Results for sample technician2014 test paper

Your answers are marked like this:

✔ **A. You got this question right, this is your correct answer.**

x *A. You got this question wrong, this is your incorrect answer.*

✔ *A. You got this question wrong, this is the correct answer.*

✔ **A. You didnt answer this question but this would be the correct answer.**

Subelement T0

1: T0A04
What is the purpose of a fuse in an electrical circuit?
A. To prevent power supply ripple from damaging a circuit
✔ **B. To interrupt power in case of overload**
xC. To limit current to prevent shocks
D. All of these choices are correct

2: T0B07
Which of the following is an important safety rule to remember when using a crank-up tower?
A. This type of tower must never be painted
B. This type of tower must never be grounded
✔ **C. This type of tower must never be climbed unless it is in the fully retracted position**
D. All of these choices are correct

3: T0C10
Why is duty cycle one of the factors used to determine safe RF radiation exposure levels?
✔ **A. It affects the average exposure of people to radiation**
B. It affects the peak exposure of people to radiation
C. It takes into account the antenna feed line loss
D. It takes into account the thermal effects of the final amplifier

Subelement T1

4: T1A08

Which of the following entities recommends transmit/receive channels and other parameters for auxiliary and repeater stations?

A. Frequency Spectrum Manager
✔ **B. Frequency Coordinator**
C. FCC Regional Field Office
xD. International Telecommunications Union

5: T1B13

Which emission may be used between 219 and 220 MHz?

xA. Spread spectrum
✔ **B. Data**
C. SSB voice
D. Fast-scan television

6: T1C06

From which of the following locations may an FCC-licensed amateur station transmit, in addition to places where the FCC regulates communications?

A. From within any country that belongs to the International Telecommunications Union
B. From within any country that is a member of the United Nations
xC. From anywhere within in ITU Regions 2 and 3
✔ **D. From any vessel or craft located in international waters and documented or registered in the United States**

7: T1D04

What is the only time an amateur station is authorized to transmit music?

✔ **A. When incidental to an authorized retransmission of manned spacecraft communications**
B. When the music produces no spurious emissions
C. When the purpose is to interfere with an illegal transmission
D. When the music is transmitted above 1280 MHz

8: T1E03

Who must designate the station control operator?

✔ **A. The station licensee**
B. The FCC
C. The frequency coordinator
D. The ITU

9: T1F07

Which of the following restrictions apply when a non-licensed person is allowed to speak to a foreign station using a station under the control of a Technician Class control operator?

A. The person must be a U.S. citizen
✔ **B. The foreign station must be one with which the U.S. has a third party agreement**
C. The licensed control operator must do the station identification
D. All of these choices are correct

Subelement T2

10: T2A10
What is a band plan, beyond the privileges established by the FCC?
✔ **A. A voluntary guideline for using different modes or activities within an amateur band**
B. A mandated list of operating schedules
C. A list of scheduled net frequencies
D. A plan devised by a club to indicate frequency band usage

11: T2B08
Which of the following applies when two stations transmitting on the same frequency interfere with each other?
✔ **A. Common courtesy should prevail, but no one has absolute right to an amateur frequency**
B. Whoever has the strongest signal has priority on the frequency
C. Whoever has been on the frequency the longest has priority on the frequency
D. The station which has the weakest signal has priority on the frequency

12: T2C05
Which of the following describes the Radio Amateur Civil Emergency Service (RACES)?
A. A radio service using amateur frequencies for emergency management or civil defense communications
B. A radio service using amateur stations for emergency management or civil defense communications
C. An emergency service using amateur operators certified by a civil defense organization as being enrolled in that organization
✔ **D. All of these choices are correct**

Subelement T3

13: T3A10
What may occur if data signals propagate over multiple paths?
A. Transmission rates can be increased by a factor equal to the number of separate paths observed
B. Transmission rates must be decreased by a factor equal to the number of separate paths observed
C. No significant changes will occur if the signals are transmitting using FM
✔ **D. Error rates are likely to increase**

14: T3B06
What is the formula for converting frequency to approximate wavelength in meters?
A. Wavelength in meters equals frequency in hertz multiplied by 300

B. Wavelength in meters equals frequency in hertz divided by 300
C. Wavelength in meters equals frequency in megahertz divided by 300
✔ **D. Wavelength in meters equals 300 divided by frequency in megahertz**

15: T3C01
Why are direct (not via a repeater) UHF signals rarely heard from stations outside your local coverage area?
A. They are too weak to go very far
B. FCC regulations prohibit them from going more than 50 miles
✔ **C. UHF signals are usually not reflected by the ionosphere**
D. They collide with trees and shrubbery and fade out

Subelement T4

16: T4A10
What is the source of a high-pitched whine that varies with engine speed in a mobile transceiver s receive audio?
A. The ignition system
✔ **B. The alternator**
C. The electric fuel pump
D. Anti-lock braking system controllers

17: T4B08
What is the advantage of having multiple receive bandwidth choices on a multimode transceiver?
A. Permits monitoring several modes at once
✔ **B. Permits noise or interference reduction by selecting a bandwidth matching the mode**
C. Increases the number of frequencies that can be stored in memory
D. Increases the amount of offset between receive and transmit frequencies

Subelement T5

18: T5A05
What is the electrical term for the electromotive force (EMF) that causes electron flow?
✔ **A. Voltage**
B. Ampere-hours
C. Capacitance
D. Inductance

