### 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: T0A10

What can happen if a lead-acid storage battery is charged or discharged too quickly? A. The battery could overheat and give off flammable gas or explode

- B. The voltage can become reversed
- C. The memory effect will reduce the capacity of the battery
- D. All of these choices are correct

### 2: T0B05

### What is the purpose of a gin pole?

- A. To temporarily replace guy wires
- B. To be used in place of a safety harness

#### C. To lift tower sections or antennas

D. To provide a temporary ground

### 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: 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: T1B12

# Why are frequency assignments for U.S. stations operating maritime mobile not the same everywhere in the world?

xA. Amateur maritime mobile stations in international waters must conform to the frequency assignments of the country nearest to their vessel

B. Amateur frequency assignments can vary among the three ITU regions

- C. Frequency assignments are determined by the captain of the vessel
- D. Amateur frequency assignments are different in each of the 90 ITU zones

### 6: T1C01

### Which type of call sign has a single letter in both its prefix and suffix?

A. Vanity

B. Sequential

### C. Special event

D. In-memoriam

### 7: T1D12

# Under which of the following circumstances may an amateur radio station engage in broadcasting?

**x**A. Under no circumstances

✓ B. When transmitting code practice, information bulletins, or transmissions necessary to provide emergency communications

C. At any time as long as no music is transmitted

D. At any time as long as the material being transmitted did not originate from a commercial broadcast station

### 8: T1E05

### What is an amateur station control point?

A. The location of the station s transmitting antenna

B. The location of the station transmitting apparatus

### C. The location at which the control operator function is performed

D. The mailing address of the station licensee

### 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: T2A02

What is the national calling frequency for FM simplex operations in the 70 cm band? A. 146.520 MHz

- B. 145.000 MHz
- xC. 432.100 MHz
- ✓ D. 446.000 MHz

### 11: T2B11

Which Q signal indicates that you are changing frequency?

A. QRU

🗸 B. QSY

C. QSL

D. QRZ

### 12: T2C01

### When do the FCC rules NOT apply to the operation of an amateur station?

xA. When operating a RACES station

- B. When operating under special FEMA rules
- C. When operating under special ARES rules
- D. Never, FCC rules always apply

### **Subelement T3**

### 13: T3A06

# What term is commonly used to describe the rapid fluttering sound sometimes heard from mobile stations that are moving while transmitting?

- A. Flip-flopping
- B. Picket fencing
  - C. Frequency shifting
  - D. Pulsing

### 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: T3C08

### What causes tropospheric ducting?

A. Discharges of lightning during electrical storms

- B. Sunspots and solar flares
- C. Updrafts from hurricanes and tornadoes

D. Temperature inversions in the atmosphere

## Subelement T4

### 16: T4A04

Where must a filter be installed to reduce harmonic emissions from your station?

- B. Between the receiver and the transmitter
- C. At the station power supply
- D. At the microphone

### 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: T5B03

### How many volts are equal to one kilovolt?

- A. One one-thousandth of a volt
- B. One hundred volts

### C. One thousand volts

D. One million volts

### 20: T5C02

What is the basic unit of capacitance?

### A. The farad

B. The ohm

C. The volt

D. The henry

21: T5D12

What is the voltage across a 10-ohm resistor if a current of 2 amperes flows through it?

- A. 8 volts
- B. 0.2 volts
- C. 12 volts
- ✓ D. 20 volts

## 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: T6B02

### What electronic component allows current to flow in only one direction?

- A. Resistor
- B. Fuse

### 🗸 C. Diode

D. Driven Element

### 24: T6C03

### What is component 2 in figure T1?

A. Resistor

### B. Transistor

- C. Indicator lamp
- D. Connector

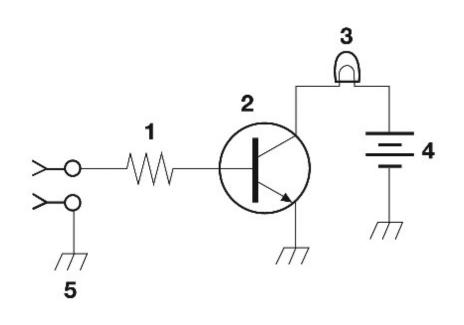


Figure T-1

### 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: T7A11

### Where is an RF preamplifier installed?

### A. Between the antenna and receiver

- B. At the output of the transmitter's power amplifier
- C. Between a transmitter and antenna tuner
- D. At the receiver's audio output

### 27: T7B03

### Which of the following may be a cause of radio frequency interference?

- A. Fundamental overload
- B. Harmonics
- C. Spurious emissions
- D. All of these choices are correct

### 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: 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: T8A06

# Which sideband is normally used for 10 meter HF, VHF and UHF single-sideband communications?

### A. Upper sideband

- B. Lower sideband
- C. Suppressed sideband
- D. Inverted sideband

### 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: T8C11

# What name is given to an amateur radio station that is used to connect other amateur stations to the Internet?

### A. A gateway

- B. A repeater
- C. A digipeater
- D. A beacon

### 33: T8D09

### What code is used when sending CW in the amateur bands?

- A. Baudot
- B. Hamming
- C. International Morse
  - D. Gray

## Subelement T9

#### *34: T9A08* What is the ar

What	t is the approximate length, in inches, of a quarter-wavelength vertical antenna
for 14	46 MHz?
•	140

A. 112	
B. 50	
✓ C. 19	
D. 12	

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 31 correct answers and 4 incorrect answers from a total of 35.

### You would have passed the exam! Congratulations!

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