

01-6-(d)

An Amateur Station is quoted in the regulations as a station:

- a for training new radio operators
- b using amateur equipment for commercial purposes
- c for public emergency purposes
- d in the Amateur Service

02-6-(c)

Unidentified signals may be transmitted by an amateur station:

- a when making brief tests not intended to be received
- b when security of message content is required
- c never, such transmissions are not permitted
- d on any frequency clear of interference

03-9-(b)

If your signal is strong and perfectly readable at a distant station, you should:

- a reduce your SWR
- b reduce your transmitter power output to the minimum needed to maintain contact
- c not change anything or you may lose contact
- d switch on your speech processor

04-5-(a)

This callsign could be that allocated to a New Zealand amateur radio operator:

- a ZL2KMJ
- b ZK-CFK
- c ZM4432
- d ZLGA

05-6-(d)

A General Amateur Operator Certificate of Competency is usually issued for:

- a two years
- b five years
- c ten years
- d life

06-6-(c)

If interference to the reception of radiocommunications is caused by the operation of an amateur station, the station operator:

- a may continue to operate
- b need not take any action
- c must immediately comply with any action required by the MBIE to prevent the interference
- d may continue and fix the problem when finances permit

07-8-(c)

An amateur station may be shut down at any time by:

- a a neighbour with a gripe about your aerial system
- b a neighbour with an old and damaged television aerial
- c a demand from an authorised official of the Ministry of Business, Innovation & Employment
- d a neighbour with a gripe about interference on his old model television receiver

08-5-(a)

In New Zealand, the "15 metre band" frequency limits are:

- a 21.00 to 21.45 MHz
- b 21.00 to 21.40 MHz
- c 21.00 to 21.35 MHz
- d 21.00 to 21.30 MHz

09-1-(b)

Amateur satellites may operate on these two bands:

- a 21.0 to 21.1 MHz and 146.0 to 148.0 MHz
- b 28.0 to 29.7 MHz and 144.0 to 146.0 MHz
- c 3.5 to 3.8 MHz and 7.0 to 7.1 MHz
- d 7.1 to 7.3 MHz and 10.1 to 10.15 MHz

10-6-(c)

This material is better for making permanent magnets:

- a copper
- b aluminium
- c steel
- d soft iron

11-9-(b)

The name for the flow of electrons in an electric circuit is:

- a voltage
- b current
- c resistance
- d capacitance

12-0-(d)

The unit of impedance is the:

- a farad
- b ampere
- c henry
- d ohm

13-4-(c)

The voltage to cause a current of 4.4 ampere to flow in a 50 ohm resistance is:

- a 2220 volt
- b 22.0 volt
- c 220 volt
- d 0.222 volt

14-7-(b)

The ohm is the unit of:

- a supply voltage
- b electrical resistance
- c electrical pressure
- d current flow

15-1-(b)

Two resistors are connected in parallel and are connected across a 40 volt battery. If each resistor is 1000 ohms, the total battery current is:

- a 40 ampere
- b 80 milliampere
- c 40 milliampere
- d 80 ampere

16-0-(d)

A 6 ohm resistor is connected in parallel with a 30 ohm resistor. The total resistance of the combination is:

- a 8 ohm
- b 24 ohm
- c 35 ohm
- d 5 ohm

17-9-(b)

Three 500 ohm resistors are wired in series. Short-circuiting the centre resistor will change the value of the network from:

- a 500 ohm to 1000 ohm
- b 1500 ohm to 1000 ohm
- c 1000 ohm to 500 ohm
- d 1000 ohm to 1500 ohm

18-4-(d)

The current in a 100 kilohm resistor is 10 mA. The power dissipated is:

- a 1 watt
- b 100 watt
- c 10,000 watt
- d 10 watt

19-2-(d)

The power dissipation of a resistor carrying a current of 10 mA with 10 volt across it is:

- a 0.01 watt
- b 1 watt
- c 10 watt
- d 0.1 watt

20-9-(c)

A sinewave alternating current of 10 ampere peak has an rms value of:

