

# CHEMISTRY QUESTIONS FOR CLASS 10

(Based on: Chemical reactions and Chemical equations)

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**DATE:- 02/06/2020**

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## Exemplar Questions and Solutions

1) Which type of chemical reaction does the general chemical reaction  $A + BC \rightarrow AC + B$  represent?

Ans)  $A + BC \rightarrow AC + B$  represents chemical displacement reaction

2) Which type of chemical reaction does the general chemical reaction  $AB \rightarrow A + B$  represent?

Ans)  $AB \rightarrow A + B$  represent chemical decomposition reaction

3) What is the chemical formula of rust?

The chemical formula for rust is  $Fe_2O_3 \cdot nH_2O$

4) Which substance is added to foods high in oil and fat to prevent rancidity?

Ans) Antioxidants are added to foods high in oil and fat to prevent rancidity. Antioxidants prevent oxidation of fats and oils.

5) List any two changes that take place when oily foods get oxidized?

Ans) The two prominent changes that takes place when oily foods get oxidized are  
a) Bad taste                      b) Unpleasant smell

6) What are the two conditions that are necessary for the rusting of iron?

Ans) The two conditions that are necessary for the rusting of iron are  
a) The presence of water which has an acidic  $P^H$   
b) Presence of oxygen

If any one of the above condition is absent then rusting would not happen.

7) Why should we not touch iron container in which CaO reacts with  $H_2O$ ?  
Give reason.

Ans) We not touch iron container in which CaO reacts with  $H_2O$  because the iron container will become hot as the reaction is exothermic.

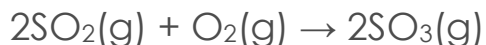


8) Why is aluminium called a self-protecting metal?

Ans) Aluminium is chemically a very reactive metal and it reacts with atmospheric oxygen to form a thin layer of aluminum oxide, which is sticky in nature. This oxide protects the metal from further corrosion.

**9) Write a balanced chemical equation for chemical combination reaction in which a compound reacts with an element:**

Ans) The formation of Sulphur trioxide from sulphur dioxide and oxygen is a combination reaction in which a compound reacts with an element



**10) A rod of metal X is placed in an aqueous solution of lead nitrate. After sometime, it was observed that a thin layer of lead is deposited on the the rod of metal X. According to you, which is more reactive, lead or metal X and why?**

Ans) The above given reaction is an example of displacement reaction. During displacement reaction, the more reactive metal displaces the less reactive metal. In the above reaction, we find that lead is displaced from the aqueous solution of lead nitrate and is deposited on metal X. This shows that metal X is more reactive than lead.

**11) How will you come to know that an exothermic reaction has taken place in an aqueous solution?**

We can come to know that an exothermic reaction has taken place in an aqueous solution by touching the vessel in which the reaction has taken place. If the reaction vessel becomes hot, then it is evident that an exothermic reaction has taken place while if the reaction vessel is cold, then it implies that an endothermic reaction has taken place.

**12) On what chemical law, balancing of chemical equation is based?**

Ans) Balancing of a chemical equation is based on the law of conservation of mass.

**13) Represent decomposition of ferrous sulphate with the help of balanced chemical equation.**

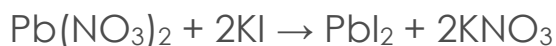


**14) When methyl alcohol (CH<sub>3</sub>OH) burns in air, it reacts with oxygen from air to form carbon dioxide and water. Write a balanced chemical equation for the reaction.**



**15) Write the chemical equation for reactions that takes place when lead nitrate and potassium iodide solutions are mixed.**

Ans) The chemical equation for reactions that takes place when lead nitrate and potassium iodide solutions are mixed is-



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