

## **CHEMISTRY**

## **BOOKS - ICSE**

### LANGUAGE OF CHEMISTRY

**Intext Questions** 

**1.** Define the term catalyst. Write one example where it is used.



2. Name the rectants and product in the skeletal equation and balance

$$Na + Cl_2 
ightarrow NaCl$$



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**3.** Name the rectants and product in the skeletal equation and balance

$$N_2 + H_2 
ightarrow NH_3$$



**4.** Name the rectants and product in the skeletal equation and balance

$$Na + O_2 
ightarrow Na_2O$$



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**5.** Name the rectants and product in the skeletal equation and balance

$$Fe+H_2O
ightarrow Fe_3O_4+H_2$$



**6.** Name the rectants and product in the skeletal equation and balance

$$Na + H_2O 
ightarrow NaOH + H_2$$



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# Exercise

1. What is a chemical reaction?



**2.** What is a chemical reaction?



**3.** Why do we need to balance chemical equations?



**4.** State the conditions necessary for a chemical change or reaction to take place.



**5.** Differentiate between:

Reactants and products



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**6.** Differentiate between:

Chemical reaction and chemical equation



7. Differentiate between:

A balanced and a skeletal chemical equation.



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**8.** Balance the following equation :

$$KClO_3 
ightarrow KCl + O_2$$



 $Zn + HCl 
ightarrow ZnCl_2 + H_2$ 



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**10.** Write word equations for the skeletal equation:

 $Fe+Cl_2
ightarrow FeCl_2$ 



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 $CO + O_2 \rightarrow CO_2$ 



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**12.** Write word equations for the skeletal equation:

$$Ca + O_2 
ightarrow CaO$$



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 $Na + O_2 
ightarrow Na_2O$ 



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**14.** Write word equations for the skeletal equation:

$$NaOH + H_2SO_4 \rightarrow Na_2SO_4 + H_2O$$



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 $AgBr 
ightarrow Ag + Br_2$ 



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**16.** Write word equations for the skeletal equation:

$$KNO_3 \rightarrow KNO_2 + O_2$$



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**17.** Balance the chemical equation:

 $FeS + HCl \rightarrow FeCl_2 + H_2S$ 

18. Balance the chemical equation:

$$Na_2CO_3 + HCl 
ightarrow NaCl + H_2O + CO_2$$



19. Balance the chemical equation:

$$H_2O_2 o H_2O$$



20. Balance the chemical equation:

Na (2) O + H (2)O to NaOH`



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**21.** By direct combination

$$H_2+Cl_2
ightarrow$$
\_\_\_\_\_



**22.** Write your observations for the chemical reactions and name the product formed : When sugar is heated.



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23. Write your observations for the chemical reactions and name the product formed:

When manganese dioxide is added to potassium chlorate and heated.



**24.** Write your observations for the chemical reactions and name the product formed:

When dilute acetic acid is poured on baking soda.



**25.** Write your observations for the chemical reactions and name the product formed :

When an aqueous solution of sodium chloride

is mixed with an aqueous solution of silver nitrate.



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26. Write your observations for the chemical reactions and name the product formed:

When ammonium chloride is heated with sodium hydroxide.



**27.** Write your observations for the chemical reactions and name the product formed :

When water is added to quick lime?



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**28.** Write skeletal equations for the following word equations.

calcium carbonate  $\,\rightarrow\,$  calcium oxide + carbon dioxide



**29.** Write a chemical equation for the following word equation and balance them.

Carbon + Oxygen ightarrow Carbon dioxide



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**30.** Write symbolic representation for the word equations and balance

Calcium oxide + Water  $\rightarrow$  Calcium hydroxide



**31.** Write symbolic representation for the word equations and balance

Aluminium + Chlorine  $\rightarrow$  Aluminium chloride



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**32.** Write symbolic representation for the word equations and balance

Iron + Sulphur  $\rightarrow$  Iron sulphide



**33.** Write symbolic representation for the word equations and balance

Sodium carbonate + Hydrochloric acid (dil)

ightarrow Sodium chloride + Water + Carbon dioxide



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**34.** Write symbolic representation for the word equations and balance

Barium chloride + Sodium sulphate ightarrow

Barium sulphate + Sodium chloride



**35.** Write symbolic representation for the word equations and balance Iron sulphide + Hydrochloric acid (dil)  $\rightarrow$  Iron (II) chloride + Hydrogen sulphide



**36.** Write symbolic representation for the word equations and balance

Calcium + Water  $\rightarrow$  Calcium hydroxide



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# Objective Type Questions Fill In The Blanks

1. The substances which undergo chemical change are called .....



**2.** The substances formed as a result of a chemical reaction are called......



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**4.** The basic condition necessary for a chemical reaction is ......



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**5.** In some chemical reactions, an insoluble...... Is formed when two solutions are mixed.



**1.** No new substance is formed during a chemical reaction......



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**2.** When potassium iodide solution is added to lead acetate solution, a red precipitate is formed. ......



**3.** A black residue is formed when sugar is heated.



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**4.** When iron and sulphur are heated together a grey mass is formed which is attracted by a magnet. ......



# Objective Type Questions Multiple Choice Questions

**1.** A chemical equation is a statement that describes a chemical change in terms of

A. Symbols and formulae

B. Energy

C. Number of atoms

D. Colours

Answer:

- 2. Balancing a chemical equation is based on
  - A. Law of conservation of mass
  - B. Mass of reactants and products
  - C. Symbols and formulae
  - D. None of the above

#### **Answer:**



<b>3.</b> Copper carbonate when heated, it turns	:

A. Blue

B. Green

C. Black

D. Yellow

#### **Answer:**



**4.** When lead acetate solution is added to potassium iodide solution, a precipitate is formed which is

A. Red

B. Yellow

C. White

D. Black

#### **Answer:**



5. The gas which has a rotten egg smell is:
---

- A. Ammonia
- B. Hydrogen
- C. Hydrogen sulphide
- D. Oxygen

#### **Answer:**



**6.** When sodium carbonate reacts with dilute hydrochloric acid, the gas evolved is

- A. Carbon-dioxide
- B. Nitrogen
- C. Oxygen
- D. Hydrogen

#### **Answer:**

