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01-7-(a)
An authorised officer from the Ministry of Business, Innovation &
Employment can inspect a General Amateur Operator's Certificate of
Competency:
   at any time
b during business hours
   at any time but not on public holidays
d at any time but not after 9 p.m.
02-4-(d)
The qualified operator of an amateur radio station is absent overseas, so
the home station may be used by:
a any member of the family to maintain contact with the traveller
  the family to contact other amateur radio operators
    anyone who knows how to operate it
    any person with an appropriate General Amateur Operator Certificate
of Competency
03-8-(c)
A person may hold a General Amateur Operator Certificate of Competency
after reaching this minimum age:
   18 years
b 21 years
   there is no age limit
   the age for holding a motor vehicle driver's licence
04 - 0 - (d)
You must surrender your General Amateur Operator Certificate of
Competency at the age of:
a 65 years
   70 years
  75 years
  there is no age limit
05-0-(c)
A person in distress:
   must avoid passing third-party traffic
    should use only the approved distress channels
   may use any available communication means to attract attention
    should quote the GPS coordinates of the current position
06-5-(a)
The expression "harmful interference" means:
   interference which obstructs or repeatedly interrupts
radiocommunication services
    interference by a station in a secondary service
    a receiver with intolerably loud audio
d arcing on a nearby power pole in wet weather
A New Zealand amateur radio operator may:
   be prepared with emergency radio apparatus available on 12-hour
  train for and support disaster relief activities
c operate with emergency traffic-handling, using solar cells during
week-end days
d use portable antennas but, only during daylight hours
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08-9-(a)
The published New Zealand amateur bandplans:
    should be adhered to in the interests of all band occupants
b regularly change with daylight saving
c are to limit the operating frequencies of high-power stations
d are determined by the MBIE
09-6-(d)
The New Zealand amateur radio bandplans are:
   obligatory for all amateur radio operators
b only for testing and development purposes
c indicators of where distant stations can be worked
d recommended, all amateur radio operators should observe them
10-0-(d)
An element which acts somewhere between being an insulator and a
conductor is called a:
a P-type conductor
b N-type conductor
c intrinsic conductor
d semiconductor
11-9-(b)
The name for the flow of electrons in an electric circuit is:
a voltage
b current
c resistance
d capacitance
12-4-(d)
The watt is the unit of:
a magnetic flux
   electromagnetic field strength
c breakdown voltage
d power
13-5-(b)
A current of 2 ampere flows through a 16 ohm resistance. The applied
voltage is:
a 8 volt
  32 volt
c 14 volt
d 18 volt
14-7-(b)
The ohm is the unit of:
a supply voltage
b electrical resistance
c electrical pressure
d current flow
15-3-(a)
One way to operate a 3 volt bulb from a 9 volt supply is to connect it
   series with a resistor
b series with the supply
c parallel with the supply
d parallel with a resistor
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16-1-(a)
The total resistance of several resistors connected in series is:
   greater than the resistance of any one resistor
    less than the resistance of any one resistor
    equal to the highest resistance present
    equal to the lowest resistance present
17 - 2 - (d)
The smallest resistance that can be made with five 1 kilohm resistors is:
   50 ohm by arranging them in series
    50 ohm by arranging them in parallel
    200 ohm by arranging them in series
    200 ohm by arranging them in parallel
18-1-(a)
The DC input power of a transmitter operating at 12 volt and drawing 500
milliamp would be:
   6 watt
  12 watt
c 20 watt
d 500 watt
19-9-(d)
The voltage applied to two resistors in series is doubled. The total
power dissipated will:
a decrease to half
b double
c not change
d increase by four times
20-9-(c)
A sinewave alternating current of 10 ampere peak has an rms value of:
   5 amp
   14.14 amp
b
   7.07 amp
С
d 20 amp
21-0-(b)
The total capacitance of two or more capacitors in series is:
