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: TOA11

What kind of hazard might exist in a power supply when it is turned off and disconnected?

- A. Static electricity could damage the grounding system
- B. Circulating currents inside the transformer might cause damage
- C. The fuse might blow if you remove the cover
- D. You might receive an electric shock from the charged stored in large capacitors

2: T0B08

What is considered to be a proper grounding method for a tower?

- A. A single four-foot ground rod, driven into the ground no more than 12 inches from the base
 - B. A ferrite-core RF choke connected between the tower and ground
- C. Separate eight-foot long ground rods for each tower leg, bonded to the tower and each other
 - D. A connection between the tower base and a cold water pipe

3: T0C07

What could happen if a person accidentally touched your antenna while you were transmitting?

- A. Touching the antenna could cause television interference
- B. They might receive a painful RF burn
 - C. They might develop radiation poisoning
 - D. All of these choices are correct

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: T1C03

What types of international communications are permitted by an FCC-licensed amateur station?

A. Communications incidental to the purposes of the amateur service and remarks of a personal character

- B. Communications incidental to conducting business or remarks of a personal nature
- C. Only communications incidental to contest exchanges, all other communications are prohibited
 - D. Any communications that would be permitted by an international broadcast station

7: T1D01

With which countries are FCC-licensed amateur stations prohibited from exchanging communications?

✓ A. Any country whose administration has notified the ITU that it objects to such communications

- **x**B. Any country whose administration has notified the ARRL that it objects to such communications
 - C. Any country engaged in hostilities with another country
 - D. Any country in violation of the War Powers Act of 1934

8: T1E06

Under what type of control do APRS network digipeaters operate?

A. Automatic

- B. Remote
- C. Local
- D. Manual

9: T1F11

To which foreign stations do the FCC rules authorize the transmission of non-emergency third party communications?

A. Any station whose government permits such communications

- B. Those in ITU Region 2 only
- C. Those in ITU Regions 2 and 3 only
- D. Those in ITU Region 3 only

2/8

Subelement T2

10: T2A03

What is a common repeater frequency offset in the 70 cm band?

✓ A. Plus or minus 5 MHz

xB. Plus or minus 600 kHz

- C. Minus 600 kHz
- D. Plus 600 kHz

11: T2B03

Which of the following describes the muting of receiver audio controlled solely by the presence or absence of an RF signal?

- A. Tone squelch
- B. Carrier squelch
 - C. CTCSS
 - D. Modulated carrier

12: T2C06

Which of the following is an accepted practice to get the immediate attention of a net control station when reporting an emergency?

- A. Repeat the words SOS three times followed by the call sign of the reporting station
- B. Press the push-to-talk button three times
- C. Begin your transmission by saying "Priority" or "Emergency" followed by your call sign
 - D. Play a pre-recorded emergency alert tone followed by your call sign

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: T3C02

Which of the following might be happening when VHF signals are being received from long distances?

- A. Signals are being reflected from outer space
- B. Signals are arriving by sub-surface ducting
- C. Signals are being reflected by lightning storms in your area
- D. Signals are being refracted from a sporadic E layer

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: T4B01

What may happen if a transmitter is operated with the microphone gain set too high?

- A. The output power might be too high
- B. The output signal might become distorted
 - C. The frequency might vary
 - D. The SWR might increase

Subelement T5

18: T5A08

Which of the following is a good electrical insulator?

xA. Copper

▶ B. Glass

- C. Aluminum
- D. Mercury

19: T5B02

What is another way to specify a radio signal frequency of 1,500,000 hertz?

- ✓ A. 1500 kHz
 - B. 1500 MHz
 - C. 15 GHz
 - D. 150 kHz

20: T5C02

What is the basic unit of capacitance?

A. The farad

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

21: T5D09

What is the current flowing through a 24-ohm resistor connected across 240 volts?

- A. 24,000 amperes
- B. 0.1 amperes
- ✓ C. 10 amperes
 - D. 216 amperes

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: T6B06

How is the cathode lead of a semiconductor diode usually identified?

- A. With the word cathode
- B. With a stripe
 - C. With the letter C
 - D. All of these choices are correct

24: T6C02

What is component 1 in figure T1?

- A. Resistor
 - B. Transistor
 - C. Battery
 - D. Connector

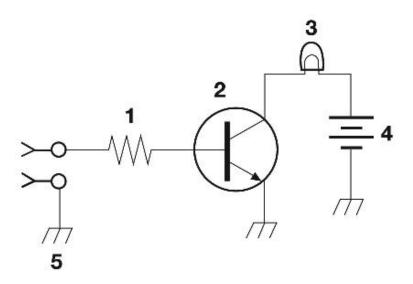


Figure T-1

25: T6D06

What component is commonly used to change 120V AC house current to a lower AC voltage for other uses?

A. Variable capacitor

B. Transformer

- C. Transistor
- D. Diode

Subelement T7

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
- D. A mobile VHF FM transceiver

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: 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: 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: T8B01

Who may be the control operator of a station communicating through an amateur satellite or space station?

- A. Only an Amateur Extra Class operator
- B. A General Class licensee or higher licensee who has a satellite operator certification
- C. Only an Amateur Extra Class operator who is also an AMSAT member
- D. Any amateur whose license privileges allow them to transmit on the satellite uplink frequency

32: T8C06

How is access to an IRLP node accomplished?

xA. By obtaining a password which is sent via voice to the node

- **▶** B. By using DTMF signals
 - C. By entering the proper Internet password
 - D. By using CTCSS tone codes

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: T9B06

Which of the following connectors is most suitable for frequencies above 400 MHz?

A. A UHF (PL-259/SO-239) connector

B. A Type N connector

- C. An RS-213 connector
- D. A DB-25 connector

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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