- a 5 amp
- b 14.14 amp
- c 7.07 amp
- d 20 amp

21-2-(a)

A radio component in a circuit diagram is identified as a capacitor, if its value is measured in:

- a microfarads
- b microvolts
- c millihenrys
- d megohms

22-8-(a)

An inductor and a capacitor form a resonant circuit. If the value of the inductor is decreased by a factor of four, the resonant frequency will:

- a increase by a factor of two
- b increase by a factor of four
- c decrease by a factor of two
- d decrease by a factor of four

23-6-(a)

The correct colour coding for the phase wire in a flexible mains lead is:

- a brown
- b blue
- c yellow and green
- d white

24-0-(a)

The basic semiconductor amplifying device is a:

- a transistor
- b PN-junction
- c diode
- d silicon gate

25-8-(b)

The two basic types of field effect transistors are:

- a NPN and PNP
- b n-channel and p-channel
- c germanium and silicon
- d inductive and capacitive

26-5-(a)

A feature common to thermionic valves and transistors is that both:

- a can amplify signals
- b have electrons drifting through a vacuum
- c convert electrical energy to radio waves
- d use heat to cause electron movement

27-7-(d)

A good ammeter should have:

- a a very high internal resistance
- b a resistance equal to that of all other components in the circuit
- c an infinite resistance
- d a very low internal resistance

28-4-(b)

An attenuator network comprises two 100 ohm resistors in series, with the input applied across both resistors and the output taken from across one of them. The attenuation of the network is:

- a 0.707
- b 0.5
- c 0.35
- d 0.25

29-0-(d)

In designing an HF station, you would use this to reduce the effects of harmonic radiation:

- a dummy load
- b antenna switch
- c SWR bridge
- d low pass filter

30-5-(b)

In a frequency modulation receiver, this is located between the filter and the limiter:

- a the high frequency oscillator
- b the intermediate frequency amplifier
- c the mixer
- d the radio frequency amplifier

31-7-(b)

In a single sideband and CW receiver, the output from this is connected to the product detector:

- a the mixer
- b the beat frequency oscillator
- c the radio frequency amplifier
- d the audio frequency amplifier

32-8-(c)

To receive Morse code signals, a BFO is employed in a superhet receiver to:

- a produce IF signals
- b beat with the local oscillator signal to produce sidebands
- c beat with the IF signal to produce an audio tone
- d produce an audio tone to beat with the IF signal

33-4-(d)

The stage in a superhet receiver with a tuneable input and fixed tuned output is the:

- a RF amplifier
- b IF amplifier
- c local oscillator
- d mixer stage

34-0-(c)

The tuning control of a superhet receiver changes the tuned frequency of the:

- a audio amplifier
- b IF amplifier
- c local oscillator
- d post-detector amplifier

35-8-(d)

It is very important that the oscillators contained in a superhet receiver are:

- a sensitive and selective
- b stable and sensitive
- c selective and spectrally pure
- d stable and spectrally pure



36-0-(c)

The gain used in the RF amplifier stage of a receiver should be:

- a as much as possible, short of self-oscillation
- b determined by the amplification factor of the first IF stage
- c sufficient to allow weak signals to overcome noise generated in the first mixer stage
- d sufficient to keep weak signals below the noise of the first mixer stage

37-2-(c)

In a frequency modulation transmitter, this is located between the speech amplifier and the oscillator:

- a power amplifier
- b microphone
- c modulator
- d frequency multiplier

38-3-(a)

In a single sideband transmitter, the output of this is connected to a sideband-selecting filter:

- a balanced modulator
- b microphone
- c mixer
- d radio frequency oscillator

39-4-(d)

The purpose of a balanced modulator in a SSB transmitter is to:

- a make sure that the carrier and both sidebands are in phase
- b ensure that the percentage of modulation is kept constant
- c make sure that the carrier and both sidebands are 180 degrees out of phase
- d suppress the carrier while producing two sidebands

40-1-(b)

The third harmonic of 7 MHz is:

- a 10 MHz
- b 21 MHz
- c 14 MHz
- d 28 MHz

41-3-(b)

