

# Fundamentals of Materials Science

Materials Science · Practice Test · 12 Questions

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**1. Which property describes a material's ability to be hammered or rolled into thin sheets without breaking?**

- A) Brittleness
- B) Malleability
- C) Elasticity
- D) Conductivity

**2. What is the primary reason why copper is frequently used in electrical wiring?**

- A) It is highly magnetic
- B) It has a low melting point
- C) It is an excellent conductor of electricity
- D) It is a very hard ceramic

**3. Which of the following is classified as a composite material?**

- A) Pure gold
- B) Concrete reinforced with steel
- C) Polystyrene plastic
- D) Glass

**4. What happens to the particles of a solid when it is heated?**

- A) They stop moving completely
- B) They move further apart and vibrate faster
- C) They turn into a gas instantly
- D) They lose their mass

**5. Which material is well-known for being a natural polymer?**

- A) Steel
- B) Diamond
- C) Cotton
- D) Aluminum

**6. In materials science, what does 'tensile strength' measure?**

- A) Resistance to being pulled apart
- B) Resistance to scratching
- C) Ability to conduct heat
- D) Ease of melting

**7. Which substance is an example of an amorphous solid?**

- A) Table salt
- B) Glass
- C) Diamond
- D) Graphite

**8. What is the main characteristic of a ceramic material?**

- A) High electrical conductivity
- B) High heat resistance and brittleness
- C) Flexibility at room temperature
- D) Ability to be stretched into wires

**9. Which metal is most commonly used as the base for stainless steel?**

- A) Iron
- B) Lead
- C) Gold
- D) Mercury

**10. What process involves heating an ore to extract a metal?**

- A) Smelting
- B) Freezing
- C) Crystallization
- D) Condensation

**11. Which of these is a synthetic polymer?**

- A) Wood
- B) Silk
- C) Nylon
- D) Wool

**12. Which property makes a material 'brittle'?**

- A) It bends under pressure
- B) It shatters when struck
- C) It stretches significantly
- D) It conducts electricity well