   always greater than that of the largest capacitor
    always less than that of the smallest capacitor
    found by adding each of the capacitances together
    found by adding the capacitances together and dividing by their total
number
22-4-(a)
A transformer with 500 turns on the primary winding and 50 turns on the
secondary winding has its primary winding connected to 230 volt AC mains.
The voltage across the secondary is:
a 23 volt
b 10 volt
c 110 volt
d 2300 volt
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23-4-(b)
An earth wire should be connected to the metal chassis of a mains-
operated power supply, to ensure that if a fault develops, the chassis:
    does not develop a high voltage with respect to the phase lead
    does not develop a high voltage with respect to earth
   becomes a conductor to bleed away static charge
   provides a path to ground in case of lightning strikes
24 - 7 - (d)
One important application for diodes is recovering information from
transmitted signals. This is referred to as:
  biasing
b rejuvenation
c ionisation
d demodulation
25-5-(d)
The two basic types of bipolar transistors are:
  p-channel and n-channel types
b diode and triode types
c varicap and zener types
d NPN and PNP types
26-7-(b)
The electrode that is usually a cylinder of wire mesh in a thermionic
valve is the:
a filament (heater)
b grid
c cathode
d anode
27 - 3 - (d)
The following meter could be used to measure the power supply current
drawn by a small hand-held transistorised receiver:
  a power meter
  an RF ammeter
h
c an electrostatic voltmeter
d a DC ammeter
28-3-(c)
A transmitter power amplifier has a gain of 20 dB. The ratio of the
output power to the input power is:
a 10
b
    20
   100
С
d
    40
29 - 4 - (d)
In an HF station, the "linear amplifier" is:
    an amplifier to remove distortion in signals from the transceiver
    an amplifier with all components arranged in-line
b
    a push-pull amplifier to cancel second harmonic distortion
    an optional amplifier to be switched in when higher power is required
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30-9-(b)
In a frequency modulation receiver, this connects to the audio frequency
amplifier output:
    the intermediate frequency amplifier
    the speaker and/or headphones
c the frequency discriminator
d the limiter
31-5-(a)
In a single sideband and CW receiver, this is located between the filter
and product detector:
   the intermediate frequency amplifier
b the audio frequency amplifier
c the beat frequency oscillator
  the radio frequency amplifier
32-6-(d)
A receiver with high selectivity has a:
   wide bandwidth
b wide tuning range
c narrow tuning range
d narrow bandwidth
33-8-(d)
The abbreviation AGC means:
a attenuating gain capacitor
b anode-grid capacitor
c amplified grid conductance
d automatic gain control
34-2-(d)
An audio amplifier is necessary in a receiver because:
   the carrier frequency must be replaced
   the signal requires demodulation
    RF signals are not heard by the human ear
    signals leaving the detector are weak
35-7-(b)
The BFO is off-set slightly (500 - 1500 Hz) from the incoming signal to
the detector. This is required:
  to pass the signal without interruption
  to beat with the incoming signal
c to provide additional amplification
   to protect the incoming signal from interference
Front-end selectivity is provided by resonant networks both before and
after the RF stage in a superhet receiver. This whole section of the
receiver is often referred to as the:
  preamble
а
b preselector
c preamplifier
d pass-selector
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37-6-(c)
In a frequency modulation transmitter, the power amplifier output is fed
a frequency multiplier
b microphone
С
   antenna
d modulator
38-7-(a)
In a single sideband transmitter, the output of the variable frequency
oscillator is connected to the:
   mixer
b antenna
c balanced modulator
d linear amplifier
39 - 0 - (d)
The signal from a balanced modulator consists of:
  a carrier and two sidebands
b a carrier and one sideband
c no carrier and one sideband
d no carrier and two sidebands
40-9-(b)
To minimise the radiation of one particular harmonic, one can use a:
a resistor
b wave trap in the transmitter output
c high pass filter in the transmitter output
   filter in the receiver lead
41-4-(d)
A parasitic oscillation:
