

Date: _____

Name: _____

Class: _____

1 What effect will the north pole of one magnet have on the north pole of another magnet?

- A** Repulsive
- B** Attractive
- C** Combative
- D** No effect

2  Why are paperclips attracted to magnets?

- A** They contain silver
- B** They contain aluminum
- C** They contain tin
- D** They contain iron

3 What is the simplest requirement for an electromagnet?

- A** A coil of electrified wire
- B** A coil of electrified wire wrapped around an iron core
- C** A bar magnet and a power source
- D** A length of electrified wire

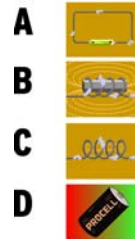
4 Where does a magnetic field occur in relation to an electrified wire?

- A** At either end, but not in the middle
- B** Only on the side closest to the source of electricity
- C** Around the entire length of the wire
- D** Only on the side furthest from the source of electricity

5 How would you compare the magnetic field generated by a simple length of wire to the magnetic field generated by a coil of wire?

- A** The coil generates a stronger magnetic field
- B** The coil generates a weaker magnetic field
- C** The field generated by the coil has a different polarity than the field generated by the length of wire
- D** The coil generates a field that attracts iron objects; the length of wire generates a field that attracts silver objects

6 Which of the following depicts a solenoid?



7 How do electromagnets differ from regular magnets?

- A** They can be turned on and off
- B** Their polarity can be reversed
- C** Their strength can be changed
- D** All of the above

8 How might an electric motor be used in a washing machine?

- A** To make water flow into the machine
- B** To make the machine spin
- C** To add the correct amount of soap
- D** To make water drain out of the machine at the end of the cycle

9  When will a circuit breaker trip, or turn off?

- A** When the polarity of the electromagnet inside it is reversed
- B** When a very strong current passes through it
- C** When any type of current passes through it
- D** When a special on/off switch is activated

10 To change the polarity of an electromagnet, you would:

- A** Reverse the current's direction
- B** Reverse the direction in which the coil is wound
- C** Turn the battery, or other power source, upside-down
- D** Remove the iron core from within the coil of wire