

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: 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: T0B10

Which of the following is true concerning grounding conductors used for lightning protection?

A. Only non-insulated wire must be used

✗ **B. Wires must be carefully routed with precise right-angle bends**

✓ **C. Sharp bends must be avoided**

D. Common grounds must be avoided

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: T1A10

What is the FCC Part 97 definition of an amateur station?

✓ **A. A station in the Amateur Radio Service consisting of the apparatus necessary for carrying on radio communications**

xB. A building where Amateur Radio receivers, transmitters, and RF power amplifiers are installed

- C. Any radio station operated by a non-professional
- D. Any radio station for hobby use

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: T1C14

Who may select a vanity call sign for a club station?

- A. Any Extra Class member of the club

xB. Any member of the club

- C. Any officer of the club

✓ **D. Only the person named as trustee on the club station license grant**

7: T1D06

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

A. The FCC maintains a list of words that are not permitted to be used on amateur frequencies

✓ **B. Any such language is prohibited**

C. The ITU maintains a list of words that are not permitted to be used on amateur frequencies

- D. There is no such prohibition

8: T1E06

Under what type of control do APRS network digipeaters operate?

✓ **A. Automatic**

- B. Remote

xC. 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

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: T2B04

Which of the following common problems might cause you to be able to hear but not access a repeater even when transmitting with the proper offset?

- A. The repeater receiver may require an audio tone burst for access
- B. The repeater receiver may require a CTCSS tone for access
- C. The repeater receiver may require a DCS tone sequence for access
- ✓ **D. All of these choices are correct**

12: T2C01

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

- A. 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: T3A04

What can happen if the antennas at opposite ends of a VHF or UHF line of sight radio link are not using the same polarization?

- A. The modulation sidebands might become inverted
- ✓ **B. Signals could be significantly weaker**
- C. Signals have an echo effect on voices
- D. Nothing significant will happen

14: T3B04

How fast does a radio wave travel through free space?

- ✓ **A. At the speed of light**
- B. At the speed of sound
- C. Its speed is inversely proportional to its wavelength
- D. Its speed increases as the frequency increases

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: T4A11

Where should the negative return connection of a mobile transceiver's power cable be connected?

✓ **A. At the battery or engine block ground strap**

- B. At the antenna mount
- C. To any metal part of the vehicle
- D. Through the transceiver's mounting bracket

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: T5B06

If an ammeter calibrated in amperes is used to measure a 3000-milliampere current, what reading would it show?

- A. 0.003 amperes
- B. 0.3 amperes

✓ **C. 3 amperes**

- D. 3,000,000 amperes

20: T5C09

How much power is being used in a circuit when the applied voltage is 13.8 volts DC and the current is 10 amperes?

✓ **A. 138 watts**

- B. 0.7 watts
- C. 23.8 watts
- D. 3.8 watts

21: T5D06

What is the resistance of a circuit that draws 4 amperes from a 12-volt source?

✓ **A. 3 ohms**

- B. 16 ohms
- C. 48 ohms
- D. 8 Ohms

Subelement T6

22: T6A11

Which of the following battery types is not rechargeable?

A. Nickel-cadmium

✓ **B. Carbon-zinc**

- C. Lead-acid
- D. Lithium-ion

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**

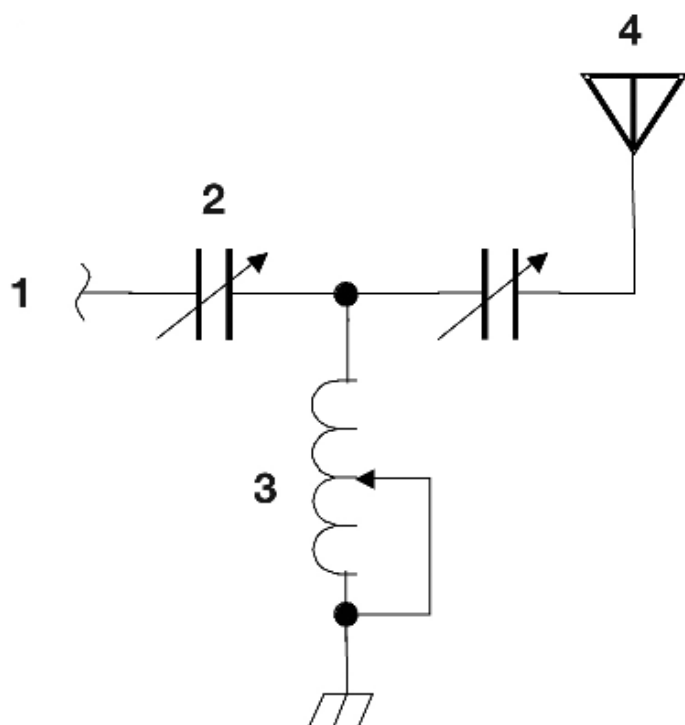


Figure T-3

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: T7A06

What device takes the output of a low-powered 28 MHz SSB exciter and produces a 222 MHz output signal?

- A. High-pass filter
- B. Low-pass filter
- ✓ C. Transverter
- D. Phase converter

27: T7B12

What might be the first step to resolve cable TV interference from your ham radio transmission?

- A. Add a low pass filter to the TV antenna input
- B. Add a high pass filter to the TV antenna input
- C. Add a preamplifier to the TV antenna input

✓ **D. Be sure all TV coaxial connectors are installed properly**

28: T7C12

Which of the following is a common use of coaxial cable?

- A. Carrying dc power from a vehicle battery to a mobile radio
- ✓ **B. Carrying RF signals between a radio and antenna**
- C. Securing masts, tubing, and other cylindrical objects on towers
- D. Connecting data signals from a TNC to a computer

29: T7D02

What is the correct way to connect a voltmeter 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: T8A04

Which type of modulation is most commonly used for VHF and UHF voice repeaters?

- A. AM
- B. SSB
- C. PSK
- ✓ **D. FM**

31: T8B03

Which of the following are provided by satellite tracking programs?

- A. Maps showing the real-time position of the satellite track over the earth
- B. The time, azimuth, and elevation of the start, maximum altitude, and end of a pass
- C. The apparent frequency of the satellite transmission, including effects of Doppler shift
- ✓ **D. All of these answers are correct**

32: T8C13

What is the Internet Radio Linking Project (IRLP)?

- ✓ **A. A technique to connect amateur radio systems, such as repeaters, via the Internet using Voice Over Internet Protocol**
- B. A system for providing access to websites via amateur radio
- C. A system for informing amateurs in real time of the frequency of active DX stations
- D. A technique for measuring signal strength of an amateur transmitter via the Internet

33: T8D07

What is PSK31?

- ✗ **A. A high-rate data transmission mode**
- B. A method of reducing noise interference to FM signals
- C. A method of compressing digital television signals
- ✓ **D. A low-rate data transmission mode**

Subelement T9

34: T9A03

Which of the following describes a simple dipole mounted so the conductor is parallel to the Earth's surface?

- A. A ground wave antenna
- ✓ B. A horizontally polarized antenna
- C. A rhombic antenna
- D. A vertically polarized antenna

35: T9B03

Why is coaxial cable used more often than any other feed line for amateur radio antenna systems?

- ✓ A. It is easy to use and requires few special installation considerations
- B. It has less loss than any other type of feed line
- C. It can handle more power than any other type of feed line
- D. It is less expensive than any other types of feed line

Results:

You scored 27 correct answers and 8 incorrect answers from a total of 35.

You would have passed the exam! Congratulations!

e1

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