

Results for sample technician2014 test paper

Your answers are marked like this:

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

✗ *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: T0A09

What kind of hazard is presented by a conventional 12-volt storage battery?

- A. It emits ozone which can be harmful to the atmosphere
- B. Shock hazard due to high voltage
- ✓ **C. Explosive gas can collect if not properly vented**
- D. All of these choices are correct

2: T0B10

Which of the following is true concerning grounding conductors used for lightning protection?

- A. Only non-insulated wire must be used
- B. Wires must be carefully routed with precise right-angle bends
- ✓ **C. Sharp bends must be avoided**
- D. Common grounds must be avoided

3: T0C11

What is the definition of duty cycle during the averaging time for RF exposure?

- A. The difference between the lowest power output and the highest power output of a transmitter
- ✗ *B. The difference between the PEP and average power output of a transmitter*
- ✓ **C. The percentage of time that a transmitter is transmitting**
- D. The percentage of time that a transmitter is not transmitting

Subelement T1

4: T1A03

Which part of the FCC regulations contains the rules governing the Amateur Radio

Service?

- A. Part 73
- B. Part 95
- C. Part 90

☒ **D. Part 97**

5: T1B07

What amateur band are you using if you are transmitting on 223.50 MHz?

- A. 15 meter band
- B. 10 meter band
- C. 2 meter band

☒ **D. 1.25 meter band**

6: T1C14

Who may select a vanity call sign for a club station?

- A. Any Extra Class member of the club
- B. Any member of the club
- C. Any officer of the club

☒ **D. Only the person named as trustee on the club station license grant**

7: T1D07

What types of amateur stations can automatically retransmit the signals of other amateur stations?

- A. Auxiliary, beacon, or Earth stations

☒ **B. Auxiliary, repeater, or space stations**

- C. Beacon, repeater, or space stations
- D. Earth, repeater, or space stations

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: T2A01

What is the most common repeater frequency offset in the 2 meter band?

- A. Plus 500 kHz
- ✓ **B. Plus or minus 600 kHz**
- C. Minus 500 kHz
- D. Only plus 600 kHz

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**
- D. The relative phase of the modulating signal and the carrier

12: T2C12

What is the Amateur Radio Emergency Service (ARES)?

- ✓ **A. Licensed amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service**
- ✗ **B. Licensed amateurs who are members of the military and who voluntarily agreed to provide message handling services in the case of an emergency**
- C. A training program that provides licensing courses for those interested in obtaining an amateur license to use during emergencies
- D. A training program that certifies amateur operators for membership in the Radio Amateur Civil Emergency Service

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: T3B11

What is the approximate velocity of a radio wave as it travels through free space?

- A. 3000 kilometers per second
- ✓ **B. 300,000,000 meters per second**
- C. 300,000 miles per hour
- D. 186,000 miles per hour

15: T3C03

What is a characteristic of VHF signals received via auroral reflection?

- A. Signals from distances of 10,000 or more miles are common
- ✓ **B. The signals exhibit rapid fluctuations of strength and often sound distorted**

- C. These types of signals occur only during winter nighttime hours
- D. These types of signals are generally strongest when your antenna is aimed west

Subelement T4

16: T4A08

Which type of conductor is best to use for RF grounding?

- A. Round stranded wire
- B. Round copper-clad steel wire
- C. Twisted-pair cable

✓ **D. Flat strap**

17: T4B06

Which of the following controls could be used if the voice pitch of a single-sideband signal seems too high or low?

- A. The AGC or limiter
- B. The bandwidth selection
- C. The tone squelch

✓ **D. The receiver RIT or clarifier**

Subelement T5

18: T5A10

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

- A. Resistance
- B. Current

✓ **C. Power**

- D. Voltage

19: T5B12

Which of the following frequencies is equal to 28,400 kHz?

✓ **A. 28.400 MHz**

- B. 2.800 MHz
- C. 284.00 MHz
- D. 28.400 kHz

20: T5C11

How many amperes are flowing in a circuit when the applied voltage is 12 volts DC and the load is 120 watts?

- A. 0.1 amperes

✓ **B. 10 amperes**

- C. 12 amperes
- D. 132 amperes

21: T5D11

What is the voltage across a 10-ohm resistor if a current of 1 ampere flows through it?

