

BHARATH COACHING CENTRE

10th CBSE

Science

Total: 50

Chemical Reactions and Equations

Time: 1.30 hrs

Section - A

5 X 1 = 5

1. How do you represent chemical changes in chemistry?
2. What should you know to write a chemical equation?
3. How are reactants and products separated in a chemical equation?
4. What is spoiling of food called when kept for a long time?
5. What is one important similarity between rusting and burning?

Section - B

5 X 2 = 10

6. Name the product obtained and type of reaction given below: $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$.
7. Explain the following in terms of gain or loss of oxygen with one example: a. Oxidation b. Reduction.
8. A copper coin is kept in a solution of silver nitrate for some time, what will happen to the coin and the colour of the solution?
9. Why do we apply paint on iron articles?
10. What is rancidity? Write the common methods to prevent it.

Section - C

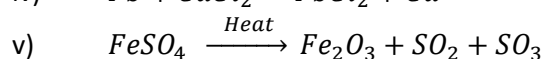
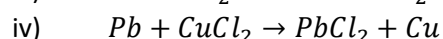
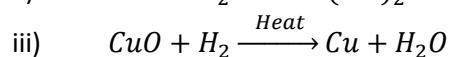
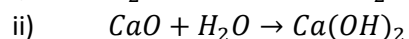
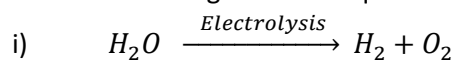
5 X 3 = 15

11. Name the type of reactions in the following cases:
 - a) Garbage producing foul smell
 - b) Burning of natural gas.
 - c) Carbon dioxide gas passed through lime water.
12.
 - a) What happens when calcium carbonate is heated?
 - b) What is this reaction called?
 - c) Does decomposition take place only on heating?
13. Give one example of a combination reaction in which an element combines with a compound to give you a new compound.
14. Write the balanced chemical equations for the following reactions:-
 - (i) Barium chloride + Potassium sulphate \rightarrow Barium sulphate + Potassium chloride
 - (ii) Sodium chloride + Silver nitrate \rightarrow Silver chloride + Sodium nitrate.
 - (iii) Calcium hydroxide + Carbon dioxide \rightarrow Calcium carbonate + Water.
15.
 - a) Why is it always essential to balance a chemical equation?
 - b) What happens when CO_2 gas is passed through lime water and why does it disappear on passing excess CO_2 ?
 - c) Can rusting of iron take place in distilled water?

16. Name the type of chemical reactions taking place when:-

- (i) Lime stone is heated.
- (ii) Magnesium ribbon is burnt in air.
- (iii) Iron nails are dipped in copper sulphate solution.
- (iv) Burning of coal.
- (v) Sodium sulphate is mixed with barium chloride

17. Balance the following chemical Equations and state the types of chemical reactions.



18. Explain with suitable reasons :- (Write chemical equation also)

- (a) Silver bromide is become kept in dark coloured (brown coloured bottles)
- (b) Iron nails become brownish and then blue in colour when kept in copper sulphate solution.
- (c) Sodium sulphate reacts with barium chloride solution, a precipitation reaction takes place.
- (d) Calcium oxide reacts vigorously with water to form slaked lime.
- (e) Carbohydrates broken down to form glucose combine with oxygen in cell provide energy.

19. Explain the types of chemical reactions with suitable equations.