



# CHEMISTRY

## BOOKS - ICSE

### CHEMICAL CHANGES AND REACTIONS

#### Exercise 2 A

1. What is a chemical reaction ?



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



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3. Define the following terms

Chemical change



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4. Define the following terms

Chemical bond



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5. Define the following terms

Effervescence



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6. Define the following terms

Precipitate



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7. Give an example of a reaction where the following are involved.

Heat



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8. Give an example of a reaction where the following are involved

Light



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9. Give an example of a reaction where the following are involved

Electricity

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10. Give an example of a reaction where the following are involved

Close contact

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11. Give an example of a reaction where the following are involved

Solution

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12. Give an example of a reaction where the following are involved

Pressure

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**13.** Give an example of a reaction where the following are involved

Catalyst



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**14.** Define :

Photochemical reaction

Give one example.



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**15. Define :**

Electrochemical reaction

Give one example.



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**16. Give an example of each of the following chemical changes.**

A photochemical reaction involving (i) silver salt (ii) water



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**17.** Give an example of each of the following chemical changes.

A reaction involving (i) blue solution (ii) formation of dirty green precipitate

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**18.** Give an example of each of the following chemical changes.

Two gases combine to form a white solid.

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**19.** Give an example of each of the following chemical changes.

Two solids combine to form a liquid.



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**20.** Give an example of each of the following chemical changes.

A reaction where colour change is noticed.



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21. Write the chemical reaction where the following changes are observed.

Gas is evolved



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22. Give an example of each of the following chemical changes.

A reaction where colour change is noticed.



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23. Write the chemical reaction where the following changes are observed.

Precipitate is formed



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24. Write the chemical reaction where the following changes are observed.

Physical state of reactants is changed.



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**25.** Give reason for the following:

Silver nitrate solution is kept in coloured bottles.



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**26.** Give reason for the following:

Molybdenum is used in the manufacture of ammonia.



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**27.** Give reason for the following:

Blue solution of copper sulphate changes to green when a piece of iron is added to the solution.



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**28.** Give reason for the following:

Colourless concentrated sulphuric acid in a test tube changes to blue on adding a small piece of copper to it.



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## Exercise 2 B

1. The chemical change involving iron and hydrochloric acid illustrates a ..... reaction.

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2. In the type of reaction called .....two compounds exchange their positive and negative radicals.

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3. A catalyst either ..... or ..... the rate of a chemical change but itself remains ..... at the end of the reaction.



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4. On heating, hydrated copper sulphate changes its colour from ..... to ..... .



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5. When hydrogen burns in oxygen, water is formed, when electricity is passed through water,



hydrogen and oxygen are given out. Name the type of chemical changes involved in the two cases.



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6. Explain, giving one example for each of the following chemical changes:

Double decomposition



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7. Explain, giving one example for each of the following chemical changes:

Thermal dissociation



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8. Explain, giving one example for each of the following chemical changes:

Reversible reaction



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9. Explain, giving one example for each of the following chemical changes:

Displacement



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10. What is synthesis ?



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11. What kind of chemical reaction is synthesis ?

Support your answer by an example.

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**12.** Decomposition brought about by heat is known as thermal decomposition. What is the difference between thermal dissociation and thermal decomposition.

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**13.** Define neutralization reaction with an example.

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**14.** Give three applications of neutralization reactions.

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**15.** What do you understand by precipitation reaction ? Explain with an example.

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**16.** What are double displacement reactions ?

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**17.** Give an example of double displacement reaction, where a gas is evolved.



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**18.** What is a decomposition reaction ?



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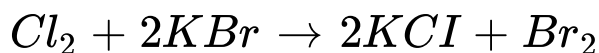
**19.** Decomposition reactions can occur by (i) heat (ii) electricity and (iii) sunlight.

Give two balanced equations for each.



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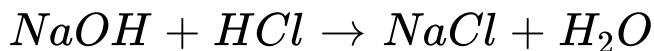
20. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



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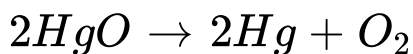
21. State the type of reactions each of the following equations represent and balance the

ones that are not balanced.



