

Batteries Quiz PDF

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Explain the difference between primary and secondary batteries.

What is the main advantage of solid-state batteries over traditional batteries?

- Lower cost
- Higher energy density
- Larger size
- More complex design

Which of the following are components of a battery?

- Anode
- Cathode
- Electrolyte
- Transformer

Predict how advancements in battery technology might influence renewable energy systems in the future.



What is the primary use of lead-acid batteries?

- Smartphones
- Laptops
- Automotive
- Cameras

What are common applications for lithium-ion batteries?

- Electric vehicles
- Solar energy storage
- Flashlights
- Smartphones

Which battery type is known for high energy density and is commonly used in electronics?

- Alkaline
- Nickel-cadmium
- Lithium-ion
- Lead-acid

What is the potential risk associated with lithium-ion batteries?

- Corrosion
- Overheating
- Low energy density
- Short cycle life

What is the unit of measurement for battery capacity?

- Volts
- Watts
- Milliamp-hours (mAh)

Joules

Which component of a battery prevents physical contact between the anode and cathode?

- Anode
- Cathode
- Electrolyte
- Separator

Which of the following is a characteristic of secondary batteries?

- Single-use
- Rechargeable
- Non-recyclable
- Low energy density

What are the benefits of recycling batteries?

- Reduces environmental harm
- Increases battery life
- Conserves resources
- Lowers production costs

Which of the following factors affect battery performance?

- Capacity
- Voltage
- Color
- Cycle life

Describe the role of the electrolyte in a battery.

Which type of battery is non-rechargeable?

- Lithium-ion
- Nickel-metal hydride
- Alkaline
- Lead-acid

Discuss the environmental impacts of improper battery disposal.

How does energy density affect the performance of a battery?

What safety measures should be taken when handling lithium-ion batteries?

Which battery types are commonly used in consumer electronics?

- Alkaline
- Nickel-cadmium

- Lithium-ion
- Lead-acid

What innovations are impacting the future of battery technology?

- Solid-state batteries
- Battery Management Systems (BMS)
- Wireless charging
- Manual charging