

- 1 Which is an example of a physical change?
- A A ship's iron wheel rusts in ocean water.
  - B A raindrop freezes to form sleet.
  - C An antacid tablet fizzes when it is placed in water.
  - D A wood log burns giving off heat and light.
- 2 What is it called when atoms in a substance rearrange themselves to form different kinds of matter with properties that are different from those of the original substance?
- A energy change
  - B physical change
  - C phase change
  - D chemical change
- 3 How can you tell a chemical change has taken place when silver tarnishes?
- A The metal changes in shape.
  - B The metal changes in color.
  - C The metal changes in weight.
  - D The metal changes in volume.
- 4 Which statement describes the process of combustion?
- A Combustion is a physical change in which a substance gives off energy.
  - B Combustion is a physical change in which bubbles of gas form.
  - C Combustion is a chemical change in which a substance gives off energy.
  - D Combustion is a chemical change in which solid crystals form.
- 5 Which of these is an example of a chemical change?
- A A ship's iron wheel rusts.
  - B Rain freezes into sleet.
  - C Paper is crumpled into a ball.
  - D Water boils and becomes steam.

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- 6 What is an example of a combination reaction?
- A Electricity causes water to form hydrogen and oxygen.
  - B Magnesium reacts with oxygen to form magnesium oxide.
  - C When wax burns, carbon and oxygen break apart to form new compounds.
  - D When sugar is heated, the sugar molecules break apart.
- 7 What is the special kind of "sentence" that shows what happens during a chemical reaction?
- A number sentence
  - B chemical equation
  - C chemical expression
  - D algebraic equation
- 8 What happens during a decomposition reaction?
- A Compounds split apart to form larger compounds.
  - B Compounds come together to form smaller products.
  - C Compounds come together to form larger compounds.
  - D Compounds split apart to form smaller products.
- 9 What does the Law of Conservation of Mass tell us?
- A Matter can be either created or destroyed during a chemical reaction.
  - B Energy can be created if the total mass is burned in a chemical reaction.
  - C Energy cannot be created or destroyed during a chemical reaction.
  - D Matter cannot be created or destroyed during a chemical reaction.
- 10 What is the substance that is made during a chemical reaction?
- A reactant
  - B solution
  - C equation
  - D product

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- 11 What color does indicator paper turn when dipped in a strong base?
- A purple
  - B red
  - C yellow
  - D green
- 12 What process is used to separate iron from iron ore?
- A The ore is cooled in a freezer and mixed with liquid oxygen.
  - B The ore is heated over an open flame and mixed with water.
  - C The ore is cooled in a water bath and mixed with carbon dioxide.
  - D The ore is heated in a blast furnace and mixed with solid carbon.
- 13 How do the properties of acids and bases help identify them?
- A The temperature of a solution will tell you if it is an acid or a base.
  - B The density of the solution will tell you if it is an acid or a base.
  - C When acids or bases react with indicators, they cause color changes in special paper.
  - D When acids or bases react with indicators, they cause crystals to form.
- 14 What color does indicator paper turn when dipped in a strong acid?
- A purple
  - B red
  - C yellow
  - D green
- 15 Which clues do scientists use to identify acids and bases?
- A Scientists look for the formation of solid crystals.
  - B Scientists look for color changes in a special paper.
  - C Scientists look for signs of energy changes.
  - D Scientists look for tiny bubbles of gas.

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- 16 Chemists have found substances in foods that prevent diseases. What are these substances called?
- A fertilizers
  - B antibiotics
  - C medicines
  - D vitamins
- 17 Which product can be made from compounds found in petroleum?
- A plastic
  - B silk
  - C ammonia
  - D cement
- 18 How are the molecules arranged in a polymer?
- A in a crystal forming a geometric pattern
  - B in separate groups of very small molecules
  - C in branching strings of very large molecules
  - D in chains of smaller units that form part of the larger molecule
- 19 Chains of large molecules containing identical smaller units connected together make up nylon. What is this general type of material called?
- A plastic
  - B polymer
  - C natural fabric
  - D metal
- 20 Why shouldn't you mix cleaning supplies carelessly?
- A They may produce inexpensive new compounds.
  - B They may contaminate your food supplies.
  - C They may cause diseases to multiply.
  - D They may cause unexpected chemical reactions.