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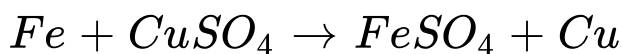
22. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



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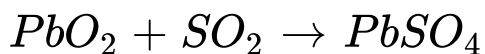


23. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



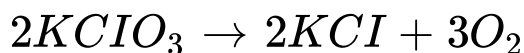
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24. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



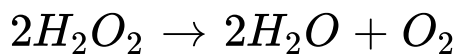
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25. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



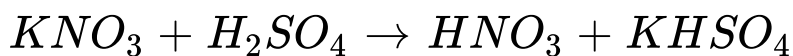
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26. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



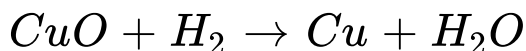
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27. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



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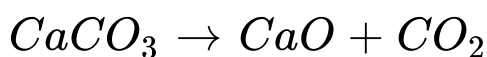
28. State the type of reactions each of the following equations represent and balance the ones that are not balanced.





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29. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



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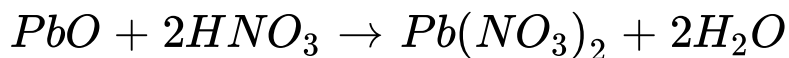
30. State the type of reactions each of the following equations represent and balance the ones that are not balanced.





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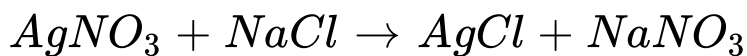
**31.** State the type of reactions each of the following equations represent and balance the ones that are not balanced.



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**32.** State the type of reactions each of the following equations represent and balance the

ones that are not balanced.



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**33.** Which of the following is not a characteristic of a chemical change?

- A. It is irreversible
- B. No net energy change is involved
- C. New substance is formed
- D. Involves absorption or liberation of energy

**Answer:**



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**34.** A reaction of a type :  $AB + CD \rightarrow AD + CB$   
, involves

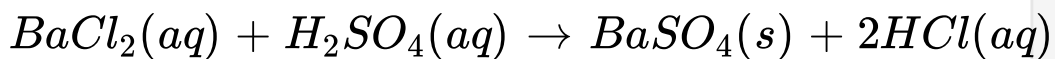
- A. no chemical change
- B. decomposition of AB and CD
- C. exchange of ions of AB and CD
- D. combination of AB and CD

**Answer:**



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35. The reaction:



is

- A. displacement reaction
- B. neutralisation reaction
- C. decomposition reaction
- D. double displacement reaction

**Answer:**





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36. Thermal decomposition of sodium carbonate will produce

- A. carbon dioxide
- B. oxygen
- C. sodium hydroxide
- D. no other product

**Answer:**



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## Exercise 2 C

1. What is a chemical change ? Give two examples of chemical change.



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2. Why energy is involved in a chemical change ?



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3. What do you understand by chemical reaction ?





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4. Give an example of a reaction where the following are involved

Evolution of heat



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5. Give an example of a reaction where the following are involved

Absorption of heat



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6. Give an example of a reaction where the following are involved

Pressure

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7. State the main characteristics of chemical reactions. Give at least one example in each case.

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8. Give an example of each of the following chemical changes.

A reaction involving (i) change of state (ii) formation of precipitate

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9. Give an example of each of the following chemical changes.

An exothermic and an endothermic reaction involving carbon as one of the reactants.

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**10.** Give an example of each of the following chemical changes.

A reaction where colour change is noticed.



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**11.** What do you understand by exothermic reaction and endothermic reaction? Give one example of each type.



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**12.** State the effects of endothermic and exothermic reactions on the surroundings.



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**13.** Define :

Photochemical reaction

Give one example.



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**14.** Define :

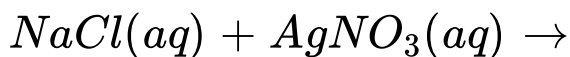
Electrochemical reaction

Give one example.



