

NEW STANDARD ACADEMY

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CLASS 10 (Chemistry) DPP (Academy)

1. Identify the type of chemical reaction and also write the chemical equation for the reaction that takes place when a solution of potassium chloride is mixed with silver nitrate solution. Write the chemical name of one of the products obtained.
2. Identify the type of each of the following reactions. Also write balanced chemical equation for each.
 - a) The reaction mixture becomes warm.
 - b) An insoluble substance is formed.
3. Write the balanced chemical equation for the following reaction and identify the type of reaction and define it. 'Iron(III) oxide reacts with aluminium and gives molten iron and aluminium oxide'
4. Write two observations that you will make when an iron nail is kept in an aqueous solution of copper sulphate. Write the chemical equation for this reaction.
5. Identify the type of the following reactions:
 - a) A reaction in which a single product is formed from two or more reactants.
 - b) The reaction mixture becomes warm.
6. Why Should curd and sour substances not be kept in brass and copper vessels
7. Metal compound A reacts with dilute hydrochloric acid to produce effervescence. The gas evolved extinguishes a burning candle. Write a Balanced chemical equation for the reaction if one of the compounds formed is calcium chloride.
8. Why Do HCl, HNO₃, etc show acidic characters in aqueous solutions while solutions of compounds like alcohol and glucose do not show acidic character?
9. Why does an aqueous solution of an acid conduct electricity?
10. What are indicators? Explain type of indicators
11. Equal lengths of magnesium ribbons are taken in test tubes A and B. Hydrochloric acid (HCl) is added to test tube A, while acetic acid (CH₃COOH) is added to test tube B. In which test tube will the fizzing occur more vigorously and why?
12. What is a neutralization reaction? Give two examples.
13. What are indicators? Explain type of indicators.
14. What are acids
15. How can the deposits of carbonates on metals surface be cleaned?
16. What are bases?
17. What happens when nitric acid is added to egg shell?
18. Which of the following substances in water show acidic properties? State reason. Sugar, carbon dioxide, acetic acid alcohol sulphur dioxide, urea.
19. The marble statues are often slowly corroded when kept in open for a long time. Give suitable reason.
20. Explain acids and bases arrehenius concept

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CLASS 9 (Chemistry) DPP (Academy)

1. Osmosis is a special kind of diffusion. Comment
2. Classify the following into osmosis /diffusion
 - a) Swelling up of a raisin on keeping in water.
 - b) Spreading of virus on sneezing.
 - c) Earthworm dying on coming in contact with common salt.
 - d) Shrinking of grapes kept in thick sugar syrup
 - e) Preserving pickles in salt.
 - f) Spreading of smell of cake being baked throughout the house.
 - g) Aquatic animals using oxygen dissolved in water during respiration.
3. Water as ice has a cooling effect whereas water as steam may cause severe burns. Explain these observations.
4. Does a compound exhibit the characteristics of constituent elements?
5. Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in the kettle. Comment.
6. Conversion of solid to vapour is called sublimation. Name the term used to denote the conversion of vapour to solid.
7. Conversion of solid state to liquid state is called fusion: what is meant by latent heat of fusion?
8. You are provided with a mixture of naphthalene and ammonium chloride by your teacher. Suggest an activity to separate them with a well-labelled diagram.
9. It is a hot summer day, Priyanshi and Ali are wearing cotton and nylon clothes respectively. Who do you think would be more comfortable and why?
10. How will you justify whether a sample of water given to you is a pure substance or a mixture?
11. Give the name of two main constituents of air.
12. Why does the temperature of a substance remain constant during its melting point or boiling point?
13. Name two metals which are both malleable and ductile.
14. A hard substance when bent produces a tinkling sound. Predict its nature.
15. Sodium chloride (NaCl) contains two elements but still it is a substance. Why?
16. List the properties of metals which enable them to be used as (i) utensils for cooking food (ii) wires for electrical connections.
17. How will you justify that water is a compound?
18. When two substances X and Y were made to combine another substance Z was formed. Following observations were recorded:
 - a) Large amount of heat was evolved when X and Y were made to combine.
 - b) The properties of Z were found to be different from those of X and Y. Predict the nature of the substance Z.
19. What is the difference between an element and a compound?
20. Write the characteristics of a compound.