Results for sample technician 2014 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: T0A06

What is a good way to guard against electrical shock at your station?

- A. Use three-wire cords and plugs for all AC powered equipment
- B. Connect all AC powered station equipment to a common safety ground
- C. Use a circuit protected by a ground-fault interrupter
- D. All of these choices are correct

2: T0B01

When should members of a tower work team wear a hard hat and safety glasses?

- A. At all times except when climbing the tower
- B. At all times except when belted firmly to the tower
- C. At all times when any work is being done on the tower
 - D. Only when the tower exceeds 30 feet in height

3: T0C09

How can you make sure your station stays in compliance with RF safety regulations?

- A. By informing the FCC of any changes made in your station
- ✓ B. By re-evaluating the station whenever an item of equipment is changed.
 - C. By making sure your antennas have low SWR
 - D. All of these choices are correct

Subelement T1

4: T1A14

What must you do if you are operating on the 23 cm band and learn that you are interfering with a radiolocation station outside the United States?

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A. Stop operating or take steps to eliminate the harmful interference

- B. Nothing, because this band is allocated exclusively to the amateur service
- C. Establish contact with the radiolocation station and ask them to change frequency
- D. Change to CW mode, because this would not likely cause interference

5: T1B02

Why are the frequency assignments for some U.S. Territories different from those in the 50 U.S. States?

✓ A. Some U. S. Territories are located in ITU regions other than region 2

xB. Territorial governments are allowed to select their own frequency allocations

- C. Territorial frequency allocations must also include those of adjacent countries
- D. Any territory that was in existence before the ratification of the Communications Act of 1934 is exempt from FCC frequency regulations

6: T1C07

What may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct mailing address?

- A. Fine or imprisonment
- ✓ B. Revocation of the station license or suspension of the operator license.
 - C. Require the licensee to be re-examined
 - D. A reduction of one rank in operator class

7: T1D10

What is the meaning of the term broadcasting in the FCC rules for the amateur services?

- xA. Two-way transmissions by amateur stations
 - B. Transmission of music
 - C. Transmission of messages directed only to amateur operators
- D. Transmissions intended for reception by the general public

8: T1E02

Who may a station licensee designate to be the control operator of an amateur station?

- A. Any U.S. citizen or registered alien
- B. Any family member of the station licensee
- C. Any person over the age of 18
- ✓ D. Only a person for whom an amateur operator/primary station license grant appears in the FCC database or who is authorized for alien reciprocal operation

9: T1F01

What type of identification is being used when identifying a station on the air as Race Headquarters?

- A. Tactical call sign
 - B. An official call sign reserved for RACES drills

xC. SSID

D. Broadcast station

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Subelement T2

10: T2A11

Which of the following is an FCC rule regarding power levels used in the amateur bands, under normal, non-distress circumstances?

- A. There is no limit to power as long as there is no interference with other services
- B. No more than 200 watts PEP may be used
- C. Up to 1500 watts PEP may be used on any amateur frequency without restriction
- ✓ D. While not exceeding the maximum power permitted on a given band, use the minimum power necessary to carry out the desired communication

11: T2B05

What determines the amount of deviation of an FM (as opposed to PM) signal?

- A. Both the frequency and amplitude of the modulating signal
- B. The frequency of the modulating signal
- C. The amplitude of the modulating signal
- xD. The relative phase of the modulating signal and the carrier

12: T2C09

Are amateur station control operators ever permitted to operate outside the frequency privileges of their license class?

- A. No
- B. Yes, but only when part of a FEMA emergency plan
- C. Yes, but only when part of a RACES emergency plan
- ✓ D. Yes, but only if necessary in situations involving the immediate safety of human life or protection of property

Subelement T3

13: T3A02

Why are UHF signals often more effective from inside buildings than VHF signals?

A. VHF signals lose power faster over distance

✓ B. The shorter wavelength allows them to more easily penetrate the structure of buildings

- C. This is incorrect; VHF works better than UHF inside buildings
- D. UHF antennas are more efficient than VHF antennas

14: T3B07

What property of radio waves is often used to identify the different frequency bands?

A. The approximate wavelength

- B. The magnetic intensity of waves
- C. The time it takes for waves to travel one mile
- D. The voltage standing wave ratio of waves

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15: T3C11

Why do VHF and UHF radio signals usually travel somewhat farther than the visual line of sight distance between two stations?

- A. Radio signals move somewhat faster than the speed of light
- B. Radio waves are not blocked by dust particles
- C. The Earth seems less curved to radio waves than to light
 - D. Radio waves are blocked by dust particles

Subelement T4

16: T4A02

How might a computer be used as part of an amateur radio station?

