

Physical and Chemical Changes

<1M>

- 1.Can deforestation be considered as a reversible change?
- 2.What is the chemical name of Baking Soda?
- 3.What is Rust?
- 4.What type of change is photosynthesis?
- 5.Fraction of ship's iron has to be replaced every year because-
 (A) It prevents rusting of iron. (B) Its color fades away.
 (C) Ship can move properly in water only after replacement. (D) All the above.
- 6.When magnesium oxide (MgO) reacts with water to form magnesium hydroxide [Mg(OH)₂], a base, it turns litmus to
 (A) Blue, red (B) Blue, colourless (C) Red, blue (D) Colourless, blue
- 7.What do you understand by physical properties of a substance?
- 8.When vinegar reacts with baking soda the gas evolved is-
 (A) Hydrogen. (B) Oxygen. (C) Carbon dioxide. (D) Nitrogen dioxide.
- 9.When copper sulphate reacts with iron, green coloured solution and brown coloured deposition is formed
 (A) Iron oxide, copper sulphide (B) Iron sulphate, copper
 (C) Iron sulphate, copper oxide (D) Iron sulphide, copper oxide
- 10.Ozone layer is present in-
 (A) Atmosphere. (B) Clouds. (C) Soil. (D) Water.
- 11.Complete the reaction-
 Carbon dioxide + Lime water → +
 (A) Calcium carbonate, water (B) Calcium hydroxide, oxygen
 (C) Calcium oxide, water (D) Calcium carbonate
- 12.The process of obtaining pure crystals of copper sulphate from copper sulphate solution is known as-
 (A) Galvanization. (B) Evaporation. (C) Crystallization. (D) Rusting.
- 13.While preparing copper sulphate crystals from copper sulphate solution, dilute sulphuric acid is used instead of concentrated sulphuric acid, because-
 (A) Concentrated sulphuric acid is corrosive in nature. (B) Dilute sulphuric acid makes large crystals.
 (C) Concentrated acid is ineffective. (D) Both (a) & (b).
- 14.Select the chemical changes from the following options:
 (i) Copper metal drawn into wires. (ii) Burning of paper. (iii) Digestion of food. (iv) Breaking of glass.

(A) (i), (ii) & (iii). (B) (ii) & (iii). (C) (i) & (iv). (D) (i), (iii) & (iv).

15. To prevent iron from rusting, a coating of this metal is deposited-

(A) Calcium. (B) Chromium. (C) Sodium. (D) Potassium.

16. Chemical change may be accompanied by:

(i) Production of sound. (ii) Heat and light. (iii) Change in mass. (iv) Change in color.

(A) (i), (ii) & (iii). (B) (ii) & (iv). (C) (i) only. (D) (i), (ii) & (iv).

17. Baking soda is common name for-

(A) Sodium carbonate. (B) Sodium hydrogen carbonate.
(C) Calcium carbonate. (D) Sodium hydroxide.

18. Give 2 examples of physical change.

19. Is crystallization an example of physical change?

20. What is a chemical change?

21. Select the correct alternative(s).

(i) Melting of ice is a physical change.
(ii) A physical change is change in physical properties of a substance.
(iii) A physical change is always irreversible in nature.
(iv) Burning of candle is an example of physical change.

(A) (i) & (ii). (B) (i) & (iv). (C) (i), (ii) & (iv). (D) (ii) & (iii).

22. When magnesium ribbon is burnt, a brilliant flame is observed.

(A) Yellow (B) Blue (C) White (D) Green

23. Pick out physical changes from the following:

(i) Rusting of iron.
(ii) Dissolving salt in water.
(iii) Change of water to ice.
(iv) Cooking of food.

(A) (i) & (ii). (B) (ii) & (iii). (C) (i), (ii) & (iii). (D) (iii) & (iv).

24. Blue vitriol is the common name of-

(A) Copper sulphate. (B) Copper oxide. (C) Copper hydroxide. (D) Magnesium sulphate.

25. The gas in the atmosphere which acts as a natural shield against ultra violet radiations is-

(A) Oxygen. (B) Sulphur dioxide. (C) Hydrogen. (D) Ozone.

26. The elements required for rusting of iron.

(A) Oxygen and moisture. (B) Only oxygen. (C) Hydrogen and oxygen. (D) Only water vapours.

27. During rusting the layer which is deposited on the surface of iron is

- (A) Fe_2O (B) FeO (C) $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ (D) $\text{Fe}(\text{OH})_3$

28. Stainless steel is made by mixing iron with carbon and metals like.....

- (A) Magnesium, sodium, calcium. (B) Chromium, Nickel, Manganese.
(C) Cobalt, Potassium, Iron. (D) Potassium, Sodium, Chromium.

29. Lime water turns milky when gas is passed through it.

- (A) Carbon dioxide (B) Hydrogen (C) Oxygen (D) Nitrogen dioxide

30. The process of depositing layer of zinc on iron is known as-

- (A) Galvanization. (B) Crystallization. (C) Rusting. (D) Layering.

31. Burning is a chemical change and is always accompanied by production of-

- (A) Sound. (B) Heat. (C) Gas only. (D) Sound & heat.

32. Explosion of a firework produces-

- (A) Heat & light. (B) Heat only. (C) Gases only. (D) Heat, light, sound & unpleasant gases.

33. When magnesium ribbon burns in air, it leaves an ash which is-

- (A) $\text{Mg}(\text{OH})_2$ (B) MgO (C) MgS (D) MgSO_4

34. For rusting-

- (A) Presence of water is essential. (B) Presence of oxygen is essential.
(C) Presence of both water and oxygen is essential. (D) Presence of air is essential.

35. Stainless steel is resistant to rusting, though it is made from iron. Why?

- (A) Because it is steel. (B) Because it is resistant to stains.
(C) Because it is made from iron, chromium, nickel and manganese. (D) Because it is galvanised.

36. Why are the water pipes in our homes galvanised?

- (A) To prevent rusting of iron. (B) To coat them with a layer of zinc.
(C) To prevent their leakage and breakage. (D) All of them.

<2M>

37. Can we call the breaking down of ozone a chemical change? Why?

38. How would you show that setting of curd is a chemical change?

39. What is the standard test for carbon oxide?

40. Give the chemical equations for rusting and chemical name for rust.

41. Explain how painting of an iron gate prevents it from rusting.

42. Explain why rusting of iron objects is faster in coastal areas than in deserts.

<3M>

43. What is the difference between physical change and chemical change? Give example.

44. Explain why burning of wood and cutting it into small pieces are considered as two different types of changes?

45. What is rusting? How do we prevent rusting?
46. When a candle burns, both physical and chemical changes take place. Identify these changes. Give another example in which both the chemical and physical changes take place.
47. What happened when a pinch of baking soda is added to vinegar. Write the equation also.
48. What are the various characteristics that may accompany a chemical change?
- <5M>
49. Describe how crystals of copper Sulphate are prepared?
50. Explain the formation of Magnesium hydroxide from a piece of magnesium ribbon along with corresponding equations.
51. Describe an activity to show the formation of iron sulphate when an iron nail is dropped into copper sulphate solution. Mention the equation too.