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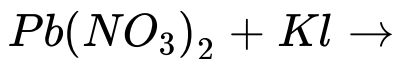
**15.** Complete and balance the following reactions :



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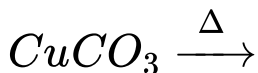


16. Complete and balance the following reactions :



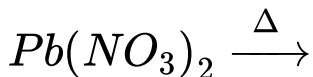
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17. Complete and balance the following reactions :



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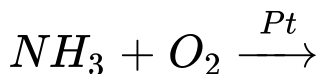
18. Complete and balance the following reactions :





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19. Complete and balance the following reactions :



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20. What do you observe when

Lead nitrate is heated.



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**21.** What do you observe when

Silver chloride is exposed to sunlight.



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**22.** What do you observe when

Hydrogen peroxide is exposed to sunlight.



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**23.** What do you observe when

HS gas is passed through copper sulphate

solution.



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**24.** State one relevant observation for each of the following :

Barium chloride solution is slowly added to sodium sulphate solution.



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**25.** What do you observe when

Water is added to quicklime.

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**26.** What do you observe when

Sodium chloride solution is added to silver nitrate solution.



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**27.** Name :

a carbonate which does not decompose on heating.



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**28. Name :**

a nitrate which produces oxygen as the only gas.



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**29. Name :**

a compound which produces carbon dioxide on heating



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30. Name :

a nitrate which produces brown gas on heating.



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## Topic 1 Chemical Reaction Conditions Necessary For A Chemical Change Characteristics Of Chemical Reaction 1 Mark Questions

1. Decomposition rate of hydrogen peroxide gets enhanced in the presence of catalyst \_\_\_\_\_

$[MnO_2 / CuCl_2]$



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## Topic 1 Chemical Reaction Conditions Necessary For A Chemical Change Characteristics Of Chemical Reaction 1 Mark Questions

1. Mercuric oxide on heating decomposes to give oxygen and \_\_\_\_ [mercury/mercury oxide]



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2. Using carbon dioxide and water, \_\_\_\_ is formed by plants in the presence of sunlight.  
[galactose/glucose]





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3. Lead nitrate solution reacts with potassium iodide solution to give yellow coloured precipitate of \_\_\_\_ [ $PbI_2 / PbNO_3$ ]



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4. Nitrogen dioxide turns acidified ferrous sulphate solution \_\_\_\_ [black/brown]



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5. The symbol  $\Delta$  in reaction signifies \_\_\_\_\_ is responsible for reaction. [heat/light]



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6. When a rod dipped in  $NH_3$  solution is brought near the hydrogen chloride, dense white fumes of \_\_\_\_\_ are formed [ $NH_4Cl / NCl_3$ ]



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7. On passing ammonia gas through a copper sulphate solution \_\_\_\_\_ precipitate is formed.

[greenish yellow/ pale blue]



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8. Hydrogen sulphide turns lead acetate paper

\_\_\_\_\_ [blue/black]



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9. The gas which has a rotten egg smell is:

A. Hydrogen sulphide

B. Ammonia

C. Sulphur dioxide

D. Hydrogen chloride

**Answer: A**



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**10.** The violet crystalline solid is

A. Ammonium chloride

B. Iodine

C. Copper Sulphate

D. Zinc Carbonate

**Answer: B**



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**11.** Nitrogen dioxide is reduced to nitrogen and oxygen in presence of finely divided :

A. Calcium

B. Potassium

C. Platinum

D. Carbon

**Answer: C**



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**12.** Colour of  $\text{PbO}$  is yellow when cold, what is its colour when hot

A. Brown

B. Black

C. Green

D. Purple

**Answer: A**



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**13.** Name the gas evolved in each of the following cases :

Copper carbonate is heated strongly.



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**14.** Name the gas that is produced in the following case :

Action of dilute hydrochloric acid on sodium sulphide.

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**15.** Name the gas evolved in each of the following cases :

Nitrogen combines with hydrogen.

