

FCC Exam Element 2 Question Pool for Technician Class
Effective 7/01/2018-6/30/2022

SUBELEMENT T6 - Electrical components; circuit diagrams; component functions
- [4 Exam Questions - 4 Groups]

T6A - Electrical components: fixed and variable resistors; capacitors and inductors; fuses; switches; batteries

T6A01 (B)

What electrical component opposes the flow of current in a DC circuit?

- A. Inductor
- B. Resistor
- C. Voltmeter
- D. Transformer

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T6A02 (C)

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

- A. Fixed resistor
- B. Power resistor
- C. Potentiometer
- D. Transformer

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T6A03 (B)

What electrical parameter is controlled by a potentiometer?

- A. Inductance
- B. Resistance
- C. Capacitance
- D. Field strength

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T6A04 (B)

What electrical component stores energy in an electric field?

- A. Resistor
- B. Capacitor
- C. Inductor
- D. Diode

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T6A05 (D)

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

- A. Resistor
- B. Potentiometer
- C. Oscillator
- D. Capacitor

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T6A06 (C)

What type of electrical component stores energy in a magnetic field?

- A. Resistor
- B. Capacitor
- C. Inductor
- D. Diode

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T6A07 (D)

What electrical component usually is constructed as a coil of wire?

- A. Switch
- B. Capacitor
- C. Diode
- D. Inductor

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T6A08 (B)

What electrical component is used to connect or disconnect electrical circuits?

- A. Magnetron
- B. Switch
- C. Thermistor
- D. All of these choices are correct

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T6A09 (A)

What electrical component is used to protect other circuit components from current overloads?

- A. Fuse
- B. Capacitor
- C. Inductor
- D. All of these choices are correct

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T6A10 (D)

Which of the following battery types is rechargeable?

- A. Nickel-metal hydride
- B. Lithium-ion
- C. Lead-acid gel-cell
- D. All of these choices are correct

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T6A11 (B)

Which of the following battery types is not rechargeable?

- A. Nickel-cadmium
- B. Carbon-zinc
- C. Lead-acid
- D. Lithium-ion

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T6B - Semiconductors: basic principles and applications of solid state devices; diodes and transistors

T6B01 (D)

What class of electronic components uses a voltage or current signal to control current flow?

- A. Capacitors
- B. Inductors
- C. Resistors
- D. Transistors

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T6B02 (C)

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

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

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T6B03 (C)

Which of these components can be used as an electronic switch or amplifier?

- A. Oscillator
- B. Potentiometer
- C. Transistor
- D. Voltmeter

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T6B04 (B)

Which of the following components can consist of three layers of semiconductor material?

- A. Alternator
- B. Transistor
- C. Triode
- D. Pentagrid converter

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T6B05 (A)

Which of the following electronic components can amplify signals?

- A. Transistor
- B. Variable resistor
- C. Electrolytic capacitor
- D. Multi-cell battery

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T6B06 (B)

How is the cathode lead of a semiconductor diode often marked on the package?

- A. With the word "cathode"
- B. With a stripe
- C. With the letter C
- D. With the letter K

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T6B07 (B)

What does the abbreviation LED stand for?

- A. Low Emission Diode
- B. Light Emitting Diode
- C. Liquid Emission Detector
- D. Long Echo Delay

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T6B08 (A)

What does the abbreviation FET stand for?

- A. Field Effect Transistor
- B. Fast Electron Transistor
- C. Free Electron Transmitter
- D. Frequency Emission Transmitter

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T6B09 (C)

What are the names of the two electrodes of a diode?

- A. Plus and minus
- B. Source and drain
- C. Anode and cathode
- D. Gate and base

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T6B10 (B)

Which of the following could be the primary gain-producing component in an RF power amplifier?

- A. Transformer
- B. Transistor
- C. Reactor
- D. Resistor

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T6B11 (A)

What is the term that describes a device's ability to amplify a signal?

- A. Gain
- B. Forward resistance
- C. Forward voltage drop
- D. On resistance

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T6C - Circuit diagrams; schematic symbols

T6C01 (C)

What is the name of an electrical wiring diagram that uses standard component symbols?

- A. Bill of materials
- B. Connector pinout
- C. Schematic
- D. Flow chart

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T6C02 (A)

What is component 1 in figure T1?

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

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T6C03 (B)

What is component 2 in figure T1?

