

Mock Exam Answers

This is not a complete set of answers but it includes those that have been answered incorrectly by students...

1 A

A “pass” in the RAE does not expire. In fact I took minw in 1963 but did not take out an Amateur Licence until 1970!!

2 A

The “/MM” is used when operating from craft on tidal-waters and “/M” is used on non-tidal water.

BR68 7(4) 12 (1)g

8 A

“M” is the letter used for Scotland. Thus my callsign, G4EGQ, becomes GM4EGQ when I am in Scotland.

BR68 note (w)

G4EGQ lesson AA page 3

10 B

One way to access a repeater is to use a tone of 1750 Hz for half a second. Half a second is 500milli seconds (500mS).

RAEM page 21. Although it is in small print I think this information is required for the RAE

12 D

“Traps” in an aerial allows different parts of the wire (or rods) to be active depending on the frequency band in use.

RAEM page 125

G4EGQ course OP2 page 1

14 A

In a transformer the impedance ratio is the “square” of the turns ratio.

$$10^2 = 100$$

The RAEM page 40

G4EGQ lesson 3 page 4

15 A

In ‘Amateur Radio’ the most common use for a vary capacitance diode is to provide a means of ‘frequency modulating’ an oscillator.

It is true that a vary capacitance diode as part of the feed back loop of an oscillator to provide stability.

In this question it is a case of choosing the most suitable correct answer of the two correct answers!

(Regrettably, the C and G do sometimes have questions with

21 D

A Low Pass Filter is used to reduce the harmonics in a transmitter output.

(A high pass filter would be used if it were necessary to reduce sub-harmonics)

RAEM 70 and 85 G4EGQ course Lesson 11 page 1

more that one correct answer and it is necessary to choose the *most suitable.*)

TheRAEM page 72 G4EGQ course Lesson 10 page 1

22 B

The bandwidth of a TV signal is large...typically 6MHz !

In comparison a speech AM (Amplitude Modulation) or DSB (Double Sideband) is 6 KHz

23 A

If an oscillator is turned on and off by the Morse key then the frequency settles down to the correct frequency each time the key is pressed. This give rise to “chirp”.

The oscillator should be left on and a following stage should be keyed to produce the Morse

RAEM page 72

G4EGQ lesson 8 pages 4 and 5

24 A

If operating near to edge of an Amateur Band it is very important that you check accurately the frequency of your transmitted signal.

RAEM page 90

G4EGQ course, Measurement lesson –frequency counter.

26 C

An Amateur Aerial should be erected well away from power Cables for safety reasons...but this is not an option in this question!

If an amateur Aerial is close to a mains cable it is likely that the transmitted signal will be picked up by the mains cable. The radio signal could then arrive at the TV, Hi-fi etc via the mains cable.

30 C

In order to avoid unnecessary interference to others, the Radio Amateur should not use more transmitted power, than is necessary for good communication.

33 A

A vertical dipole will transmit in all directions of the compass, but not upwards and not down towards the ground.

There should be a Polar diagram at the last paragraph of my *lesson 8C Page 1*.

It should look like a dot (representing the “birds eye view” of the vertical aerial.) surrounded by a circle.

RAEM page 125

35 A

The Ω symbol is missing in the question!

The higher the resistance of the meter, the more sensitive it will be. The sensitivity of a meter is quoted in “ohms per Volt”.

In this question the highest sensitivity is $100\text{M}\Omega$ per volt

End.