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**16.** Name the gas evolved in each of the following cases :



Action of dilute sulphuric acid on sodium carbonate.

 [Watch Video Solution](#)

17. Name the gas evolved in each of the following cases :

Addition of sodium to cold water.

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18. Define the term "Promoters".

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**19.** Name the gas evolved in the following case:

Heating potassium chlorate in the presence of manganese dioxide



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**20.** Give reason for the following:

Silver nitrate solution is kept in coloured bottles.



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21. Write your observation : When chlorine is passed through the solution of KI.



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22. Match the columns :

**Column A**

- (i) Element react violently with acid
- (ii) Element less reactive than hydrogen
- (iii) Negative catalyst
- (iv) Positive catalyst
- (v) Promoter

**Column B**

- A. Cu
- B. Na
- C.  $\text{MnO}_2$
- D. Mo
- E.  $\text{H}_3\text{PO}_4$



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**23.** Match the columns :

**Column A**

- (i) Golden yellow
- (ii) Lilac
- (iii) Brick red
- (iv) Bluish green
- (v) Violet colour

**Column B**

- A. Iodine
- B. Sodium
- C. Copper
- D. Potassium
- E. Calcium



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



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**25.** State what is observed when hydrochloric acid is added to silver nitrate solution.



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26. Write a balanced chemical equation for the following:

Action of heat on calcium bicarbonate



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**Topic 1 Chemical Reaction Conditions Necessary For  
A Chemical Change Characteristics Of Chemical  
Reaction 2 Marks Questions**

1. Distinguish on the basis of heating in dry test tube

(i) Copper carbonate and zinc carbonate



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2. Distinguish on the basis of heating in dry test tube

Zinc nitrate and copper nitrate



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3. Distinguish on the basis of heating in dry test tube

$CO_2$  and  $SO_2$  (by using a suitable reagent)



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4. Write the chemical test to identify the following gases.

$NH_3$



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5. Write the chemical test to identify the following gases.



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6. Write the chemical test to identify the following gases.



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7. Write the chemical test to identify the following gases.

HCl



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8. What do you observe when Water vapours react with cobalt chloride.



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9. What do you observe when Ammonia gas is passed through Nessler's reagent.



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10. Give a chemical test to distinguish following gases.

$H_2$  and  $O_2$



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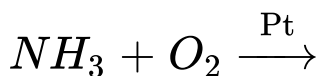
11. Give a chemical test to distinguish following gases.

$CO_2$  and  $NO_2$



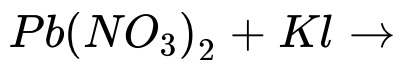
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12. Complete the reactions



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13. Complete and balance the following reactions :



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14. Name the gas that does not affect filter paper dipped in acidified  $KMnO_4$

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15. Name the gas that turns moist starch iodide paper blue black.

 [Watch Video Solution](#)

16. Name the gas that decolourises acidified  $KMnO_4$  solution.

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17. Name the gas that turns colourless  $PbNO_3$  solution into black.

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18. Write example of most active metal of activity series.



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19. Write example of least active non metal of activity series.



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20. What do you observe when : Black lead sulphide is heated.

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**21.** What do you observe when : Strong heating of red HgO in test tube.

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**22.** Name the gas evolved in each of the following cases.

Addition of dilute hydrochloric acid to baking soda.

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**23.** Name the gas evolved in each of the following cases.

Addition of caustic soda to ammonium sulphate.



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**24.** Give an example of reaction where Two gases on combination give white solid.



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25. Give an example of reaction where Two compounds in solution form gives white precipitate.

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26. Name :An alkaline gas .X. which gives dense oxide fumes with HCl.

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27. Name : Gas with smell of rotten eggs.



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**28.** Select from the list the gas that matches the description given in each case

[Hydrogen , Nitrogen,Ammonia,Nitrogen dioxide, Chlorine]

A gas which burns in air or oxygen forming water.