- A. Resistor
- B. Transistor
- C. Indicator lamp
- D. Connector

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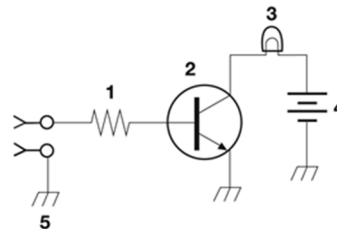


Figure T-1

T6C04 (C)

What is component 3 in figure T1?

- A. Resistor
- B. Transistor
- C. Lamp
- D. Ground symbol

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T6C05 (C)

What is component 4 in figure T1?

- A. Resistor
- B. Transistor
- C. Battery
- D. Ground symbol

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T6C06 (B)

What is component 6 in figure T2?

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

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T6C07 (D)

What is component 8 in figure T2?

- A. Resistor
- B. Inductor
- C. Regulator IC
- D. Light emitting diode

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T6C08 (C)

What is component 9 in figure T2?

- A. Variable capacitor
- B. Variable inductor
- C. Variable resistor
- D. Variable transformer

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T6C09 (D)

What is component 4 in figure T2?

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

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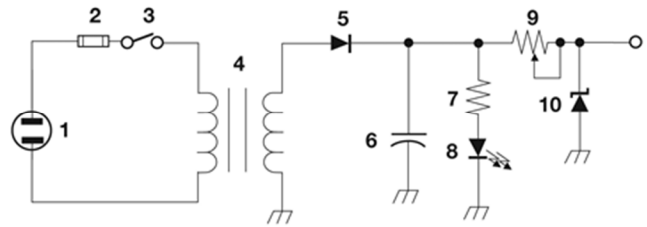


Figure T-2

T6C10 (D)

What is component 3 in figure T3?

- A. Connector
- B. Meter
- C. Variable capacitor
- D. Variable inductor

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T6C11 (A)

What is component 4 in figure T3?

- A. Antenna
- B. Transmitter
- C. Dummy load
- D. Ground

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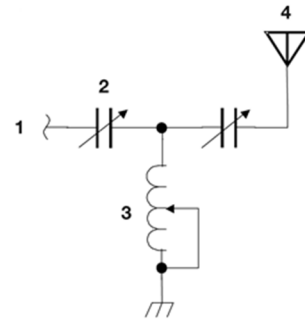


Figure T-3

T6C12 (A)

What do the symbols on an electrical schematic represent?

- A. Electrical components
- B. Logic states
- C. Digital codes
- D. Traffic nodes

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T6C13 (C)

Which of the following is accurately represented in electrical schematics?

- A. Wire lengths
- B. Physical appearance of components
- C. The way components are interconnected
- D. All of these choices are correct

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T6D - Component functions: rectification; switches; indicators; power supply components; resonant circuit; shielding; power transformers; integrated circuits

T6D01 (B)

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

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T6D02 (A)

What is a relay?

- A. An electrically-controlled switch
- B. A current controlled amplifier
- C. An optical sensor
- D. A pass transistor

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T6D03 (A)

What type of switch is represented by component 3 in figure T2?

- A. Single-pole single-throw
- B. Single-pole double-throw
- C. Double-pole single-throw
- D. Double-pole double-throw

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T6D04 (C)

Which of the following displays an electrical quantity as a numeric value?

- A. Potentiometer
- B. Transistor
- C. Meter
- D. Relay

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T6D05 (A)

What type of circuit controls the amount of voltage from a power supply?

- A. Regulator
- B. Oscillator
- C. Filter
- D. Phase inverter

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T6D06 (B)

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

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T6D07 (A)

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

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

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T6D08 (D)

Which of the following is combined with an inductor to make a tuned circuit?

- A. Resistor
- B. Zener diode
- C. Potentiometer
- D. Capacitor

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T6D09 (C)

What is the name of a device that combines several semiconductors and other components into one package?

- A. Transducer
- B. Multi-pole relay
- C. Integrated circuit
- D. Transformer

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T6D10 (C)

What is the function of component 2 in Figure T1?

- A. Give off light when current flows through it
- B. Supply electrical energy
- C. Control the flow of current
- D. Convert electrical energy into radio waves

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T6D11 (A)

Which of the following is a resonant or tuned circuit?

- A. An inductor and a capacitor connected in series or parallel to form a filter
- B. A type of 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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T6D12 (C)

Which of the following is a common reason to use shielded wire?

- A. To decrease the resistance of DC power connections
- B. To increase the current carrying capability of the wire
- C. To prevent coupling of unwanted signals to or from the wire
- D. To couple the wire to other signals

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