

TECHNICIAN PRACTICE EXAM

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T9A03

1. Which of the following describes a simple dipole parallel to the earth's surface?

- ☐ A. A horizontally polarized antenna
- ☐ B. A vertically polarized antenna
- ☐ C. A ground wave antenna
- ☐ D. A traveling-wave antenna

T1F03

2. When are you required to transmit your assigned call sign?

- ☐ A. At least every 10 minutes and at the end of a communication
- ☐ B. At least every 15 minutes and at the end of a communication
- ☐ C. At least once during each transmission
- ☐ D. At the beginning of each contact, and every 10 minutes thereafter

T0B02

3. What is required when climbing an antenna tower?

- ☐ A. Always wear an appropriate climbing harness
- ☐ B. Use appropriate tie-off to the tower at all times
- ☐ C. Have sufficient training on safe tower climbing techniques
- ☐ D. All these choices are correct

T5B13

4. Which is equal to 2425 MHz?

- ☐ A. 2.425 GHz
- ☐ B. 2425 GHz
- ☐ C. 24.25 GHz
- ☐ D. 0.002425 GHz

T6A02

5. What type of component is often used as an adjustable volume control?

- ☐ A. Power Resistor
- ☐ B. Transformer
- ☐ C. Fixed Resistor
- ☐ D. Potentiometer

T0C03

6. How does the allowable power density for RF safety change if the duty cycle changes from 100 percent to 50 percent?

- ☐ A. It increases by a factor of 3
- ☐ B. It increases by a factor of 2
- ☐ C. There is no adjustment allowed for lower duty cycle
- ☐ D. It decreases by 50 percent

T3C09

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

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

T0A05

8. Why should a 5 ampere fuse never be replaced with a 20 amp fuse?

- ☐ A. Excessive current could cause a fire
- ☐ B. The power supply ripple would increase
- ☐ C. The larger fuse would likely blow because it is rated for a higher current
- ☐ D. All these choices are correct

T1A05

9. What proves that the FCC has issued an operator/primary license grant?

- ☐ A. The license appears in the FCC ULS database
- ☐ B. All these choices are correct
- ☐ C. An email from the NCVEC granting the license
- ☐ D. A printed copy of the certificate of successful completion of examination

T8A09

10. What is the approximate bandwidth of a VHF repeater FM voice signal?

- ☐ A. Less than 500 Hz
- ☐ B. Between 50 and 125 kHz
- ☐ C. About 150 kHz
- ☐ D. Between 10 and 15 kHz

T6C06

11. What is component 6 in the figure T-2?

- ☐ A. Transistor
- ☐ B. Resistor
- ☐ C. Regulator IC
- ☐ D. Capacitor

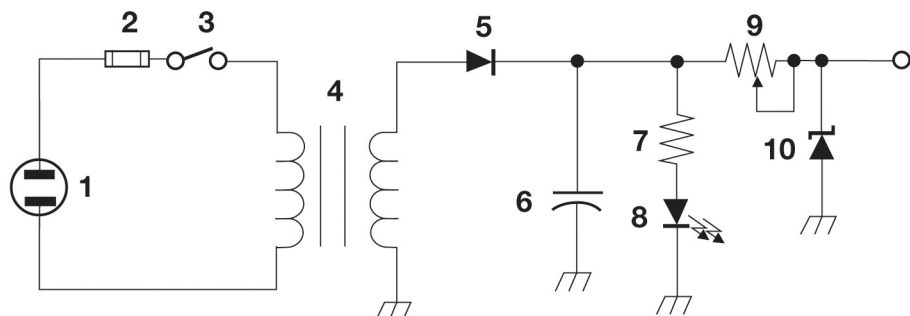


Figure T-2

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T2C01

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

- ☐ A. FCC rules always apply
- ☐ B. When operating under special ARES rules
- ☐ C. When operating a RACES station
- ☐ D. When operating under special FEMA rules

T8B04

13. What mode of transmission is commonly used by amateur radio satellites?

- ☐ A. All these choices are correct
- ☐ B. FM
- ☐ C. CW/data
- ☐ D. SSB

T7A08

14. Which of the following describes combining speech with an RF carrier signal?

- ☐ A. Modulation
- ☐ B. Impedance matching
- ☐ C. Low-pass filtering
- ☐ D. Oscillation

T4A01

15. Which of the following is an appropriate power supply rating for a typical 50 watt output mobile FM transceiver?

- ☐ A. 24.0 volts at 4 amperes
- ☐ B. 13.8 volts at 4 amperes
- ☐ C. 24.0 volts at 12 amperes
- ☐ D. 13.8 volts at 12 amperes

