

## 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.**

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### 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: T0B12

**Which of the following is good practice when installing ground wires on a tower for lightning protection?**

- A. Put a loop in the ground connection to prevent water damage to the ground system
- B. Make sure that all bends in the ground wires are clean, right angle bends

✓ **C. Ensure that connections are short and direct**

- D. All of these choices are correct

3: T0C13

**If the averaging time for exposure is 6 minutes, how much power density is permitted if the signal is present for 3 minutes and absent for 3 minutes rather than being present for the entire 6 minutes?**

- A. 3 times as much
- B. 1/2 as much

✓ **C. 2 times as much**

- D. There is no adjustment allowed for shorter exposure times

### Subelement T1

4: T1A12

**Which of the following is a permissible use of the Amateur Radio Service?**

- A. Broadcasting music and videos to friends
- ☒ B. Providing a way for amateur radio operators to earn additional income by using their stations to pass messages
- C. Providing low-cost communications for start-up businesses
- ☒ D. Allowing a person to conduct radio experiments and to communicate with other licensed hams around the world

5: T1B06

**Which 23 cm frequency is authorized to a Technician Class licensee?**

- A. 2315 MHz
- ☒ B. 1296 MHz
- C. 3390 MHz
- D. 146.52 MHz

6: T1C04

**When are you allowed to operate your amateur station in a foreign country?**

- ☒ A. When the foreign country authorizes it
- ☒ B. When there is a mutual agreement allowing third party communications
- C. When authorization permits amateur communications in a foreign language
- D. When you are communicating with non-licensed individuals in another country

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: T1E12

**When, under normal circumstances, may a Technician Class licensee be the control operator of a station operating in an exclusive Extra Class operator segment of the amateur bands?**

- ☒ A. At no time
- B. When operating a special event station
- C. As part of a multi-operator contest team
- D. When using a club station whose trustee is an Extra Class operator licensee

9: T1F10

**Who is accountable should a repeater inadvertently retransmit communications that violate the FCC rules?**

- ☒ A. The control operator of the originating station
- B. The control operator of the repeater
- C. The owner of the repeater
- D. Both the originating station and the repeater owner

## Subelement T2

10: T2A08

**What is the meaning of the procedural signal CQ ?**

- A. Call on the quarter hour
- B. A new antenna is being tested (no station should answer)
- C. Only the called station should transmit

✓ **D. Calling any station**

11: T2B12

**Under what circumstances should you consider communicating via simplex rather than a repeater?**

✓ **A. When the stations can communicate directly without using a repeater**

- B. Only when you have an endorsement for simplex operation on your license
- C. Only when third party traffic is not being passed
- D. Only if you have simplex modulation capability

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: T3A11

**Which part of the atmosphere enables the propagation of radio signals around the world?**

- A. The stratosphere
- B. The troposphere

✓ **C. The ionosphere**

- D. The magnetosphere

14: T3B02

**What property of a radio wave is used to describe its polarization?**

✓ **A. The orientation of the electric field**

- B. The orientation of the magnetic field

✗ **C. The ratio of the energy in the magnetic field to the energy in the electric field**

- D. The ratio of the velocity to the wavelength

15: T3C06

**What mode is responsible for allowing over-the-horizon VHF and UHF communications to ranges of approximately 300 miles on a regular basis?**

☒ **A. Tropospheric scatter**

- B. D layer refraction
- C. F2 layer refraction
- D. Faraday rotation

## Subelement T4

16: T4A03

**Which is a good reason to use a regulated power supply for communications equipment?**

☒ **A. It prevents voltage fluctuations from reaching sensitive circuits**

- B. A regulated power supply has FCC approval
- C. A fuse or circuit breaker regulates the power
- D. Power consumption is independent of load

17: T4B05

**Which of the following would reduce ignition interference to a receiver?**

- A. Change frequency slightly
- B. Decrease the squelch setting

☒ **C. Turn on the noise blanker**

- D. Use the RIT control

## Subelement T5

18: T5A12

**What term describes the number of times per second that an alternating current reverses direction?**

- A. Pulse rate
- B. Speed
- C. Wavelength

☒ **D. Frequency**

19: T5B04

**How many volts are equal to one microvolt?**

☒ **A. One one-millionth of a volt**

- B. One million volts
- C. One thousand kilovolts
- D. One one-thousandth of a volt

