

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Quiz name: **Magnetism**

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1. Where is the field of a magnet strongest?

- (A) near the north pole
  - (B) near the south pole
  - (C) near both poles
  - (D) near the middle
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2. If you cut a magnet in half, you have

- (A) no magnets
  - (B) two half magnets
  - (C) one magnet
  - (D) two magnets
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3. A magnet's field lines always start near

- (A) middle
  - (B) south pole
  - (C) north pole
  - (D) side
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4. A ferromagnetic material is

- (A) always a magnet
  - (B) a magnet if its domains are aligned
  - (C) a magnet if its domains are not aligned
  - (D) never a magnet
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5. An iron bar is placed in a solenoid to

- (A) decrease the voltage
  - (B) increase the voltage
  - (C) increase the magnetic field strength
  - (D) decrease the magnetic field strength
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6. Which of these cannot increase the strength of an electromagnet?

- (A) making the loops smaller in the coil?
  - (B) placing an iron bar in the coil
  - (C) winding more loops in the coil
  - (D) increasing the current in the coil
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7. What effect does a magnetic field have on a charge moving perpendicular to the field?

- (A) it has no effect
- (B) it pulls the charge forward

- C it pushes the charge backward
  - D it pushes the charge perpendicularly to the field and the charge's velocity
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8. A galvanometer is a device used to measure

- A current
  - B resistance
  - C voltage
  - D magnetic field strength
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9. A transformer increases or decreases

- A energy
  - B resistance
  - C voltage
  - D direct current
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10. An electric generator converts

- A electrical energy into mechanical energy
  - B power into energy
  - C mechanical energy into electrical energy
  - D energy into power
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11. What part of an atom is responsible for producing magnetic field?

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12. Why is iron easy to magnetise when used in electromagnet?

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13. A transformer is connected to a 9-volt battery. A student tries to use this setup to double the voltage for an experiment. However, the output voltage is zero. Explain why.

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14. Using the concept of magnetic domains, explain why a magnet will attract an iron nail but not a plastic button.

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15. A child's toy has a magnet hidden inside. How can you determine where the north and south poles of the magnet are, without damaging the toy?

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16. A permanent magnet would be a good core for a transformer.

- A True
- B False

17. Unpaired electrons cause a ferromagnetic material to become magnetic.

- A True
- B False

18. Like magnetic poles attract one another.

- A True
- B False

19. Moving electric charges create magnetic field.

- A True
- B False

20. It is possible for a magnetic field to slow down a charged particle moving through the field.

- A True
- B False