A spurious transmission from a transmitter is:

- a an unwanted emission that is harmonically related to the modulating audio frequency
- b an unwanted emission unrelated to the output signal frequency
- c generated at 50 Hz
- d the main part of the modulated carrier

42-9-(b)

Electrolytic capacitors are used in power supplies because:

- a they are tuned to operate at 50 Hz
- b they can be obtained in larger values than other types
- c they have very low losses compared to other types
- d they radiate less RF noise than other types

43-7-(b)

In a regulated power supply, the "crowbar" is a:

- a means to lever up the output voltage
- b last-ditch protection against over-voltage resulting from failure of the regulator in the supply
- c convenient means to move such a heavy supply unit
- d circuit for testing mains fuses

44-7-(a)

When conversing via a VHF or UHF repeater, you should pause between overs for about:

- a 3 seconds
- b half a second
- c 30 seconds
- d several minutes

45-8-(d)

The "S meter" on a receiver:

- a indicates where the squelch control should be set
- b indicates the standing wave ratio
- c indicates the state of the battery voltage
- d indicates relative incoming signal strengths

46-0-(c)

A noise blanker on a receiver is most effective to reduce:

- a 50 Hz power supply hum
- b noise originating from the mixer stage of the receiver
- c ignition noise
- d noise originating from the RF stage of the receiver

47-6-(d)

The "Q" signal "shall I decrease transmitter power?" is:

- a QRL?
- b QRZ?
- c QRN?
- d QRP?

48-4-(d)

The designed output impedance of the antenna socket of most modern transmitters is nominally:

- a 25 ohm
- b 75 ohm
- c 100 ohm
- d 50 ohm

49-0-(c)

Losses occurring on a transmission line between a transmitter and the antenna result in:

- a a SWR of 1:1
- b reflections occurring in the line
- c less RF power being radiated
- d improved transfer of RF energy to the antenna

50-1-(a)

The longest "active" element of a Yagi antenna is the:

- a reflector
- b boom
- c driven element
- d director(s)

51-7-(a)

The purpose of a balun in a transmitting antenna system is to:

- a match unbalanced and balanced transmission lines
- b balance harmonic radiation
- c reduce unbalanced standing waves
- d protect the antenna system from lightning strikes

52-7-(b)

The resonant frequency of a dipole antenna is mainly determined by:

- a its height above the ground
- b its length
- c the output power of the transmitter used
- d the length of the transmission line

53-5-(b)

The reflector and director(s) in a Yagi antenna are called:

- a oscillators
- b parasitic elements
- c tuning stubs
- d matching units

54-5-(a)

That portion of HF radiation which is directly affected by the surface of the earth is called:

- a ground wave
- b local field wave
- c inverted wave
- d ionospheric wave

55-8-(c)

VHF and UHF bands are frequently used for satellite communication because:

- a the Doppler frequency change caused by satellite motion is much less than at HF
- b satellites move too fast for HF waves to follow
- c waves at these frequencies travel to and from the satellite relatively unaffected by the ionosphere
- d the Doppler effect would cause HF waves to be shifted into the VHF and UHF bands

56-9-(a)

Regular changes in the ionosphere occur approximately every 11:

- a years
- b days
- c months
- d centuries

57-8-(c)

When someone in the neighbourhood complains of TVI, it is wise to:

- a deny all responsibility
- b immediately blame the other equipment
- c check your log to see if it coincides with your transmissions
- d inform all the other neighbours

58-2-(c)

Unwanted signals from a radio transmitter which cause harmful interference to other users are known as:

- a rectified signals
- b re-radiation signals
- c harmonic and other spurious signals
- d reflected signals

59-1-(b)

Television interference caused by harmonics radiated from an amateur transmitter could be eliminated by fitting:

- a a low-pass filter in the TV receiver antenna input
- b a low-pass filter in the transmitter output
- c a high-pass filter in the transmitter output
- d a band-pass filter to the speech amplifier

60-2-(c)

The following can be adapted for use as a modem:

- a an electronic keyer
- b a spare transceiver
- c a computer sound-card
- d a spare receiver