Two metal plates separated by an insulating material is called ?
A	An inductor
B	A resistor
C	A transistor
Right	A capacitor

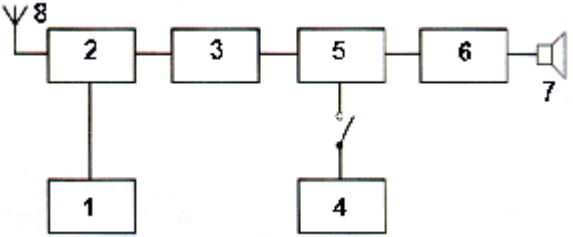
Q.11	The diagram represents what part of a circuit ? 
A	A capacitor and inductor in parallel.
B	A capacitor and resistor in parallel.
C	A series tuned circuit
Right	A parallel tuned circuit
Q.12	What is the purpose of the iron core in a transformer ?
A	To ensure the transformer is structurally stable.

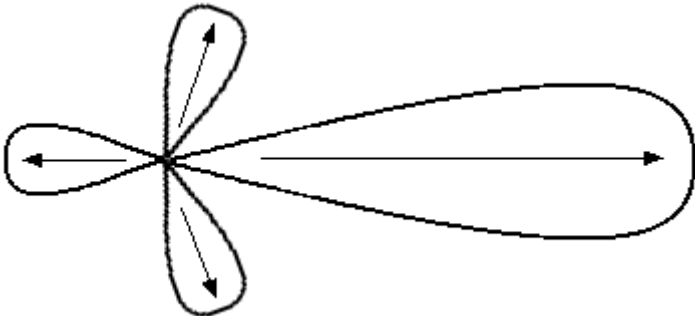
B	To reduce the magnetic field.
C	To concentrate the magnetic field.
D	Transformers do not have an iron core.

Q.13	<p>Looking at the circuit diagram will the lamp light?</p> 
A	Yes
B	No
C	Yes but intermittently due to the AC source
D	Yes but only whilst the capacitor holds the charge.

Q.14	<p>Does the circuit diagram show a crystal oscillator circuit or a tuned circuit oscillator?</p> 
A	Neither it is an audio amplifier.
B	Tuned circuit oscillator.
C	Crystal oscillator.
D	The diagram is the same for both so it could be either.

Q.15	What does the circuit diagram symbol represent ? 
A	A volt meter
B	A diode
C	An earth point
D	A potential difference input
Q.15	<p>In the circuit diagram which is the correct place to put an ammeter to measure the circuit's current?</p> 
A	1
B	1 or 2
C	1 or 2 or 3
D	3
Q.17	Unlike voice communication data communication uses?
A	A single tone to modulate the carrier
B	Only two tones to modulate the carrier
C	One or more tones to modulate the carrier
D	Only three tones to modulate the carrier
Q.18	The second harmonic of 3.5MHz can cause interference to which other band ?
A	7.0MHz
B	10.5MHz
C	14.0MHz
D	17.5MHz

<p>Q.19</p>	<p>What is part 1 in the diagram of a superhet receiver ?</p> 
<p>A</p>	<p>The BFO</p>
<p>B</p>	<p>The VFO</p>
<p>C</p>	<p>The Mixer</p>
<p>D</p>	<p>The Detector</p>
<p>Q.20</p>	<p>If the RF frequency is 7.1 MHz and the Intermediate frequency is 500 kHz what is the frequency of the local oscillator ?</p>
<p>A</p>	<p>7.6 MHz</p>
<p>B</p>	<p>2.1 MHz</p>
<p>C</p>	<p>6.6 MHz</p>
<p>D</p>	<p>6.1 MHz</p>
<p>Q.21</p>	<p>What type of oscillator is needed to recover an AM signal ?</p>
<p>A</p>	<p>A BFO.</p>
<p>B</p>	<p>A CIO.</p>
<p>C</p>	<p>None the diode detector will recover the signal.</p>
<p>D</p>	<p>A discriminator.</p>
<p>Q.22</p>	<p>In twin feeder lines the signal travels ?</p>
<p>A</p>	<p>In the same direction in each line</p>
<p>B</p>	<p>In only one line the other is grounded</p>
<p>C</p>	<p>Periodically in the same direction then in the reverse direction</p>
<p>D</p>	<p>In each conductor as equal but opposite signals</p>