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**29.** Select from the list the gas that matches the description given in each case

[Hydrogen , Nitrogen,Ammonia,Nitrogen dioxide,

Chlorine]

A greenish yellow gas that turns moist starch iodide paper blue black.



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**30.** Select from the list the gas that matches the description given in each case

[Hydrogen , Nitrogen,Ammonia,Nitrogen dioxide,

Chlorine]

A reddish brown gas liberated on heating lead nitrate crystals.



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**31.** Select from the list the gas that matches the description given in each case

[Hydrogen , Nitrogen,Ammonia,Nitrogen dioxide, Chlorine]

A basic gas which turns red litmus solution blue.



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**32.** Complete the following table which relates to action of heat on substances :

S. No.	Substance heated	Gas evolved	Residue colour
(a)	Zinc Carbonate	(i)	(ii)
(b)	Ammonium dichromate	(i)	(ii)

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## Topic 1 Chemical Reaction Conditions Necessary For A Chemical Change Characteristics Of Chemical Reaction 3 Marks Questions

1. Name the phenomenon involved : The formation of gas bubbles in a liquid during a reaction.

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2. Name the phenomenon involved : A white insoluble substance called silver chloride is formed when a solution of silver nitrate is added to the solution of sodium chloride.



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3. Name the phenomenon involved : When electric current is passed through acidulated water, hydrogen and oxygen are formed.



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4. Define the Chemical bond



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5. Define the Photolysis



[Watch Video Solution](#)

6. Define the Electrochemical reaction.



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7. Name the gas evolved in each of the following cases

Action of heat on blue vitriol.



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8. Name the gas evolved in each of the following cases

Nitrogen dioxide gas is passed through potassium iodide solution.



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9. Name the gas evolved in each of the following cases

Action of heat on mercuric oxide.

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10. What do you observe when : Nitrogen tetraoxide is heated

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11. What do you observe when : Dilute hydrochloric acid reacts with Hg.



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12. What do you observe when :  $SO_2$  is passed through acidified  $KMnO_4$



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13. Name the following gases based on their characteristic : The gas which reacts with hydrochloride gas to form a compound which sublimes on heating.



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14. Name the following gases based on their characteristic : The gas produced on decomposition of potassium chlorate.



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15. Name the following gases based on their characteristic : Gas which burns with pop sound



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16. Provide the following information for blue vitriol.

(i) Chemical name

(ii) Formula

(iii) Identify whether acid, base or salt .



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17. What do you observe when  $HgCl_2$  and KI rubbed in mortar.



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18. What do you observe when  $H_2S$  is passed through lead nitrate.

 [Watch Video Solution](#)

19. What do you observe when  $CO_2$  is passed through  $Ca(OH)_2$

 [Watch Video Solution](#)

20. Write the observations : Ammonia gas is shaken with blue litmus solution

 [Watch Video Solution](#)

 [Watch Video Solution](#)

21. Write the observations : HCl gas is shaken with blue litmus solution.

 [Watch Video Solution](#)

22. Write the observations : Chlorine gas is bubbled through the solution of potassium iodide.

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23. Give an example of chemical changes of a reaction involving blue solution.



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## Topic 1 Chemical Reaction Conditions Necessary For A Chemical Change Characteristics Of Chemical Reaction 5 Marks Questions

1. Give an example of a reaction where the following are involved.

Heat



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2. Give an example of a reaction where the following are involved.

Electricity



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3. Give an example of a reaction where the following are involved.

Close contact



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4. Give an example of a reaction where the following are involved.

Solution



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5. Give an example of a reaction where the following are involved

Pressure



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6. Name the gas evolved in each of the following cases :Iron sulphide is treated with aqueous sulphuric acid.



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7. Name the gas evolved in each of the following cases :Calcium metal is added into water.



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8. Name the gas evolved in each of the following cases :Ammonium salt when heated with alkali.



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9. Name the gas evolved in each of the following cases :Action of heat on copper nitrate.



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10. Name the gas evolved in each of the following cases : Addition of dil. Hydrochloric acid on zinc

metal



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11. Write the observations for the following:

Reaction between  $\text{HCl}(g)$  and  $\text{NH}_3(g)$ .



