Syllabus 2019 – Mock Examination Paper

Foundation Mock paper 1

1
The holder of M6XYZ is
A. a Full licence holder.
B. a Scottish Intermediate licensee.
C. a Foundation licence holder in England.
D. a pirate station.

2
Your CQ call on two metres is answered immediately, and you change frequency to a ‘working’ channel where you hold a 20 minute conversation and then close down. To comply with your licence, you must have given your callsign
A. whenever asked.
B. three times.
C. four times.
D. as frequently as practicable.

3
Which transmission is regarded as ‘transmitting for general reception’?
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.

4
Who may require you to stop transmitting until a fault in your transmitter has been fixed?
A. The person suffering from interference.
B. A person authorised by Ofcom.
C. A person authorised by the local Council.
D. A member of the RSGB staff.

5
What power is a Foundation Licence holder permitted to use on the 0.137MHz band?
A. 1W.
B. 1W erp.
C. 10W.
D. 10W erp.
6  On which one of the following bands do radio amateurs have Primary status?
1G2
A.  50.00 – 51.00 MHz.
B.  51.00 – 52.00 MHz.
C.  430.0 – 431.0 MHz.
D.  431.0 – 432.0 MHz.

7  A 12V mobile transceiver consumes 10W on receive and 100W on transmit. The highest current drawn will be
2A1, 2A2, 2B1, 2C1, 2C2, 2C3, 2C4
A.  0.83A.
B.  0.83Ω.
C.  8.3A.
D.  8.3Ω.

8  What is the significant difference between AC and DC?
2E1, 2E2, 2E7, 2J1
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.

9  Digital signals are
2F1, 2F2
A.  constantly changing in amplitude, frequency or both.
B.  a stream of finite values at a specific sampling interval.
C.  demodulated using a frequency discriminator.
D.  created by a digital to analogue converter.

10 The bottom waveform in the diagram shows
3A1, 3A2, 3A3, 3A4
A.  An audio wave.
B.  A carrier wave.
C.  An amplitude modulated wave.
D.  A frequency modulated wave.
11. Too much audio gain is likely to cause a transmitter to
A. stop working.
B. increase the SWR.
C. interfere with other bands.
D. interfere with adjacent frequencies.

12. A Software Defined Radio (SDR) receiver
A. uses a balanced modulator to recover the original audio.
B. digitises incoming signals for processing in software.
C. does not require an antenna or coaxial feeder.
D. is completely immune to interference.

13. Which one of the following would NOT be found in a radio receiver?
A. RF power amplifier.
B. Audio amplifier.
C. Detector (demodulator).
D. Tuning and RF amplifier.

14. A vertical half wave dipole will radiate
A. equally in all horizontal directions.
B. a maximum signal in a vertical direction.
C. a minimum signal at right-angles to the antenna.
D. a maximum signal off the ends of the antenna.

15. The connector shown is a
A. PL259 plug.
B. BNC plug.
C. jack plug.
D. USB plug.

16. HF propagation is NOT affected by the
A. sun.
B. time of day.
C. day of the week.
D. frequency used.
17  5C1, 5C2, 5C3
A VHF transmitting antenna should be located
A. indoors, protected from the rain, wind and sun.
B. outdoors, as high as practicable to avoid obstructions.
C. close to the transmitter so you can easily adjust it to the correct length.
D. at ground level to minimise interference.

18  6A1, 6A2, 6A3, 6A4
A radio amateur’s transmission is LEAST likely to cause interference to
A. other amateurs.
B. other radio users.
C. an electric drill.
D. An electronic security alarm.

19  6B1, 6C1, 6D1, 6D4, 6E1, 6E2, 6F1, 6F2, 6F3
Which of the following would NOT help to reduce interference to local TV receivers?
A. Increasing the distance between the antenna and the houses.
B. Lengthening the transmitter mains cable.
C. Increasing the height of the antenna.
D. Using balanced antennas for HF.

20  6G1, 6G2, 6G3
Your neighbour complains that your radio transmissions are interfering with his TV. You should
A. tell him that it is not possible because you are working to the conditions of your licence.
B. offer to make a log of your transmission times and ask him to note the times of any interference for comparison.
C. ring the local authority and ask them for advice.
D. suggest that he buys a new TV.

21  7A1, 7A2, 7A3, 7A4, 7A5, 7A6
Once you have contacted another station on a VHF FM calling channel you should
A. remain on the frequency until another station wishes to use it.
B. remain on the frequency as long as the contact takes.
C. ask if the frequency is clear.
D. change frequency to a suitable clear channel.
22. Band plans are used because
   A. using them is a condition of the licence.
   B. they help prevent on-air abuse.
   C. they enable efficient use of the band for different modes.
   D. they are required for radio competitions.

23. Digital Voice (DV) radios
   A. may have the owners callsign embedded in the configuration.
   B. can be used to contact all other types of amateur radios.
   C. automatically check to see if a channel is in use.
   D. cause more interference than SSB radios.

24. The mains power switch to the radio shack should be
   A. out of reach to younger children for safety reasons.
   B. key operated to prevent use by non-licensed persons.
   C. switched off at all times.
   D. in a clearly marked position.

25. When using a soldering iron you should
   A. have a responsible person nearby to help.
   B. wear glasses or eye protection.
   C. ensure that tools are stored in a locked tool box.
   D. ensure the circuit you are working on is earthed.

26. When working a portable field station, feeder cables must always 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.

Answer key
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