19: T5B08
How many microfarads are 1,000,000 picofarads?
A. 0.001 microfarads
✔ **B. 1 microfarad**

xC. 1000 microfarads
D. 1,000,000,000 microfarads

20: T5C10
How much power is being used in a circuit when the applied voltage is 12 volts DC and the current is 2.5 amperes?
A. 4.8 watts
✔ **B. 30 watts**
C. 14.5 watts
D. 0.208 watts

21: T5D02
What formula is used to calculate voltage in a circuit?
✔ **A. Voltage (E) equals current (I) multiplied by resistance (R)**
B. Voltage (E) equals current (I) divided by resistance (R)
C. Voltage (E) equals current (I) added to resistance (R)
D. Voltage (E) equals current (I) minus resistance (R)

Subelement T6

22: T6A02
What type of component is often used as an adjustable volume control?
A. Fixed resistor
B. Power resistor
✔ **C. Potentiometer**
D. Transformer

23: T6B12
What is the term that describes a transistor's ability to amplify a signal?
✔ **A. Gain**
B. Forward resistance
C. Forward voltage drop
D. On resistance

24: T6C05
What is component 4 in figure T1?
A. Resistor
B. Transistor
✔ **C. Battery**
D. Ground symbol

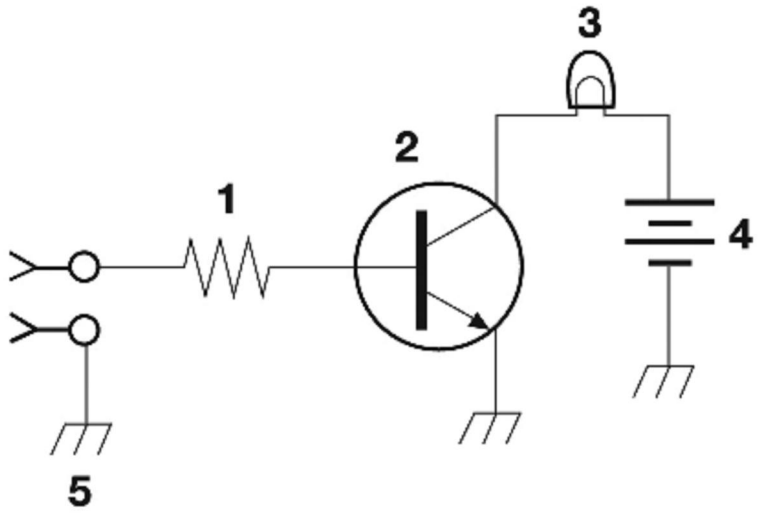

Figure T-1

25: T6D06
What component is commonly used to change 120V AC house current to a lower AC voltage for other uses?
A. Variable capacitor
✔ **B. Transformer**
C. Transistor
D. Diode

Subelement T7

26: T7A08
Which of the following describes combining speech with an RF carrier signal?-
A. Impedance matching
B. Oscillation
✔ **C. Modulation**
D. Low-pass filtering

27: T7B02
What would cause a broadcast AM or FM radio to receive an amateur radio transmission unintentionally?
✔ **A. The receiver is unable to reject strong signals outside the AM or FM band**
B. The microphone gain of the transmitter is turned up too high
C. The audio amplifier of the transmitter is overloaded
D. The deviation of an FM transmitter is set too low

28: T7C01
What is the primary purpose of a dummy load?
✔ **A. To prevent the radiation of signals when making tests**

B. To prevent over-modulation of your transmitter
C. To improve the radiation from your antenna
D. To improve the signal to noise ratio of your receiver

29: T7D03
How is an ammeter usually connected to a circuit?
✔ **A. In series with the circuit**
B. In parallel with the circuit
C. In quadrature with the circuit
D. In phase with the circuit

Subelement T8

30: T8A11
What is the approximate maximum bandwidth required to transmit a CW signal?
A. 2.4 kHz
✔ **B. 150 Hz**
C. 1000 Hz
D. 15 kHz

31: T8B01
Who may be the control operator of a station communicating through an amateur satellite or space station?
A. Only an Amateur Extra Class operator
B. A General Class licensee or higher licensee who has a satellite operator certification
C. Only an Amateur Extra Class operator who is also an AMSAT member
✔ **D. Any amateur whose license privileges allow them to transmit on the satellite uplink frequency**

32: T8C02
Which of these items would be useful for a hidden transmitter hunt?
A. Calibrated SWR meter
✔ **B. A directional antenna**
C. A calibrated noise bridge
D. All of these choices are correct

33: T8D11
What is an ARQ transmission system?
A. A special transmission format limited to video signals
B. A system used to encrypt command signals to an amateur radio satellite
✔ **C. A digital scheme whereby the receiving station detects errors and sends a request to the sending station to retransmit the information**
D. A method of compressing the data in a message so more information can be sent in a shorter time

Subelement T9

34: T9A06
What type of antennas are the quad, Yagi, and dish?
A. Non-resonant antennas
B. Loop antennas
✔ **C. Directional antennas**
D. Isotropic antennas

35: T9B09
What might cause erratic changes in SWR readings?
A. The transmitter is being modulated
✔ **B. A loose connection in an antenna or a feed line**
C. The transmitter is being over-modulated
D. Interference from other stations is distorting your signal

Results:
You scored 30 correct answers and 5 incorrect answers from a total of 35.

You would have passed the exam! Congratulations!

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