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12. Write the observations for the following: Piece

of magnesium ribbon is placed over flame.



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**13.** Write the observations for the following: Zinc oxide is heated in a test tube.

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**14.** Write the observations for the following: Dilute sulphuric acid is added to Zinc sulphide.

 [Watch Video Solution](#)

**15.** Write the observations for the following:  
Heating the crystals of pure sodium chloride.



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**16.** Name the gas evolved in each of the following cases : Action of sulphuric acid on magnesium

 [Watch Video Solution](#)

**17.** Name the gas evolved in each of the following cases : Action of heat on lead oxide.

 [Watch Video Solution](#)

**18.** Name the gas evolved in each of the following cases : Addition of concentrated hydrochloric acid on  $Pb_3O_4$

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**19.** Name the gas evolved in each of the following cases : Addition of concentrated sulphuric acid to sodium chloride.

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20. Name the gas evolved in each of the following cases : Zinc sulphide is treated with dilute hydrochloric acid.



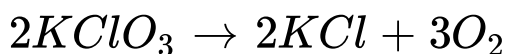
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21. Define catalyst .



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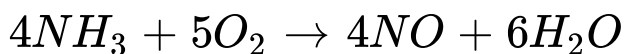
22. Which catalyst are used in following reactions :





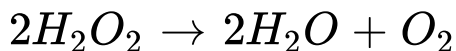
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**23.** Which catalyst are used in following reactions :



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**24.** Which catalyst are used in following reactions :



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25. Give reasons for the following: Fused calcium chloride is used in desiccators.



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## Topic 2 Types Of Chemical Change 1 Mark Questions

1. The chemical reaction in which heat is absorbed is known as \_\_\_\_\_ reaction.

[endothermic/exothermic]



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2. Chemical change taking place between Fe and HCl is an example of \_\_\_\_\_ [Displacement/combination] reaction



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3. In \_\_\_\_\_ reaction, two compounds in their aqueous state exchange their positive and negative radicals mutually to form two new compounds. [Direct combination/double decomposition]



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4. \_\_\_\_\_ solutions turn blue litmus paper red.

[Basic Acidic]



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5. The formula of green solid chromium oxide obtained on heating orange coloured ammonium dichromate is \_\_\_\_\_ [ $CrO_2 / Cr_2O_3$ ]



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6. The photosynthesis reaction is classified as \_\_\_\_\_ reaction. [Exothermic/Endothermic]

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7. Digestion of food in our body exhibits the example \_\_\_\_\_ of \_\_\_\_\_ reaction.  
[dissociation/decomposition]

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8. Law of conservation of \_\_\_\_\_ states that matter can neither be created nor destroyed.

[energy/mass]



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9. Chlorine is more reactive than \_\_\_\_\_

[fluorine/iodine]



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10. Reaction between copper sulphate and zinc is an example of \_\_\_\_\_ [displacement/dissociation]

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11. Hydrogen peroxide on decomposition gives water and \_\_\_\_\_ [ $O_2$  /  $O$ ]

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12. Proteins on decomposition in our body gives \_\_\_\_\_ [Amino acids/Acetic acids]

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**13.** Excess hydrochloric acid secreted by stomach glands results in pain and can be relieved by giving milk of magnesia. The above process is an example of \_\_\_\_\_ reaction [Hydrolysis/ neutralization]

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**14.** After heating washing soda, the colour of residue left behind would be

A. Yellow



B. Black

C. Pink

D. White

**Answer: D**



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**15.** The salt that undergoes photo chemical decomposition is:

A. Copper sulphate

B. Zinc carbonate

C. lead bromide

D. Silver nitrate

**Answer: D**



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**16.** Write down the observation for the following:

Hydrogen sulphide gas, is passed through aqueous copper sulphate solution.



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17. Write down the observation for the following:

Addition of  $BaCl_2$  salt to dilute sulphuric acid.