T3B04

16. What is the velocity of a radio wave traveling through free space?

- ☐ A. Speed of light
- ☐ B. Speed of sound
- ☐ C. Speed that increases as the frequency increases
- ☐ D. Speed inversely proportional to its wavelength

T6D11

17. Which of the following is a resonant or tuned circuit?

- ☐ A. An inductor and a capacitor in series or parallel
- ☐ B. A linear voltage regulator
- ☐ C. A resistor circuit used for reducing standing wave ratio
- ☐ D. A circuit designed to provide high-fidelity audio

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T2A02

18. What is the national calling frequency for FM simplex operations in the 2 meter band?

- ☐ A. 146.520 MHz
- ☐ B. 446.000 MHz
- ☐ C. 145.000 MHz
- ☐ D. 432.100 MHz

T8D12

19. Which of the following best describes an amateur radio mesh network?

- ☐ A. A wide-bandwidth digital voice mode employing DMR protocols
- ☐ B. A satellite communications network using modified commercial satellite TV hardware?
- ☐ C. An amateur-radio based data network using commercial Wi-Fi equipment with modified firmware
- ☐ D. An internet linking protocol used to network repeaters

T3A05

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

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

T2B06

21. What type of signaling uses pairs of audio tones?

- ☐ A. GPRS
- ☐ B. CTCSS
- ☐ C. DTMF
- ☐ D. D-STAR

T1C05

22. Which of the following is a valid Technician Class call sign format?

- ☐ A. W1XX
- ☐ B. All these choices are correct
- ☐ C. KF1XXX
- ☐ D. KA1X

T4B10

23. Which of the following receiver bandwidths provide the best signal-to-noise ratio for SSB reception?

- ☐ A. 500 Hz
- ☐ B. 2400 Hz
- ☐ C. 1000 Hz
- ☐ D. 5000 Hz

T7C08

24. Which instrument can be used to determine SWR?

- ☐ A. Voltmeter
- ☐ B. Directional Wattmeter
- ☐ C. Iambic pentameter
- ☐ D. Ohmmeter

T5D12

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

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

T1D06

26. What, if any, are the restrictions concerning transmission of foul language that may be considered indecent or obscene?

- ☐ A. There is no such prohibition
- ☐ B. The ITU maintains a list of words that are not permitted to be used on amateur frequencies
- ☐ C. Any such language is prohibited
- ☐ D. The FCC maintains a list of words that are not permitted to be used on amateur frequencies

T1E01

27. When may an amateur station transmit without a control operator?

- ☐ A. When the station licensee is away and another licensed amateur is using the station
- ☐ B. When using automatic control, such as in the case of a repeater
- ☐ C. Never
- ☐ D. When the transmitting station is an auxiliary station

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T7B07

28. Which of the following can reduce overload of a VHF transceiver by a nearby commercial FM station?

- ☐ A. Installing bypass capacitors in the microphone cable
- ☐ B. Using double-shielded coaxial cable
- ☐ C. Installing an RF preamplifier
- ☐ D. Installing a band-reject filter

T7D01

29. Which instrument would you use to measure electric potential?

- ☐ A. An ohmmeter
- ☐ B. A voltmeter
- ☐ C. A wave meter
- ☐ D. an ammeter

T1B09

30. Why should you not set your transmit frequency to be exactly at the edge of an amateur sub-band?

- ☐ A. So that the modulation sidebands do not extend beyond the band edge
- ☐ B. To Allow for calibration error in the transmitter frequency display
- ☐ C. All these choices are correct
- ☐ D. To allow for transmitter frequency drift

T8C07

31. What is Voice Over Internet Protocol (VoIP)?

- ☐ A. A technique for measuring modulation quality of a transmitter using remote sites monitored via the internet
- ☐ B. A technique employed to "spot" DX stations via the internet
- ☐ C. A method of delivering voice communications over the internet using digital techniques
- ☐ D. A set of rules specifying how to identify your station when linked over the internet

T9B10

32. What is the electrical difference between RG-58 and RG-213 coaxial cable?

- ☐ A. RG-58 has two shields
- ☐ B. RG-58 cable can handle higher power levels
- ☐ C. There is no significant difference between the two types
- ☐ D. RG-213 has less loss at a given frequency

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T5C04

33. What is the unit of inductance?

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

T6B02

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

- ☐ A. Fuse
- ☐ B. Resistor
- ☐ C. Diode
- ☐ D. Driven element

T5A12

35. What describes the number of times per second that an alternating current makes a complete cycle?

- ☐ A. Pulse rate
- ☐ B. Frequency
- ☐ C. Speed
- ☐ D. Wavelength