Q.23	At the feed point of an antenna the impedance is a ratio of ?
A	The forward and reverse signals.
B	The RF potential and the SWR.
C	The RF potential and the current at that point.
D	The SWR and the current at that point.
Q.24	<p>The diagram represents ?</p> 
A	A polar diagram of a dipole
B	A polar diagram of a 1/4 wave vertical
C	A polar diagram of a 1/2 wave vertical
D	A polar diagram of a yagi
Q.25	Typical distance for VHF to travel is ?
A	10kms
B	25kms
C	50kms
D	100kms
Q.26	Which is the highest layer of the ionosphere ?
A	D
B	E
C	F1
D	F2

Q.27	VHF propagation uses the ?
A	Ionosphere.
B	Troposphere.
C	Ground wave only. .
D	Line of sight only.
Q.28	What can happen if you cause EMC problems to a neighbour ?
A	Be instructed to operate at lower power.
B	Be instructed to operate at lower power or cease operation.
C	Your equipment is taken away.
D	Your licence is revoked.
Q.29	It is good practice to use a filter on the antenna lead and to connect it in line ?
A	Next to the transmitter
B	Before the SWR unit
C	After the SWR unit
D	In place of the SWR unit
Q.30	On Digital Television the effect of interference is ?
A	Patterning on the picture.
B	Flickering of the picture.
C	Freezing of the picture.
D	No adverse effect.
Q.31	What antenna should be used to conduct tests for RF being conducted out of a transmitter by its power leads and into the mains ?
A	A yagi
B	A dipole
C	A vertical

D	A dummy load
Q.32	Should you conduct tests with the co-operation of a complainant in instances of interference ?
A	Yes
B	No
C	Yes but only on instruction from the RSGB
D	Yes but only on instruction from your local amateur radio club
Q.33	What is the meaning and when is the Amateur Radio abbreviation "DE" usually used?
A	Means from, and is used to precede the call sign of the calling station in CW and Data modes
B	Means from, and is used to precede the call sign of the called station in CW and Data modes
C	Means from, and is used to precede the call sign of the calling station only in CW mode.
D	Means "of", in French, and used in "how much of ----- is needed ? ".
Q.34	What is packet?
A	A fast form of CW that can be read by the best CW operators but needs a great deal of practice.
B	A voice mode used in Meteor shower experiments.
C	A form of Slow Scan TV
D	A data mode using a keyboard and personal computer or special terminal and other input system.
Q.35	What is the purpose of a soldering iron stand ?
A	To hold the soldering iron when not in use.
B	To hold the soldering iron when in use and not in use.
C	To hold the soldering iron when warming up.
D	To hold the soldering iron when hot and not in use to reduce likelihood of contact with ones skin and therefore prevent burns.
Q.36	When an item is being drilled or sawn should it be held in a vice, why ?

	why :
A	To ensure accurate drilling or sawing.
B	To prevent the item being cut or drilled from slipping or rotating.
C	To prevent damage to the work bench.
D	The reduce the likelihood of damage to the drill or saw.
Q.37	What is over reaching on a ladder ?
A	Going up too high for your comfort.
B	Using a ladder that it too long for the job in hand.
C	Leaning out to either side of the ladder with only one foot in contact with a ladder rung and risking the ladder rotating, leading to a fall from the ladder.
D	Using a support on the top of a ladder to carry additional pieces of equipment and thus reduce the number of times that the ladder has to be climbed.
Q.38	What is the danger of ladders coming into contact with overhead power lines ?
A	It will de-tune your antenna system
B	It may cause a short to earth.
C	There is the risk of electric shock to anyone on the ladder.
D	None so long as they are made of timber.
Q.39	What is soldering?
A	A method of wire wrapping components to pegs to make joints.
B	The linking of wires and components together by the use of a hot soldering iron and melting solder into a joint.
C	A method of taking solder off a joint.
D	A method of testing a component in circuit.
Q.40	From the three band colour code what is the value of a resistor with the bands Brown Black Gold and tolerance of gold ?
A	1R 5%
B	10R 5%

C	100R 5%
D	1000R 5%



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