

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: T0A08

What safety equipment should always be included in home-built equipment that is powered from 120V AC power circuits?

✓ **A. A fuse or circuit breaker in series with the AC hot conductor**

- B. An AC voltmeter across the incoming power source
- C. An inductor in series with the AC power source
- D. A capacitor across the AC power source

2: T0B04

Which of the following is an important safety precaution to observe when putting up an antenna tower?

- A. Wear a ground strap connected to your wrist at all times
- B. Insulate the base of the tower to avoid lightning strikes
- ✓ **C. Look for and stay clear of any overhead electrical wires**
- D. All of these choices are correct

3: T0C12

How does RF radiation differ from ionizing radiation (radioactivity)?

- ✓ **A. RF radiation does not have sufficient energy to cause genetic damage**
- B. RF radiation can only be detected with an RF dosimeter
- C. RF radiation is limited in range to a few feet
- ✗ **D. RF radiation is perfectly safe**

Subelement T1

4: T1A01

Which of the following is a purpose of the Amateur Radio Service as stated in the FCC rules and regulations?

- A. Providing personal radio communications for as many citizens as possible
- B. Providing communications for international non-profit organizations

☒ **C. Advancing skills in the technical and communication phases of the radio art**

- D. All of these choices are correct

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: T1C02

Which of the following is a valid US amateur radio station call sign?

- A. KMA3505

☒ **B. W3ABC**

- C. KDKA
- D. 11Q1176

7: T1D05

When may amateur radio operators use their stations to notify other amateurs of the availability of equipment for sale or trade?

☒ **A. When the equipment is normally used in an amateur station and such activity is not conducted on a regular basis**

- B. When the asking price is \$100.00 or less
- C. When the asking price is less than its appraised value
- D. When the equipment is not the personal property of either the station licensee or the control operator or their close relatives

8: T1E08

Which of the following is an example of automatic control?

☒ **A. Repeater operation**

- B. Controlling the station over the Internet
- C. Using a computer or other device to automatically send CW
- D. Using a computer or other device to automatically identify

9: T1F08

Which indicator is required by the FCC to be transmitted after a station call sign?

- A. /M when operating mobile
- B. /R when operating a repeater
- C. / followed the FCC Region number when operating out of the region in which the license was issued

☒ **D. /KT, /AE or /AG when using new license privileges earned by CSCE while waiting for an upgrade to a previously issued license to appear in the FCC license database**

[Subelement T2](#)

10: T2A06

What must an amateur operator do when making on-air transmissions to test equipment or antennas?

- ☒ **A. Properly identify the transmitting station**
- ☐ B. Make test transmissions only after 10:00 p.m. local time
- ☐ C. Notify the FCC of the test transmission
- ☐ D. State the purpose of the test during the test procedure

11: T2B02

What is the term used to describe the use of a sub-audible tone transmitted with normal voice audio to open the squelch of a receiver?

- ☐ A. Carrier squelch
- ☐ B. Tone burst
- ☐ C. DTMF
- ☒ **D. CTCSS**

12: T2C08

Which of the following is a characteristic of good emergency traffic handling?

- ☒ **A. Passing messages exactly as received**
- ☐ B. Making decisions as to whether or not messages should be relayed or delivered
- ☐ C. Communicating messages to the news media for broadcast outside the disaster area
- ☐ D. All of these choices are correct

Subelement T3

13: T3A05

When using a directional antenna, how might your station be able to access a distant repeater if buildings or obstructions are blocking the direct line of sight path?

- ☐ A. Change from vertical to horizontal polarization
- ☒ **B. Try to find a path that reflects signals to the repeater**
- ☐ C. Try the long path
- ☐ D. Increase the antenna SWR

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

15: T3C09

What is generally the best time for long-distance 10 meter band propagation via the F layer?

- ☒ **A. From dawn to shortly after sunset during periods of high sunspot activity**
- ☐ B. From shortly after sunset to dawn during periods of high sunspot activity

- C. From dawn to shortly after sunset during periods of low sunspot activity
- D. From shortly after sunset to dawn during periods of low sunspot activity

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: T4B04

What is a way to enable quick access to a favorite frequency on your transceiver?

- A. Enable the CTCSS tones

✓ **B. Store the frequency in a memory channel**

- C. Disable the CTCSS tones
- D. Use the scan mode to select the desired frequency

Subelement T5

18: T5A04

What is the name for a current that flows only in one direction?

- A. Alternating current

✓ **B. Direct current**

- C. Normal current
- D. Smooth current ~

19: T5B08

How many microfarads are 1,000,000 picofarads?

