P5 SA1 REVISION 2:

Name: _____

Materials, Properties, and Changes

Section A: Multiple-Choice Questions (MCQ)

Instructions: Underline the letter of the best answer (A, B, C, or D) for each question.

1. Which property describes a material that can be bent easily without breaking?

   A) Hardness B) Transparency C) Flexibility D) Conductivity

2. A substance that allows light to pass through completely, so you can see clearly through it, is called:

   A) Opaque B) Transparent C) Translucent D) Reflective

3. Which of the following is a poor conductor of heat and is often used to make pot handles?

   A) Copper B) Steel C) Aluminium D) Wood

4. The change of state from a liquid to a gas is called:

   A) Melting B) Condensation C) Freezing D) Evaporation

5. At standard pressure, water boils at a temperature of:

   A) 0∘C B) 50∘C C) 90∘C D) 100∘C

6. Which material is typically an electrical insulator?

   A) Gold B) Iron C) Rubber D) Silver

7. Tearing a piece of paper into smaller pieces is an example of what type of change?

A) Chemical change B) Irreversible change

C) Physical change D) State change

8. Which process is an example of an irreversible change?

A) Melting ice B) Dissolving sugar in water

C) Burning wood D) Folding paper

9. When a substance undergoes a chemical change, what is formed?

A) The same substance in a different state

B) A new substance (product)

C) A mixture of the original substance

D) A solid precipitate only

10. In a chemical reaction, the original substances that react together are called:

A) Products B) Catalysts C) Reactants D) Solutions

11. Rusting of iron is a chemical change because:

A) The iron only changes its shape.

B) The change can be easily reversed.

C) A new substance (iron oxide) is formed.

D) It only involves a change in temperature.

12. Which device is used to measure temperature?

A) Barometer B) Stopwatch

C) Thermometer D) Measuring cylinder

13. The melting point of a substance is the temperature at which it changes from a:

A) Liquid to gas B) Gas to liquid

C) Solid to liquid D) Liquid to solid

14. A metal spoon feels colder than a wooden spoon at the same room temperature because the metal is a good:

A) Electrical insulator B) Thermal conductor

C) Thermal insulator D) Electrical conductor

15. Why is plastic used to cover electrical wires?

A) It is cheap. B) It is a good electrical conductor.

C) It is a good electrical insulator. D) It is very flexible.

16. Which of the following is an example of a reversible change?

A) Frying an egg B) Baking a cake

C) Dissolving salt in water D) Souring of milk

17. A change where no new substance is formed, and the change can often be reversed, is called a:

A) Chemical change B) Physical change

C) Irreversible change D) State change

18. What is a common sign that a chemical reaction has taken place?

A) Change in size B) Change in shape

C) Production of gas bubbles (fizzing) D) Bending of the material

19. When you mix vinegar and baking soda, bubbles are produced. The bubbles are a sign of:

A) A physical change B) Evaporation

C) A chemical reaction D) Condensation

20. A material that is magnetic will be attracted to:

A) Wood B) Plastic C) Glass D) Iron

21. What happens to the water vapor in the air when the temperature drops sharply?

A) It melts. B) It freezes.

C) It condenses into liquid water. D) It evaporates.

22. Which material is the best thermal conductor among the choices?

A) Glass B) Air C) Silver D) Water

23. The temperature at which a liquid turns into a solid is called the:

A) Boiling point B) Condensation point

C) Melting point D) Freezing point

24. What is the product when a piece of paper is completely burnt?

A) Paper pulp B) Ash and smoke

C) Charcoal only D) Paper with a different color

25. A change in which the chemical structure of a substance is altered is called a:

A) State change B) Chemical change

C) Reversible change D) Physical change

26. An item made of glass has the property of:

A) Flexibility B) Hardness and Transparency

C) High electrical conductivity D) Low thermal insulation

27. When ice cream melts, it is an example of a change from:

A) Gas to liquid B) Liquid to gas

C) Solid to liquid D) Liquid to solid

28. Which of these changes is irreversible?

A) Stretching a rubber band B) Baking bread

C) Boiling water D) Melting butter

29. The products of a chemical reaction are found:

A) Only at the start of the reaction.

B) On the left side of a chemical equation.

C) On the right side of a chemical equation.

D) Mixed with the reactants.

30. A substance used to slow down the flow of electricity is an:

A) Conductor B) Reactant C) Insulator D) Product

Section B: Open-Ended Questions (OEQ)

Instructions: Answer the following questions in the space provided.

1. List two **physical properties** of plastic.

_____

2. What is the difference between an **opaque** and a **transparent** material?

_____

3. Name the state of matter that has a fixed volume but takes the shape of its container.

_____

4. Define **boiling point**.

_____

5. Explain why a piece of cloth placed in the sun eventually dries.

_____

6. Give one example of an excellent **thermal conductor**.

_____

7. Give one example of an excellent **electrical insulator**.

_____

8. Why are most cooking pots made of metal?

_____

9. Give a brief reason why a wooden spoon is better than a metal spoon for stirring hot soup.

_____

_____

10. Describe the main characteristic of a **physical change**.

_____

11. State one example of a **reversible physical change**.

_____

12. State one example of an **irreversible physical change**.

_____

13. Describe the main characteristic of an **irreversible change**.

_____

14. What are the two types of changes a substance can undergo?

_____

15. What are the two substances needed for iron to rust?

_____

16. Give two signs that indicate a **chemical reaction** has occurred (other than forming a precipitate).

_____

17. In the reaction: Wood + Oxygen → Ash + Smoke, what are the **reactants**?

_____

18. In the same reaction, what are the **products**?

_____

19. What is the common name for the chemical process where iron combines with oxygen and water?

_____

20. Why is freezing water to form ice considered a reversible change?

_____

21. A shirt changes color when bleach is applied. Is this a physical or chemical change? Explain why.

_____

22. What happens to the temperature of a substance as it is melting?

_____

23. Why is it important to use electrical insulators for safety when handling wires?

_____

_____

24. Explain the difference between a **physical change** and a **chemical change** in terms of what happens to the substance.

_____

_____

25. Give an example of a chemical change that is useful in the kitchen.

_____

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