
Technician Question Pool

July 2018 to June 2022

The MORE Project

<http://n2re.org/m-o-r-e-project>



Electrical Safety

No-Nonsense pages 49 - 50

Power circuits and hazards, hazardous voltages, fuses and circuit breakers, grounding, and battery safety

BE SAFE! When operating or working on amateur radio equipment, one can come into contact with dangerous voltages and currents that can cause injury or even death. Because of this, it's important to know and always remember how to be safe when dealing with electricity.



TOA02

What health hazard is presented by electrical current flowing through the body?

- A. It may cause injury by heating tissue
- B. It may disrupt the electrical functions of cells
- C. It may cause involuntary muscle contractions
- D. All of these choices are correct.



TOA02

What health hazard is presented by electrical current flowing through the body?

- A. It may cause injury by heating tissue
- B. It may disrupt the electrical functions of cells
- C. It may cause involuntary muscle contractions
- D. **All of these choices are correct.**



T0A03

In the United States, what is connected to the green wire in a threewire electrical AC plug?

- A. Neutral
- B. Hot
- C. Equipment ground
- D. The white wire



ES1 Q2 of 9

T0A03

In the United States, what is connected to the green wire in a threewire electrical AC plug?

- A. Neutral
- B. Hot
- C. **Equipment ground**
- D. The white wire



T0A06

What is a good way to guard against electrical shock at your station?

- A. Use three-wire cords and plugs for all AC powered equipment
- B. Connect all AC powered station equipment to a common safety ground
- C. Use a circuit protected by a ground-fault interrupter
- D. All of these choices are correct



TOA06

What is a good way to guard against electrical shock at your station?

- A. Use three-wire cords and plugs for all AC powered equipment
- B. Connect all AC powered station equipment to a common safety ground
- C. Use a circuit protected by a ground-fault interrupter
- D. **All of these choices are correct**



T0A04

What is the purpose of a fuse in an electrical circuit?

- A. To prevent power supply ripple from damaging a circuit
- B. To interrupt power in case of overload
- C. To limit current to prevent shocks
- D. All of these choices are correct



T0A04

What is the purpose of a fuse in an electrical circuit?

- A. To prevent power supply ripple from damaging a circuit
- B. To interrupt power in case of overload**
- C. To limit current to prevent shocks
- D. All of these choices are correct



T0A05

Why is it unwise to install a 20-ampere fuse in the place of a 5-ampere fuse?

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



T0A05

Why is it unwise to install a 20-ampere fuse in the place of a 5-ampere fuse?

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



T0A08

What safety equipment should always be included in home-built equipment that is powered from 120V AC power circuits?

- A. A fuse or circuit breaker in series with the AC hot conductor
- B. An AC voltmeter across the incoming power source
- C. An inductor in parallel with the AC power source
- D. A capacitor in series with the AC power source



T0A08

What safety equipment should always be included in home-built equipment that is powered from 120V AC power circuits?

- A. A fuse or circuit breaker in series with the AC hot conductor**
- B. An AC voltmeter across the incoming power source
- C. An inductor in parallel with the AC power source
- D. A capacitor in series with the AC power source



T0A11

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 charge stored in large capacitors



T0A11

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 charge stored in large capacitors**



TOA01

Which of the following is a safety hazard of a 12-volt storage battery?

- A. Touching both terminals with the hands can cause electrical shock
- B. Shorting the terminals can cause burns, fire, or an explosion
- C. RF emissions from the battery
- D. All of these choices are correct



TOA01

Which of the following is a safety hazard of a 12-volt storage battery?

- A. Touching both terminals with the hands can cause electrical shock
- B. Shorting the terminals can cause burns, fire, or an explosion**
- C. RF emissions from the battery
- D. All of these choices are correct



T0A10

What can happen if a lead-acid storage battery is charged or discharged too quickly?

- A. The battery could overheat, 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



T0A10

What can happen if a lead-acid storage battery is charged or discharged too quickly?

- A. The battery could overheat, 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





A non-profit initiative by the IEEE and ARDC to increase the numbers of youth (12-18) and non-males in Amateur Radio. Participants earn FCC licenses and receive free 2-way radios.

For MORE information: n2re.org/m-o-r-e-project
Dr. Rebecca Mercuri, Grant Administrator, rtmercuri@ieee.org