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18. Write down the observation for the following:

Reaction of concentrated HCl with  $Pb_2O_2$  when heated.



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**19.** Write down the observation for the following:

Ammonia carbonate is heated.



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**20.** Name the evolved gases in following cases :

Exposure of chlorine water to sunlight.



**Watch Video Solution**

**21.** Name the evolved gases in following cases :

Addition of dilute sulphuric acid to sodium

hydrogen sulphite

 [Watch Video Solution](#)

22. Name the evolved gases in following cases :

Action of heat on calcium carbonate

 [Watch Video Solution](#)

23. Identify the gas evolved in the following reactions when :

concentrated hydrochloric acid is made to react with manganese dioxide.



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**24.** Name the evolved gases in following cases :

Addition of concentrated sulphuric acid to potassium chloride



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**25.** Match the columns :

**Column A**

- (i) Nessler's reagent
- (ii) Greenish yellow gas with pungent choking odour
- (iii) Gas that burns with pale blue flame
- (iv) Orange Solid
- (v) Light green powder

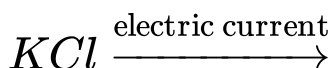
**Column B**

- A.  $\text{Cl}_2$
- B.  $\text{H}_2$
- C.  $\text{CuCO}_3$
- D.  $\text{K}_2\text{HgI}_4$
- E.  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$



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26. Complete the following reaction



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27. Identify the type of reaction on the basis of following observations: Addition of dilute hydrochloric acid to silver nitrate solution results in formation of white curdy precipitate.



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**28. Match the columns :**

**Column A**

- (i) Light green amorphous Powder
- (ii) White crystalline solid
- (iii) Blue crystalline solid
- (iv) Violet crystalline solid
- (v) Orange red crystalline solid

**Column B**

- A.  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
- B.  $\text{I}_2$
- C.  $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
- D.  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$
- E.  $\text{CuCO}_3$



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**29. Give reasons for the following: Use of rubbing the area infected with stings of bee with baking soda.**



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30. Differentiate between the following :

Exothermic reaction and Endothermic reaction



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## Topic 2 Types Of Chemical Change 2 Marks Questions

1. Give the example of Endothermic reaction



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2. Give the example of Exothermic reaction



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3. Give examples of following reactions

Neutralization reaction (ii) Double decomposition



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4. Give examples of following reactions Double

decomposition



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5. Give examples of following reactions Reversible reaction



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6. Give examples of following reactions Thermal Dissociation



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7. Write the chemical equations showing following reactions : Hydrolysis

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8. Write the chemical equations showing following reactions : Precipitation

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9. Write the chemical equations showing following reactions : Electrolysis

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10. Write the chemical equations showing following reactions : Thermal decomposition



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11. Name the gas evolved in each of the following cases

Action of strong heat on potassium nitrate



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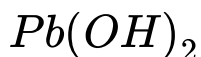
12. Name the gas evolved in each of the following cases

Action of heat on ammonium chloride



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13. Write the thermal decomposition reaction of following compounds



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14. Write the thermal decomposition reaction of following compounds



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15. Write the thermal decomposition reaction of following compounds



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16. Write the thermal decomposition reaction of following compounds



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17. Write the photochemical reactions which involves Silver salt



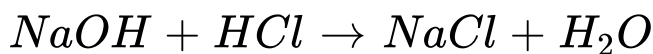
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18. Write the photochemical reactions which involves Water

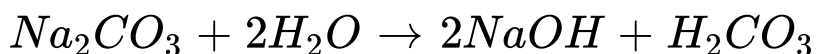
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19. Identify the type of reaction



 [Watch Video Solution](#)

20. Identify the type of reaction



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**21.** Name the gas evolved : Action of dilute sulphuric acid to potassium sulphite.

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**22.** Name the gas evolved when the following mixture is heated :

Calcium hydroxide and ammonium chloride.

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23. Name the gas evolved : On Boiling calcium hydrogen carbonate



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24. Name the gas evolved : Reaction between lead oxide and ammonia



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25. Write the reaction involving : Blue solution of Copper sulphate.