- A. 0.001 microfarads

✓ **B. 1 microfarad**

- C. 1000 microfarads
- D. 1,000,000,000 microfarads

20: T5C01

What is the ability to store energy in an electric field called?

- A. Inductance
- B. Resistance
- C. Tolerance

✓ **D. Capacitance**

21: T5D01

What formula is used to calculate current in a circuit?

- A. Current (I) equals voltage (E) multiplied by resistance (R)

✓ **B. Current (I) equals voltage (E) divided by resistance (R)**

- C. Current (I) equals voltage (E) added to resistance (R)
D. Current (I) equals voltage (E) minus resistance (R)

Subelement T6

22: T6A05

What type of electrical component consists of two or more conductive surfaces separated by an insulator?

- A. Resistor
B. Potentiometer
C. Oscillator

✓ **D. Capacitor**

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: T6C09

What is component 4 in figure T2?

- A. Variable inductor
B. Double-pole switch
C. Potentiometer

✓ **D. Transformer**

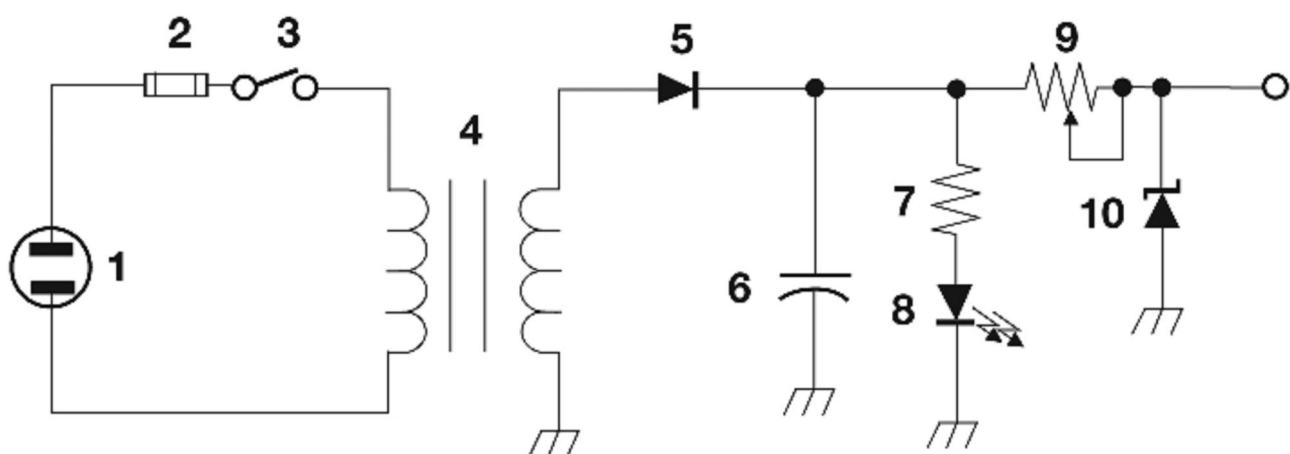


Figure T-2

25: T6D07

Which of the following is commonly used as a visual indicator?

- ☒ **A. LED**
- B. FET
- C. Zener diode
- D. Bipolar transistor

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: 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: T7C09

Which of the following is the most common cause for failure of coaxial cables?

- ☒ **A. Moisture contamination**
- B. Gamma rays
- C. The velocity factor exceeds 1.0
- D. Overloading

29: T7D06

Which of the following might damage a multimeter?

- A. Measuring a voltage too small for the chosen scale
- B. Leaving the meter in the milliamps position overnight
- ☒ **C. Attempting to measure voltage when using the resistance setting**
- D. Not allowing it to warm up properly

Subelement T8

30: T8A02

What type of modulation is most commonly used for VHF packet radio transmissions?

- ☒ **A. FM**
- B. SSB
- C. AM
- D. Spread Spectrum

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: T8C09

How might you obtain a list of active nodes that use VoIP?

- A. From the FCC Rulebook
- B. From your local emergency coordinator
- ✓ C. From a repeater directory
- D. From the local repeater frequency coordinator

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: T9A07

What is a good reason not to use a rubber duck antenna inside your car?

- ✓ A. Signals can be significantly weaker than when it is outside of the vehicle
- B. It might cause your radio to overheat
- C. The SWR might decrease, decreasing the signal strength
- D. All of these choices are correct

35: T9B02

What is the impedance of the most commonly used coaxial cable in typical amateur radio installations?

- A. 8 ohms
- ✓ B. 50 ohms
- C. 600 ohms
- D. 12 ohms

Results:

You scored 33 correct answers and 2 incorrect answers from a total of 35.

You would have passed the exam! Congratulations!

e)

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