20: T5C04

**What is the basic unit of inductance?**

- A. The coulomb
- B. The farad
- ✓ C. The henry
- D. The ohm

21: T5D05

**What is the resistance in a circuit for which the applied voltage is 12 volts and the current flow is 1.5 amperes?**

- A. 18 ohms
- B. 0.125 ohms
- ✓ C. 8 ohms
- D. 13.5 ohms

## 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: T6B10

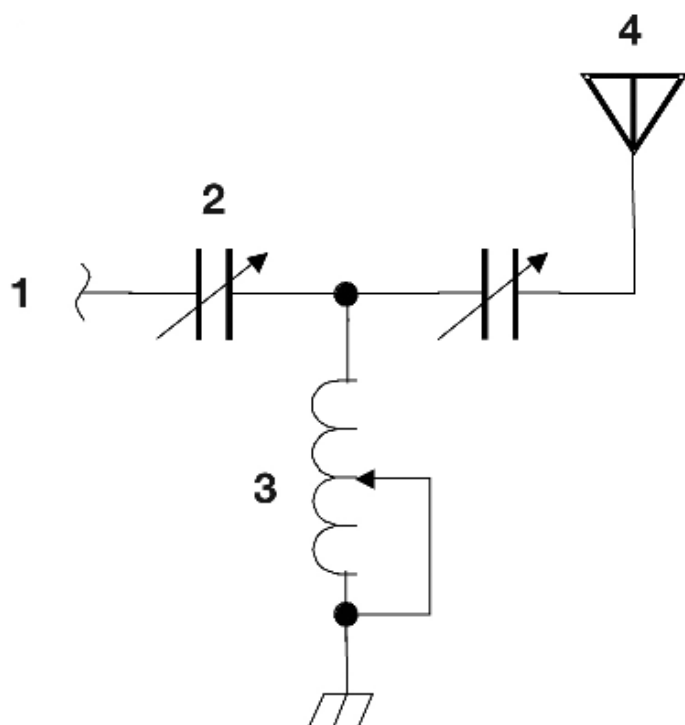
**What are the three electrodes of a PNP or NPN transistor?**

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

24: T6C10

**What is component 3 in figure T3?**

- A. Connector
- B. Meter
- C. Variable capacitor
- ✓ D. Variable inductor



**Figure T-3**

25: T6D01

**Which of the following devices or circuits changes an alternating current into a varying direct current signal?**

- A. Transformer
- ✓ B. Rectifier
- C. Amplifier
- D. Reflector

## Subelement T7

26: T7A07

**What is meant by term PTT ?**

- A. Pre-transmission tuning to reduce transmitter harmonic emission
- B. Precise tone transmissions used to limit repeater access to only certain signals
- C. A primary transformer tuner use to match antennas
- ✓ D. The push to talk function which switches between receive and transmit

27: T7B11

**What is a symptom of RF feedback in a transmitter or transceiver?**

- A. Excessive SWR at the antenna connection
- B. The transmitter will not stay on the desired frequency
- ✓ C. Reports of garbled, distorted, or unintelligible transmissions
- D. Frequent blowing of power supply fuses

28: T7C02

**Which of the following instruments can be used to determine if an antenna is resonant at the desired operating frequency?**

- A. A VTVM
- ✓ B. An antenna analyzer
- C. A Q meter
- D. A frequency counter

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: T8A05

**Which of the following types of emission has the narrowest bandwidth?**

- A. FM voice
- B. SSB voice
- ✓ C. CW
- D. Slow-scan TV

31: T8B09

**What causes spin fading when referring to satellite signals?**

- A. Circular polarized noise interference radiated from the sun
- ✓ B. Rotation of the satellite and its antennas
- C. Doppler shift of the received signal
- D. Interfering signals within the satellite uplink band

32: T8C04

**Which of the following is good procedure when contacting another station in a radio contest?**

- A. Be sure to sign only the last two letters of your call if there is a pileup calling the station
- B. Work the station twice to be sure that you are in his log
- ✓ C. Send only the minimum information needed for proper identification and the contest exchange
- D. All of these choices are correct

33: T8D05

**Which of the following is an application of APRS (Automatic Packet Reporting System)?**

- ✓ A. Providing real time tactical digital communications in conjunction with a map showing the locations of stations
- B. Showing automatically the number of packets transmitted via PACTOR during a

specific time interval

- C. Providing voice over Internet connection between repeaters
- D. Providing information on the number of stations signed into a repeater

## 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: T9B11

**Which of the following types of feed line has the lowest loss at VHF and UHF?**

- A. 50-ohm flexible coax
- B. Multi-conductor unbalanced cable
- ✓ C. Air-insulated hard line
- D. 75-ohm flexible coax

**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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