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 [Watch Video Solution](#)

26. Write the reaction involving : Formation of dirty green ppt using iron salt.

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27. Give reasons for each of the following

On addition of water to quicklime, along with formation of  $Ca(OH)_2$ , energy is produced.

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**28.** Give reasons for the following

Chlorine displaces bromine from potassium bromide.



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**29.** Write a balanced chemical equation for each of the following: Reaction of ammonia with oxygen in presence of platinum.

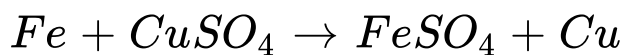


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**30.** Write a balanced chemical equation for the following: Action of dilute sulphuric acid on sodium carbonate.

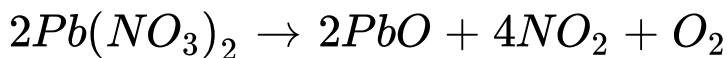
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**31.** Classify the following reactions as Direct combination, Decomposition, Displacement, Precipitation and Neutralization.



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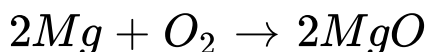
**32.** Classify the following reactions as Direct combination, Decomposition, Displacement, Precipitation and Neutralization.



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**33.** Reactions can be classified as follows:

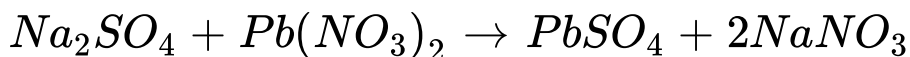
Direct combination, decomposition, simple displacement, double decomposition and neutralisation. State which of the above types takes place in the reactions given below.





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**34.** Classify the following reactions as Direct combination, Decomposition, Displacement, Precipitation and Neutralization.



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**35.** Name - The gas which turns acidified potassium dichromate clear green.



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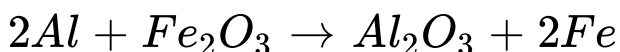
## Topic 2 Types Of Chemical Change 3 Marks Questions

1. What kind of chemical reaction is synthesis ?

Support your answer by an example.

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2. Classify each of the following reactions as combination, decomposition, displacement or double displacement:



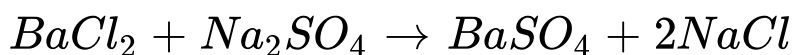
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3. Classify each of the following reactions as combination, decomposition, displacement or double displacement:  $2KClO_3 \rightarrow 2KCl + 3O_2$

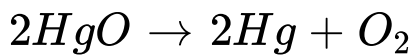
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4. Classify each of the following reactions as combination, decomposition, displacement or double displacement:



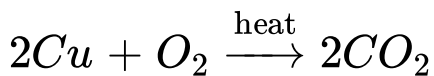
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5. Mention the type of reactions :



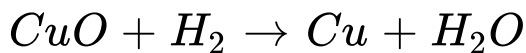
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6. Mention the type of reactions :



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7. Name the type of reactions for the following chemical equations.



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8. Write one similarity and one difference between thermal decomposition & thermal dissociation. Give one examples for each reaction.



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9. Give an example of each of the following:

Electrochemical reaction



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10. Give an example of each of the following:

Photochemical reaction



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11. Give an example of each of the following:

Exothermic reaction involving carbon as one of the

reactants.



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**12.** Name : Gas that supports combustion



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**13.** Name : Gas with crackling sound



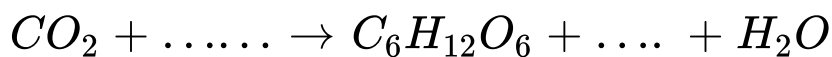
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**14.** This gas turns lime water milky.



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15. Complete the chemical equations :



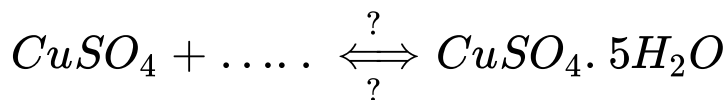
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16. