



Chemical reactions and equations

SUBJECT-CHEMISTRY

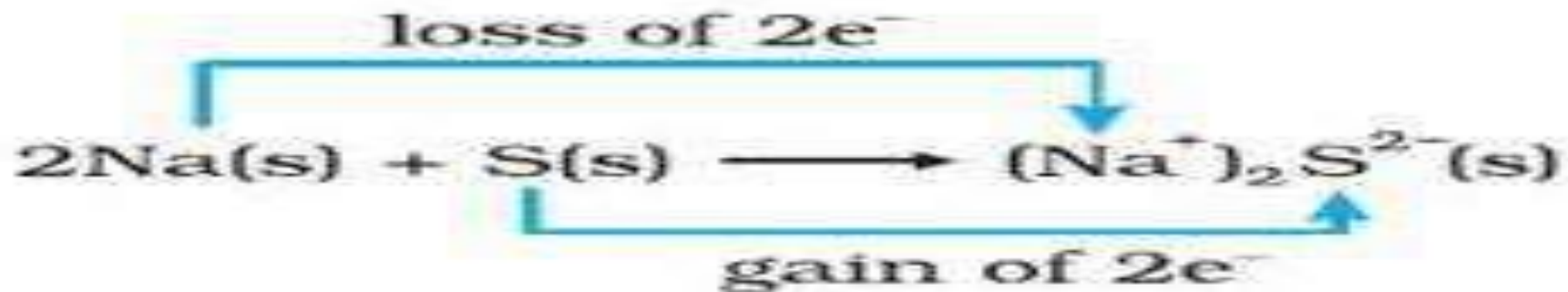
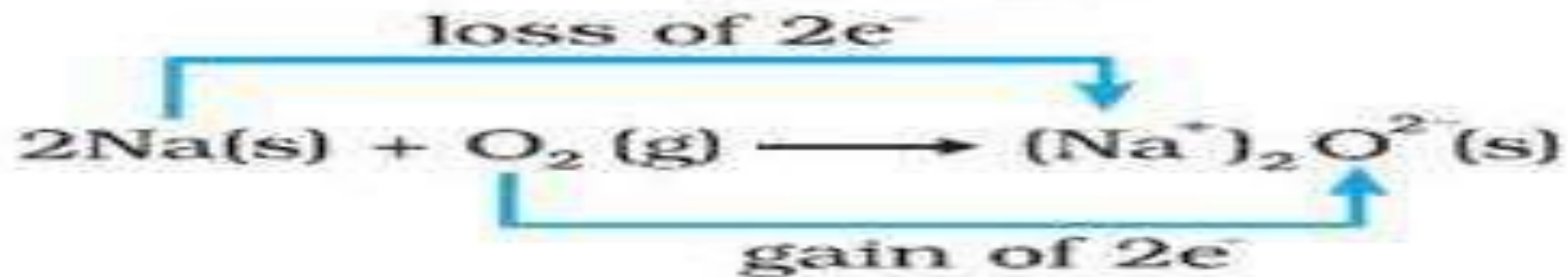
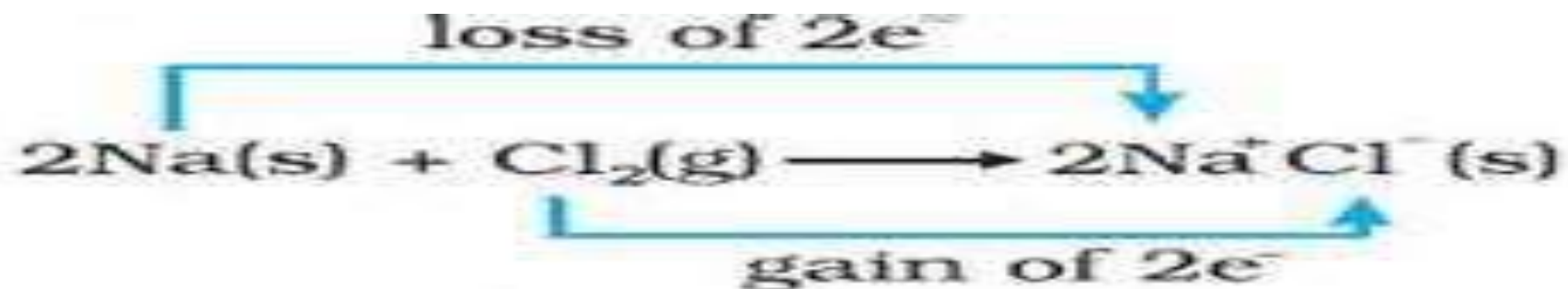
CHAPTER-1