   is generated by parasitic elements of a Yaqi beam
   does not cause any radio interference
   is produced in a transmitter oscillator stage
    is an unwanted signal developed in a transmitter
42-6-(d)
The following should always be included as a standard protection device
in any power supply:
  a saturating transformer
  a zener diode bridge limiter
c a fuse in the filter capacitor negative lead
d a fuse in the mains lead
43-1-(a)
A regulator device is used in a power supply to:
  keep the output voltage at a constant value
    ensure that the output voltage never exceeds a dangerous value
   keep the incoming frequency constant at 50~\mathrm{Hz}
    regulate the incoming mains voltage to a constant rms value
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44 - 7 - (a)
When conversing via a VHF or UHF repeater, you should pause between overs
for about:
   3 seconds
  half a second
   30 seconds
d several minutes
45-2-(c)
"Break-in keying" means:
a unauthorised entry has resulted in station equipment disappearing
   temporary emergency operating
    key-down changes the station to transmit, key-up to receive
   the other station's keying is erratic
46-7-(a)
The AGC circuit is to:
a minimise the adjustments needed to the receiver gain control knobs
b
   expand the audio gain
    limit the extent of amplitude generation
    amplitude limit the crystal oscillator output
47-4-(c)
The "Q" signal "what is your location?" is:
   ORZ?
b QTC?
c QTH?
d QRL?
The characteristic impedance of a 20 metre length of transmission line is
52 ohm. If 10 metres is cut off, the impedance will be:
   13 ohm
   26 ohm
b
c 52 ohm
d 39 ohm
49-7-(a)
The velocity factor of a coaxial cable with solid polythene dielectric is
about:
a 0.66
b 0.1
c 0.8
d 1.0
50-5-(a)
The physical length of an antenna can be shortened but the electrical
length maintained, if one of the following items is added at an
appropriate point in the antenna:
a an inductor
b
  a capacitor
c an insulator
d a resistor
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51-6-(d)
The effect of adding a series inductance to an antenna is to:
   increase the resonant frequency
  have no change on the resonant frequency
c have little effect
d decrease the resonant frequency
52 - 3 - (b)
The resonant frequency of an antenna may be increased by:
a lengthening the radiating element
  shortening the radiating element
   increasing the height of the radiating element
   lowering the radiating element
53 - 9 - (b)
On VHF and UHF bands, polarisation of the receiving antenna is important
in relation to the transmitting antenna, but on HF it is relatively
unimportant because:
   the ground wave and the sky wave continually shift the polarisation
  the ionosphere can change the polarisation of the signal from moment
to moment
  anomalies in the earth's magnetic field profoundly affect HF
polarisation
d improved selectivity in HF receivers makes changes in polarisation
redundant
54-2-(c)
The highest frequency that will be reflected back to the earth at any
given time is known as the:
а
  UHF
b
  OWF
  MUF
С
d LUF
55-1-(b)
The layer of the ionosphere mainly responsible for long distance
communication is:
а
   C
  F
b
c D
d E
56-5-(a)
The ionosphere:
a is formed from layers of ionised gases around the earth
   is a magnetised belt around the earth
    consists of magnetised particles around the earth
   is a spherical belt of solar radiation around the earth
57-4-(c)
If broadband noise interference varies when it rains, the most likely
cause could be from:
a underground power cables
b car ignitions
c outside overhead power lines
d your antenna connection
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58-1-(a)

Cross-modulation of a broadcast receiver by a nearby transmitter would be noticed in the receiver as:

- a the undesired signal in the background of the desired signal
- b a lack of signals being received
- c interference only when a broadcast signal is received
- d distortion on transmitted voice peaks

59-8-(c)

An active audio low-pass filter could be constructed using:

- a zener diodes and resistors
- b electrolytic capacitors and resistors
- c an operational amplifier, resistors and capacitors
- d a transformer and capacitors

60-9-(a)

The following communication mode is generally used for connecting to a VHF packet radio bulletin board:

- a FM
- b SSB
- c AM
- d DSB