Ch-1 Chemical Reactions and Equations

1. What is an oxidation reaction? Is it exothermic or endothermic? Give one example of oxidation Reaction.
2. Give an example of photochemical reaction.
3. Give an example of a decomposition reaction. Describe any activity to illustrate such a reaction by heating.
4. Why is respiration considered as exothermic process?
5. Balance the following chemical equations –
    a. $Fe(s) + H_2O(g) \rightarrow Fe_3O_4 + H_2(g)$
    b. $MnO_2 + HCL \rightarrow MnCl_2 + Cl_2 + H_2O$
    c. $HNO_3 + Ca(OH)_2 \rightarrow Ca(NO_3)_2 + H_2O$
6. On what basis is a chemical equation balanced?
7. State any two observations in an activity suggesting the occurrence of a chemical reaction.
8. Name a reducing agent which may be used to obtain manganese from manganese dioxide.
9. What change in colour is observed when silver chloride is left exposed to sunlight? Also mention the type of chemical reaction.
10. Define a combination reaction. Give one example of an exothermic combination reaction.
11. What is observed when a solution of potassium iodide is added to lead nitrate solution? What type of reaction is this? Write a balanced chemical equation for this reaction.
12. Distinguish between an exothermic and an endothermic reaction.
13. Distinguish between a displacement and a double displacement reaction.
14. Identify the type of reaction in the following –
    a. $Fe + CuSO_4(aq) \rightarrow FeSO_4(aq) + Cu(s)$
    b. $2H_2 + O_2 \rightarrow 2H_2O$
15. What is a redox reaction?
16. What is corrosion? Explain its advantage and disadvantage.
17. What is rancidity? How can we reduce the problem of rancidity?
18. How is corrosion different from rusting?
19. Why is photosynthesis considered as an endothermic reaction?
20. In electrolysis of water, why is the volume of gas collected over one electrode double that of the other electrode?
21. What happens when water is added to solid calcium oxide taken in a container? Write a chemical formula for the same. Give two uses of quick lime.
22. Give three types of decomposition reaction.
23. Name the compound used for testing CO_2 gas.
24. Explain four different types of chemical reaction with suitable examples.
25. What is electrolytic decomposition?
26. Identify the following type of reactions –
    a. $Na_2SO_4 + BaCL_2 \rightarrow BaSO_4 + 2NaCL$
    b. $CaCO_3 \rightarrow CaO + CO_2$
    c. $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$