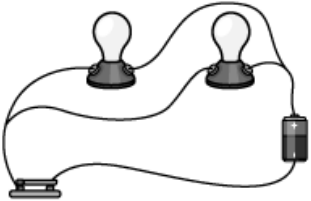
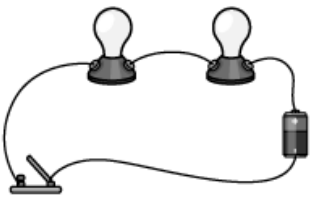
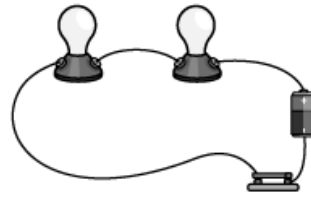
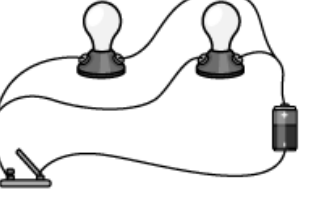


**Exam not valid for Paper Pencil Test Sessions**

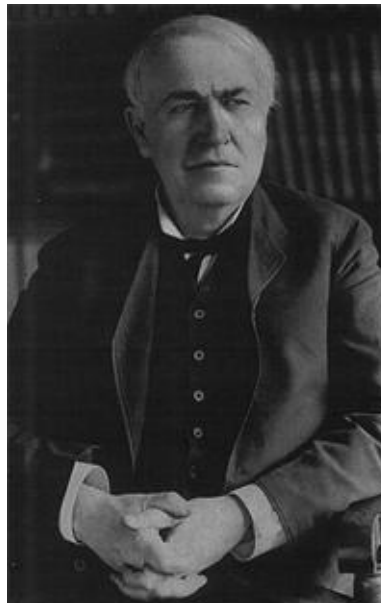
- 1 **What contribution did Benjamin Franklin make toward the study of electricity?**
- A He invented the light bulb.
  - B He discovered that protons have a positive charge.
  - C He invented the generator.
  - D He discovered that lightning is a form of electricity.
- 2 **Which contribution toward understanding electricity was made by Michael Faraday?**
- A Discovered that lightning carried electricity
  - B Concentrated on mass-producing long-lasting light bulbs
  - C Improved the telegraph system
  - D Invented the lightning rod
  - E Created the first electric power generator
- 3 **What type of material will NOT allow electric current to pass through it?**
- A Insulator
  - B Open
  - C Closed
  - D Conductor

4 Directions: Click and drag the text to the correct box.

**Match the circuit name with the correct diagram.**

 <p>closed parallel</p>	 <p>open series</p>
 <p>closed series</p>	 <p>open parallel</p>

5



**This picture shows the scientist who invented the light bulb. Who is pictured here?**

- A Thomas Jefferson
- B Thomas Edison
- C Michael Faraday
- D Benjamin Franklin

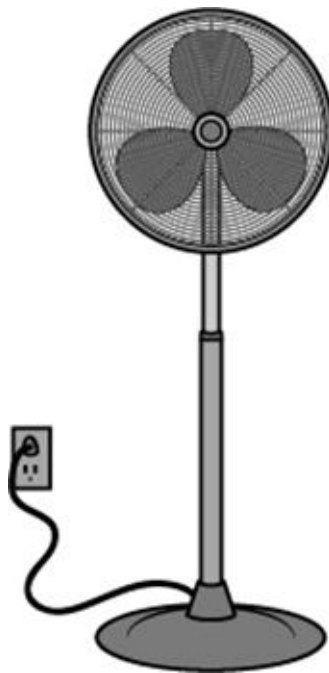
6 **Which naturally occurring phenomenon is caused by static electricity?**

- A Lightning
- B Hail
- C Tornado
- D Earthquake

7 **Why do electricians always wrap wires in plastic?**

- A Plastic comes in many different colors.
- B Plastic makes the wire easy to bend.
- C Plastic is a good electrical insulator.
- D Plastic is a good electrical conductor.

8



**The student felt the cool breeze of the fan. This is an example of —**

- A solar energy transformed into battery
- B magnetic energy transformed into static
- C mechanical energy transformed into magnetism
- D electrical energy transformed into motion

9 **A metal paper clip is an example of —**

- A an insulator
- B a conductor
- C an electron
- D a proton

10 **A type of circuit that has only one path is called a —**

- A parallel circuit
- B closed circuit
- C open circuit
- D series circuit

11 Directions: Click on each answer you want to select. You must select all correct answers.

**Which of the following materials are best used as insulators?**

- |                                |   |  |  |
|--------------------------------|---|--|--|
| <input type="checkbox"/> Metal | <input checked="" type="checkbox"/> Plastic | <input checked="" type="checkbox"/> Wood | <input checked="" type="checkbox"/> Rubber |
|--------------------------------|---|--|--|

