Quiz #6: Magnetism

Question 1 (2 points)
The force of an electron moving in a magnetic field will be the largest when its direction is

- a) the same as the direction of the magnetic field
- b) exactly opposite to the magnetic field
- c) perpendicular to the magnetic force direction
- d) at an angle other than 90 degrees to the magnetic field direction
- d) none of the above

Answer: C

Question 2 (2 points)
A stationary electric charge will feel a force if placed in

- a) an electric field
- b) a magnetic field
- c) both of these
- d) neither of these

Answer: A

Question 3 (2 points)
Which one of the following statements concerning permanent magnets is false?

- a) the north pole of a permanent magnet is attracted to a south pole
- b) all permanent magnets are surrounded by a magnetic field
- c) the direction of a magnetic field is indicated by the north pole of a compass
- d) when a permanent magnet is cut in half, one piece will be a north pole and one piece will be a south pole
- e) none of the above

Answer: D

Question 4 (2 points)
Magnetic domains normally occur in

- a) iron
- b) copper
- c) silver
- d) all of these
- e) none of these

Answer: A

Question 5 (2 points)
Why does heating a magnet or dropping a magnet on a hard surface weaken its magnetism?

Heating a magnet or dropping it on a hard surface weakens its magnetism because it destroys the magnetic domains alignment. The less magnetic domains aligned, the weaker the magnet.