TOPIC – CHEMICAL REACTIONS AND EQUATIONS

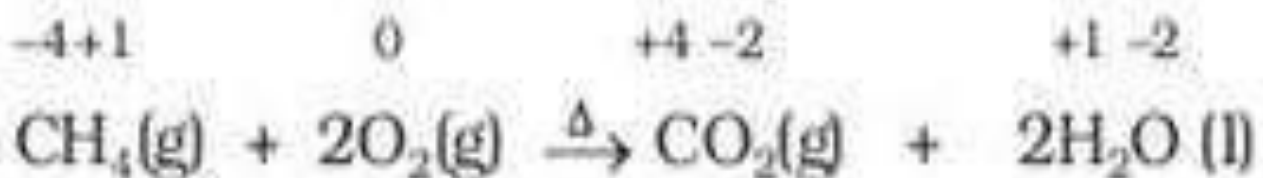
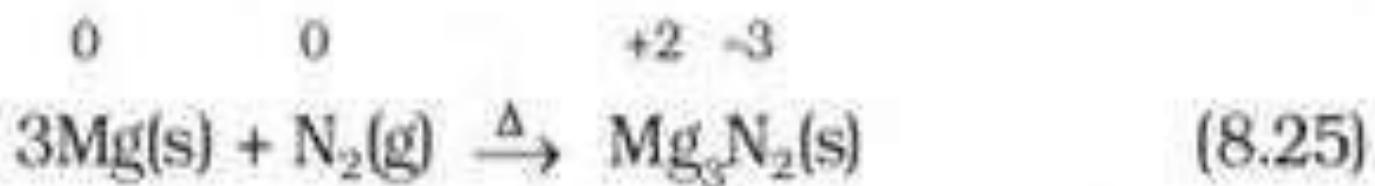
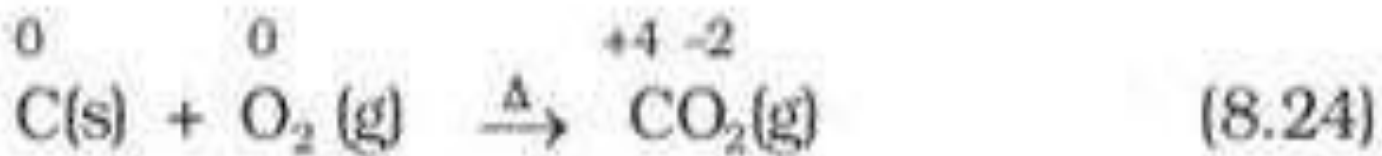
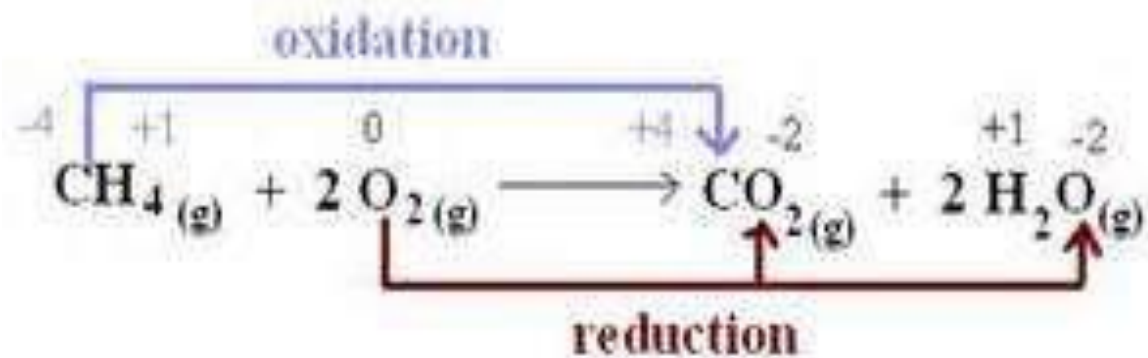
SUB TOPIC - More study on Oxidation and

Reduction reactions and Applications

Examples of redox reactions



Redox reactions examples



Corrosion and rancidity

When a metal is attacked by substances around it such as moisture, acids, etc., it is said to corrode and this process is called corrosion. The black coating on silver and the green coating on copper are other examples of corrosion.

☐ Corrosion causes damage to car bodies, bridges, iron railings, ships and to all objects made of metals, specially those of iron. Corrosion of iron is a serious problem.

Rus

☐ When fats and oils are oxidised, they become rancid and their smell and taste change. Usually substances which prevent oxidation (antioxidants) are added to foods containing fats and oil. Keeping food in air tight containers helps to slow down oxidation. This prevents the food from becoming rancid and hence chips are flushed with nitrogen gas to prevent it from rancidity.

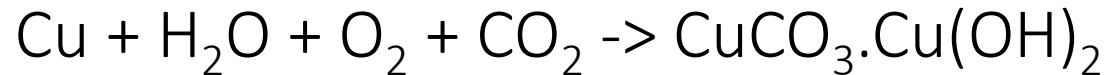


Corrosion of different metals its methods of prevention.

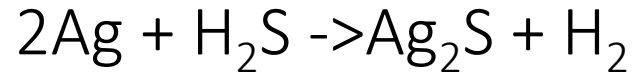
Rusting of Iron : When iron articles are kept open in air for long time , they make a coating of reddish brown color of hydrated Ferric Oxide.



Corrosion of Copper : When Copper utensils are kept in open for long days they make a green coating of basic Copper Carbonate.



Tarnishing of Silver : when silver articles are kept exposed for long time in open they react with atmospheric H_2S forming black coating of Silver Sulphide.



Some preventive methods as follows :

* Oiling , Greasing and Painting .

* Alloying * Electroplating * Galvanizing

* Tin, Aluminium coating. (just to keep away the metal from air and water)



RANCIDITY

- It is the process of oxidation of oily or fatty food when they are kept exposed for long time in air, they turn into their corresponding acids or other compounds creating a foul smell and making the food inedible. It can be prevented in the following ways :
- Air tight or vacuum packing
- Refrigeration or deep freezing
- N₂ gas flush In
- Using anti-oxidants like BHT, BHA or sodium Benzoate as food preservatives

THANKING YOU
ODM EDUCATIONAL GROUP