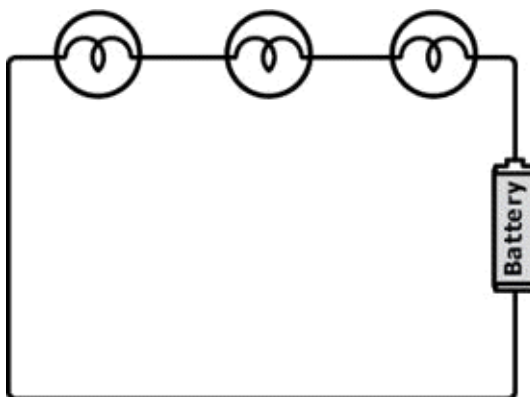
12 **A teacher entered the classroom and turned on the lights. Which person changed history by making this possible?**

- A Einstein
- B Aristotle
- C Edison
- D Newton

13 **Why is a bulb brighter when it is powered by two batteries rather than one?**

- A The bulb will not glow brighter with two batteries.
- B The flow of electricity in the circuit is less.
- C The flow of electricity in the circuit is the same.
- D The flow of electricity in the circuit is greater.

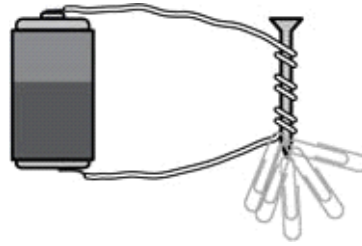
14



**The circuit pictured is an example of —**

- A an open circuit
- B a parallel circuit
- C a closed circuit
- D an electromagnet

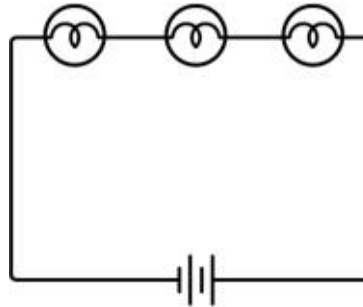
15



**How is this electromagnet different than a permanent magnet?**

- A An electromagnet can be turned on and off when desired whereas a permanent magnet is always magnetic.
- B A permanent magnet is made of plastic and an electromagnet is made of metal.
- C A permanent magnet has a magnetic field and an electromagnet does not.
- D An electromagnet can only pick up paperclips and a permanent magnet can pick up anything magnetic.

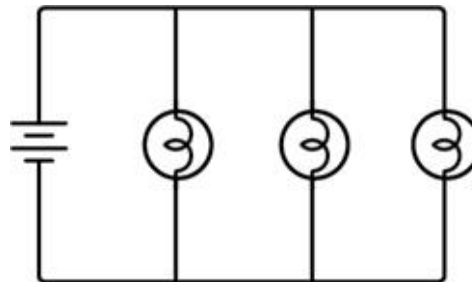
16



**The model shown is an example of —**

- A an insulator
- B a magnet
- C a series circuit
- D a parallel circuit

17



**The circuit pictured is —**

- A a series circuit
- B an insulator
- C an electromagnet
- D a parallel circuit

18 **Which of the following is NOT true about magnets?**

- A Magnets can be made with electricity and some metals.
- B Metal will attract anywhere on a magnet.
- C Magnets occur in nature.
- D Magnets have two north poles.

19 **What type of circuit has a broken path that does NOT let current flow through it?**

- A Toggle
- B Open circuit
- C Switch
- D Closed circuit

20



**How can it be explained that this young man's hair is sticking to the balloon in the picture?**

- A A parallel circuit was on too long.
- B There is too much dust in the air.
- C He needs to wash his hair.
- D There is static electricity.

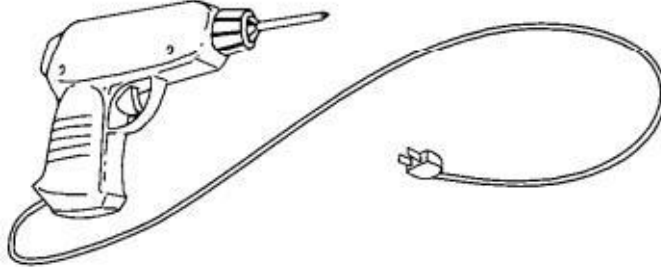
21 **Electricity used to operate a toaster or stove is transformed to —**

- A potential energy
- B mechanical energy
- C radiant energy
- D superior energy

22 **An eraser is an example of —**

- A an open circuit
- B a closed circuit
- C a conductor
- D an insulator

23



**When in operation, this tool transforms electrical energy *mostly* into —**

- A solar energy
- B mechanical energy
- C chemical energy
- D sound energy

24 **When an electric current passes through a wire curled around an iron core this creates —**

- A a nucleus
- B an electromagnet
- C resistance
- D lightning