Magnetism

Name_____ Class_____ Date_____

1 An **electron** moving in a uniform magnetic field experiences the **maximum magnetic force** when the angle between the direction of the electron's motion and the direction of the magnetic field is

A 0°
B 45°
C 90°
D 180°

2 An **accelerating particle** that does **not** generate electromagnetic waves could be

A a neutron
B a proton
C an electron
D an alpha particle

3 A beam of particles is produced in a **cathode-ray tube**. The beam may be **deflected** by a magnetic field because each **particle** in the beam

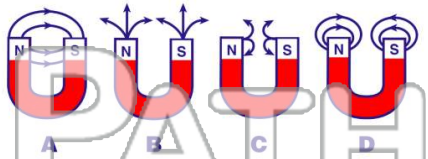
4 Which **device** does **not** operate by means of **torque** exerted on a current-carrying **loop of wire** in a magnetic field?

5

7

A violet light
B green light
C yellow light
D red light

horseshoe magnet?



9 If the **speed** of the electrons traveling through the magnetic field **increases**, the **magnetic force** on the electrons will

A decrease
B increase
C remain the same

10 This diagram shows **conductor C** between two opposite magnetic poles. Which procedure will produce the **greatest induced potential difference** in the conductor?

A holding the conductor stationary between the poles
B moving the conductor out of the page
C moving the conductor toward the right side of the page
D moving the conductor toward the N-pole

Magnetism

Name_____ Class_____ Date_____

1. An **electron** moving in a uniform magnetic field experiences the **maximum magnetic force** when the angle between the direction of the electron's motion and the direction of the magnetic field is

   A 0°
   B 45°
   C 90°
   D 180°

   C

2. An **accelerating particle** that does **not** generate electromagnetic waves could be

   A a neutron
   B a proton
   C an electron
   D an alpha particle

   A

3. A beam of particles is produced in a **cathode-ray tube**. The beam may be **deflected** by a magnetic field because each **particle** in the beam

4. Which **device** does **not** operate by means of **torque** exerted on a current-carrying **loop of wire** in a magnetic field?

   C

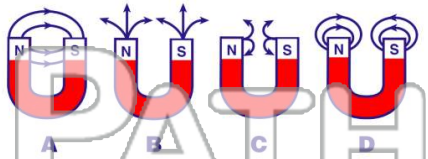
5. B

7. A violet light
   B green light
   C yellow light
   D red light

   D

horseshoe magnet?



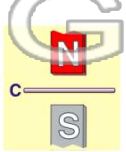
A

9. If the **speed** of the electrons traveling through the magnetic field **increases**, the **magnetic force** on the electrons will

   A decrease
   B increase
   C remain the same

   B

10. This diagram shows **conductor C** between two opposite magnetic poles. Which procedure will produce the **greatest induced potential difference** in the conductor?

    A holding the conductor stationary between the poles
    B moving the conductor out of the page
    C moving the conductor toward the right side of the page
    D moving the conductor toward the N-pole

    B