- A. 1 volt
- ✓ **B. 10 volts**
- C. 11 volts
- D. 9 volts

Subelement T6

22: T6A08

What electrical component is used to connect or disconnect electrical circuits?

- A. Magnetron
- ✓ **B. Switch**
- C. Thermistor
- D. All of these choices are correct

23: T6B10

What are the three electrodes of a PNP or NPN transistor?

- ✓ **A. Emitter, base, and collector**
- B. Source, gate, and drain
- C. Cathode, grid, and plate
- D. Cathode, drift cavity, and collector

24: T6C04

What is component 3 in figure T1?

- A. Resistor
- B. Transistor
- ✓ **C. Lamp**
- D. Ground symbol

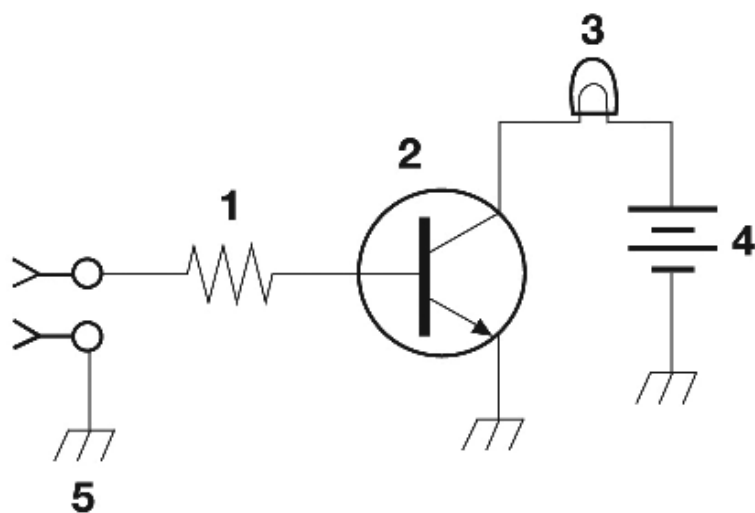


Figure T-1

25: T6D11

What is a simple resonant or tuned circuit?

- ☒ **A. An inductor and a capacitor connected in series or parallel to form a filter**
- B. A type of voltage regulator
- C. A resistor circuit used for reducing standing wave ratio
- D. A circuit designed to provide high fidelity audio

Subelement T7

26: T7A04

Which term describes the ability of a receiver to discriminate between multiple signals?

- A. Discrimination ratio
- B. Sensitivity
- ☒ **C. Selectivity**
- D. Harmonic Distortion

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: T7C13

What does a dummy load consist of?

- A. A high-gain amplifier and a TR switch

✓ **B. A non-inductive resistor and a heat sink**

- C. A low voltage power supply and a DC relay
- D. A 50 ohm reactance used to terminate a transmission line

29: T7D02

What is the correct way to connect a voltmeter 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: T8A07

What is the primary advantage of single sideband over FM for voice transmissions?

- A. SSB signals are easier to tune
- B. SSB signals are less susceptible to interference

✓ **C. SSB signals have narrower bandwidth**

- D. All of these choices are correct

31: T8B11

What is a commonly used method of sending signals to and from a digital satellite?

- A. USB AFSK
- B. PSK31

✓ **C. FM Packet**

- D. WSJT

32: T8C03

What popular operating activity involves contacting as many stations as possible during a specified period of time?

✓ **A. Contesting**

- B. Net operations
- C. Public service events
- D. Simulated emergency exercises

33: T8D01

Which of the following is an example of a digital communications method?

- A. Packet
- B. PSK31
- C. MFSK

✓ **D. All of these choices are correct**

Subelement T9

34: T9A05

How would you change a dipole antenna to make it resonant on a higher frequency?

- A. Lengthen it
- B. Insert coils in series with radiating wires
- ✓ C. Shorten it
- D. Add capacitive loading to the ends of the radiating wires

35: T9B03

Why is coaxial cable used more often than any other feed line for amateur radio antenna systems?

- ✓ A. It is easy to use and requires few special installation considerations
- B. It has less loss than any other type of feed line
- C. It can handle more power than any other type of feed line
- D. It is less expensive than any other types of feed line

Results:

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

You would have passed the exam! Congratulations!

e1

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