- A. For logging contacts and contact information
- B. For sending and/or receiving CW
- C. For generating and decoding digital signals
- D. All of these choices are correct

17: T4B07

What does the term RIT mean?

- A. Receiver Input Tone
- B. Receiver Incremental Tuning
 - C. Rectifier Inverter Test
 - D. Remote Input Transmitter

Subelement T5

18: T5A10

Which term describes the rate at which electrical energy is used?

- A. Resistance
- B. Current
- C. Power
 - D. Voltage

19: T5B13

If a frequency readout shows a reading of 2425 MHz, what frequency is that in GHz?

- A. 0.002425 GHZ
- B. 24.25 GHz
- ✓ C. 2.425 GHz
 - D. 2425 GHz

20: T5C02

What is the basic unit of capacitance?

A. The farad

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- B. The ohm
- C. The volt
- D. The henry

21: T5D04

What is the resistance of a circuit in which a current of 3 amperes flows through a resistor connected to 90 volts?

- A. 3 ohms
- ✓ B. 30 ohms
 - C. 93 ohms
 - D. 270 ohms

Subelement T6

22: T6A01

What electrical component is used to oppose the flow of current in a DC circuit?

xA. Inductor

- **✔** B. Resistor
 - C. Voltmeter
 - D. Transformer

23: T6B05

Which of the following electronic components can amplify signals?

A. Transistor

- B. Variable resistor
- C. Electrolytic capacitor
- D. Multi-cell battery

24: T6C01

What is the name for standardized representations of components in an electrical wiring diagram?

- A. Electrical depictions
- B. Grey sketch

C. Schematic symbols

D. Component callouts

25: T6D12

Which of the following is a common reason to use shielded wire?

- A. To decrease the resistance of DC power connections
- B. To increase the current carrying capability of the wire

C. To prevent coupling of unwanted signals to or from the wire

D. To couple the wire to other signals

Subelement T7

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26: T7A09

Which of the following devices is most useful for VHF weak-signal communication?

- A. A quarter-wave vertical antenna
- **▶** B. A multi-mode VHF transceiver
 - C. An omni-directional antenna
- xD. A mobile VHF FM transceiver

27: T7B04

Which of the following is a way to reduce or eliminate interference by an amateur transmitter to a nearby telephone?

- A. Put a filter on the amateur transmitter
- B. Reduce the microphone gain
- C. Reduce the SWR on the transmitter transmission line
- D. Put a RF filter on the telephone

28: T7C11

What is a disadvantage of air core coaxial cable when compared to foam or solid dielectric types?

- A. It has more loss per foot
- B. It cannot be used for VHF or UHF antennas
- C. It requires special techniques to prevent water absorption
 - D. It cannot be used at below freezing temperatures

29: T7D10

What is probably happening when an ohmmeter, connected across an unpowered circuit, initially indicates a low resistance and then shows increasing resistance with time?

- A. The ohmmeter is defective
- B. The circuit contains a large capacitor
 - C. The circuit contains a large inductor
 - D. The circuit is a relaxation oscillator

Subelement T8

30: T8A08

What is the approximate bandwidth of a single sideband voice signal?

- A. 1 kHz
- ✓ B. 3 kHz
 - C. 6 kHz
 - D. 15 kHz

31: T8B10

What do the initials LEO tell you about an amateur satellite?

- A. The satellite battery is in Low Energy Operation mode
- B. The satellite is performing a Lunar Ejection Orbit maneuver
- C. The satellite is in a Low Earth Orbit

D. The satellite uses Light Emitting Optics

32: T8C08

What is required in place of on-air station identification when sending signals to a radio control model using amateur frequencies?

- A. Voice identification must be transmitted every 10 minutes
- B. Morse code ID must be sent once per hour

✓ C. A label indicating the licensee s name, call sign and address must be affixed to the transmitter

D. A flag must be affixed to the transmitter antenna with the station call sign in 1 inch high letters or larger

33: T8D02

What does the term APRS mean?

A. Automatic Packet Reporting System

- B. Associated Public Radio Station
- C. Auto Planning Radio Set-up
- D. Advanced Polar Radio System

Subelement T9

34: T9A08

What is the approximate length, in inches, of a quarter-wavelength vertical antenna for 146 MHz?

- A. 112
- B. 50
- ✓ C. 19
 - D. 12

35: T9B10

What electrical difference exists between the smaller RG-58 and larger RG-8 coaxial cables?

xA. There is no significant difference between the two types

- B. RG-58 cable has less loss at a given frequency
- ✓ C. RG-8 cable has less loss at a given frequency
 - D. RG-58 cable can handle higher power levels

Results:

You scored 28 correct answers and 7 incorrect answers from a total of 35.

You would have passed the exam! Congratulations!

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