SAMPLE

RADIOCOMMUNICATIONS AGENCY

Foundation Amateur Radio Question Paper

This paper consists of 20 questions, Duration 30 minutes.

INSTRUCTIONS TO CANDIDATES

You should have 5 items.
1. This question paper
2. The Schedule to the Foundation Amateur licence
3. A Frequency to Wavelength conversion chart
4. A Frequency Allocation Table
5. Band Plans of the 14MHz and 144MHz amateur bands

All questions have equal marks and all questions should be attempted.

Each question has 4 possible answers, identified 'A' 'B' 'C' and 'D'. Only one answer is correct, the others are wrong. You should decide which of the 4 answers is the correct one and mark the answer box for each question accordingly.

If you decide answer 'C' is correct, show this by ticking in the box marked 'C'. **Take care to ensure your tick does NOT cover two boxes**.

If you then change your mind, shade out the tick and tick the box for your new choice.

A [ ] A [✔]
B [ ] B [ ]
C [✔] C [■]
D [ ] D [ ]

The Schedule to the licence, the Frequency Allocation Table, the Frequency to Wavelength Conversion Chart and the Band Plans may be used to help answer any question.

You may also use a calculator.

This paper will contain your answers and must be handed in at the end of the assessment.

Please fill in the details below before the start.

Family Name:	
First names:	
Date of birth:	
Candidate Number:	
Test centre location:	
Date of Test:	

1 Which, of the items listed below, is NOT a type of Amateur licence?

A [ ] Intermediate

B [ ] Foundation

C [ ] Beginner

D [ ] Full

2 Which of the following messages is NOT permitted by the Foundation licence?

A [ ] A reply to a "CQ" call.

B [ ] A message in Morse code.

C [ ] A secret message to an amateur friend.

D [ ] Agreeing to meet at the radio club.

3 If an amateur changes address, he/she should notify

A [ ] the Police

B [ ] the RSGB (Radio Society of Great Britain)

C [ ] the Secretary of State via the radio licensing centre

D [ ] the local radio club.

4 Each log entry must contain

A [ ] signature of operator

B [ ] call sign of station contacted

C [ ] frequency used

D [ ] type of receiver used.

5 On which one of the frequencies below may a Foundation licensee transmit?

A [ ] 7·5MHz

B [ ] 15MHz

C [ ] 72MHz

D [ ] 145MHz

6 The correct formula relating the voltage, V, the current, I, and the resistance R is

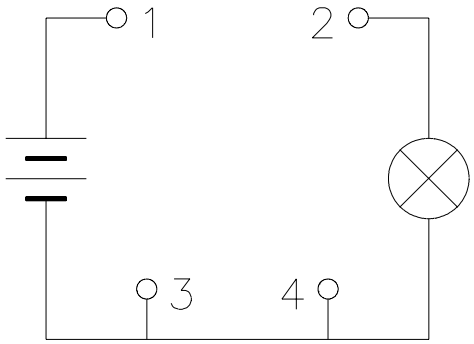
A [ ] $R = V - I$

B [ ] $R = V \times I$

C [ ] $R = V / I$

D [ ] $R = I / V$

7 To allow the bulb in the diagram to light correctly, a wire should be connected between points



A [ ] 2 and 4

B [ ] 2 and 3

C [ ] 1 and 2

D [ ] 1 and 3

8 The UK mains supply is

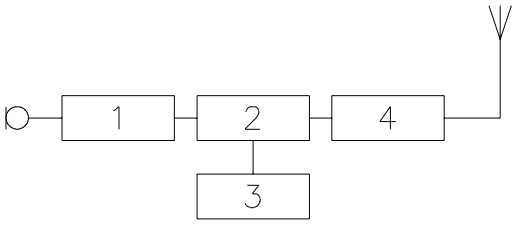
A [ ] 230V D.C.

B [ ] 230V 50Hz

C [ ] 230V 60Hz

D [ ] 230V 100Hz

9 What is the function of the box marked '2' on the transmitter block diagram ?



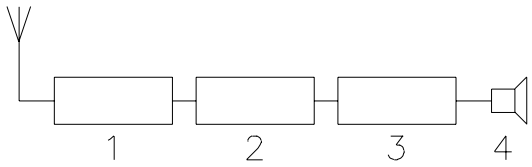
A [ ] Frequency generation oscillator

B [ ] RF amplifier

C [ ] Modulator

D [ ] Audio amplifier

10 In the block diagram of a radio receiver shown, what is the function of the box marked '2'?



A [ ] Tuning and rf amplification.

B [ ] Detection.

C [ ] Audio amplifier.

D [ ] Loudspeaker.

11 The output from the transmitter should be connected to the antenna by

A [ ] waterproof mains cable

B [ ] screened audio cable

C [ ] coaxial cable

D [ ] fuse wire.

12 An antenna is connected correctly to a transmitter but used on the wrong frequency. This will have the effect of

A [ ] risking damage to the antenna

B [ ] reflecting some of the power from the transmitter back down the feeder

C [ ] reducing the SWR on the feeder

D [ ] increasing the signal strength received at a distance from the transmitter.

13 An amateur wishes to achieve a greater range on VHF and UHF. Which option is likely to be most successful?

A [ ] Use UHF for greatest range.

B [ ] Double the receiving station's transmitter power.

C [ ] Increase the antenna height above surrounding roofs.

D [ ] Move the antenna on the ground in the garden.

14 The ionosphere is

A [ ] another name for the air we breath

B [ ] layers of reflective air at heights of 70 to 400km

C [ ] a type of spherical transmitting antenna

D [ ] a piece of amateur radio test equipment.

15 One of the effects of operating a radio transmitter is that

A [ ] the electricity bill might be reduced

B [ ] the RSGB membership fees are higher

C [ ] local rainfall is increased

D [ ] interference may be caused to nearby televisions.

16 An amateur transmitter is designed to radiate from the antenna. How might signals enter other electrical devices in the house?

A [ ] By direct radiation out of the front panel of the transmitter.

B [ ] By radiating from the Morse key.

C [ ] By being picked up by mains wires leading to the affected device.

D [ ] By being conducted along the microphone lead.

17 Before making an initial call an amateur should

A [ ] make an entry in the log book

B [ ] listen on the frequency

C [ ] log the frequency

D [ ] check the transmitter power.

18 Band Plans are published because

A [ ] it is a convenient way of remembering the schedule to the amateur licence

B [ ] it allows the different modes and types of transmission to best share the band

C [ ] it allocates most of the band to the higher power stations

D [ ] it is illegal to operate in contravention of the band plan.

19 What is the most serious risk when working inside equipments using high voltages?

A [ ] Such equipments are more likely to develop a fault.

B [ ] There is a risk of receiving a fatal electric shock.

C [ ] High voltage equipments are more complicated and harder to repair.

D [ ] Spare parts are harder to obtain.

20 It is bad practice to have wires and feeders trailing about on the floor. Why?

A [ ] It is a ‘trip’ hazard.

B [ ] Poor layout of feeders is likely to cause a high SWR.

C [ ] The wrong lead could become accidentally unplugged.

D [ ] It will give a poor impression to visiting and potential new amateurs.