

Amateur Radio Examination Foundation Level [E40436F]

Candidate:

Date of Birth:

Exam Centre:

Date: Wed,

This paper consists of 26 questions. **Time allowed:** 55 minutes

Candidate Declaration <i>I confirm that this is all my own work and that I have followed the rules of the examination.</i>	Candidate's Signature
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INSTRUCTIONS TO CANDIDATES

You should have 3 items.

1. This Examination Paper
2. An Optical Mark Sheet
3. Reference Data for use in the Foundation Level Examination

You will need a pen to sign this form and complete the Optical Mark Sheet, an HB Pencil and an eraser.
 You may use a silent, non-programmable calculator.

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

Your answers should initially be marked in pencil on the Optical Mark Sheet or the examination paper itself. Errors should be corrected using your eraser. When you are satisfied that your answers are final, you should **INK IN** the answer box on the Optical Mark Sheet using a black pen.

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 correct and mark the answer box for each question accordingly.

If you decide answer 'C' is correct, show this by shading in the box marked 'C' using an HB pencil .	A <input type="checkbox"/> B <input type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/>
If you change your mind before inking-in, rub out the shading and shade in the box for your new choice.	A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>

When you are satisfied with your answer, shade in the whole box with **black ink**. Do **NOT** make any mark outside the box. **Once you have inked-in the Optical Mark Sheet, no changes can be made.**

The Reference Data booklet contains the Schedule to the Licence, the Band Plans, the Frequency to Wavelength Conversion Chart and the Frequency Allocation Table, which may be used to help answer any question.

The Optical Mark Sheet is designed to be machine marked and will provide your result for this Examination.

It must be completed during the time allowed for the Examination.

This paper, the Optical Mark Sheet and Reference Data Booklet must be handed in at the end of the Examination.

NOTICE TO CANDIDATES

You must not talk to or distract any other candidate in the exam room.

You are not allowed any assistance with the exam questions and the Invigilator is not permitted to discuss examination questions.

If you need other assistance, please raise your hand and talk quietly to an Invigilator when approached.

You may not leave the exam room without permission and may not re-enter the room unless you have been escorted by an Invigilator at all times.

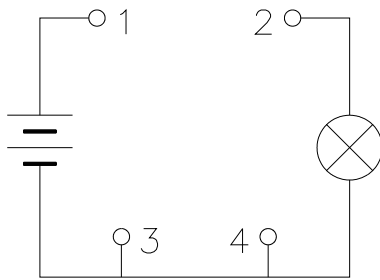
You must only use black ink for your final answers on the Optical Mark Sheet, and any calculations may be done on the reverse of the Examination Paper.

- 1** Which, of the items listed below, is NOT a type of Amateur licence?
- A Intermediate
 - B Foundation
 - C Beginner
 - D Full
- 2** When transmitting, you must give your call sign when establishing contact and
- A on every 'over'.
 - B every 5 minutes.
 - C every 15 minutes.
 - D at the end of the contact.
- 3** You are talking to M3ABC by amateur radio and friends enter his room. You may also talk to them
- A if they are a family members.
 - B if M3ABC gives permission.
 - C if they are also amateurs.
 - D but only on the calling channel.
- 4** If an amateur changes address, he/she should notify
- A the Police.
 - B the RSGB (Radio Society of Great Britain).
 - C Ofcom.
 - D the local radio club.
- 5** On which one of the frequencies below may a Foundation licensee transmit?
- A 7.5MHz
 - B 15MHz
 - C 72MHz
 - D 145MHz
- 6** 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

7 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 $R = V / I$

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



- A 1 and 2
- B 1 and 3
- C 2 and 3
- D 2 and 4

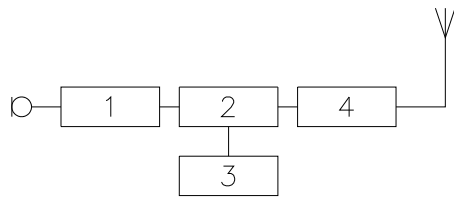
9 The UK mains supply is

- A 230V D.C.
- B 230V 50Hz
- C 230V 60Hz
- D 230V 100Hz

10 The frequency 121.5MHz is used for

- A Aeronautical radio.
- B Amateur radio.
- C Land based radio.
- D Satellite radio.

11 What is box marked '2' in the transmitter block diagram ?

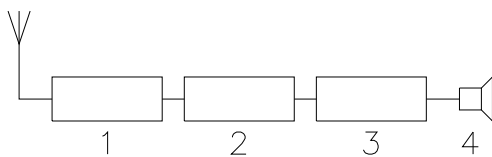


- A Frequency generation oscillator.
- B RF amplifier.
- C Modulator.
- D Audio amplifier.

12 Excessive microphone gain may cause

- A the transmit frequency to drift.
- B interference to adjacent channels.
- C the received voice to become higher in pitch.
- D the standing wave ratio to increase above its limits.

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

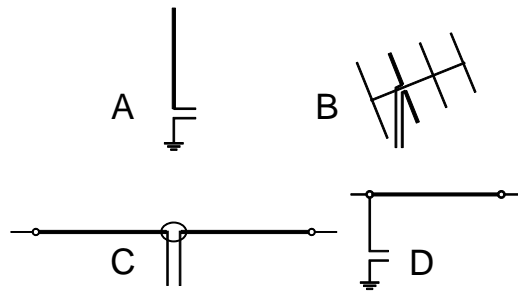


- A Tuner and RF amplifier.
- B Detector.
- C Audio amplifier.
- D Loudspeaker.

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

- A waterproof mains cable.
- B screened audio cable.
- C fuse wire.
- D coaxial cable.

15 Which drawing shows a dipole antenna?



- A Drawing A.
- B Drawing B.
- C Drawing C.
- D Drawing D.

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

- A reflecting some of the power from the transmitter back down the feeder
- B risking damage to the antenna.
- C reducing the SWR on the feeder.
- D increasing the signal strength received at a distance from the transmitter.

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

- A Increase the antenna height above surrounding roofs.
- B Use a longer feeder to the antenna.
- C Use UHF for greatest range.
- D Move the antenna onto the ground in the garden.

18 The ionosphere is

- A layers of reflective air at heights of 70 to 400km.
- B another name for the air we breath.
- C a type of spherical transmitting antenna.
- D a piece of amateur radio test equipment.

19 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.

- 20** Which transmission is MOST likely to cause interference?
- A A high power FM transmission.
 - B A low power FM transmission.
 - C A high power SSB transmission.
 - D A low power SSB transmission.
- 21** A neighbour complains that your transmissions were causing interference to his television. You should
- A say its not your fault because you were operating in accordance with your licence.
 - B advise him to inform the local authority.
 - C advise him to contact Ofcom.
 - D ask if he will help you with a test to check what the problem might be.
- 22** Before making an initial call an amateur should
- A make an entry in the log book.
 - B listen on the frequency.
 - C connect the feeder to a dummy load.
 - D check the power supply is switched on.
- 23** 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.
- 24** You are in contact with a friend by radio and he plays you a piece of music he has written. In reply you should
- A say it is not considered acceptable to play music on amateur radio.
 - B say it is against the terms of the licence to play music on amateur radio
 - C agree it is a nice piece of music and continue to chat about it.
 - D suggest a couple of changes might work and then play it again.
- 25** What is the most serious risk when working inside equipment using high voltages?
- A Such equipment is more likely to develop a fault.
 - B Spare parts are harder to obtain.
 - C High voltage equipments are more complicated and harder to repair.
 - D There is a risk of receiving a fatal electric shock.

26 You find an amateur friend lying on the floor, silent and not moving, beside his transmitter which has fallen off the desk. You should

- A go for help.
- B turn him face up.
- C switch off the power.
- D pull any microphone and other cables away from him.

NOW GO BACK AND CHECK YOUR WORK

Answers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
C	C	C	C	D	C	D	A	B	A	C	B	B	D	C	A	A	A	D	C	D	B	B	A	D	C

Candidate Declaration

*I declare that the responses on this Answer Sheet
are all my own work.*

Candidate's Signature

Candidate:

Exam: Amateur Radio Examination Foundation Level

Centre:

Date:



1.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
2.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
3.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
4.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
5.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
6.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
7.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
8.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
9.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
10.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
11.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
12.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
13.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
14.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
15.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
16.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
17.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
18.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
19.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
20.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
21.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
22.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
23.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
24.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
25.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>
26.	A	<input type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>	D	<input type="checkbox"/>

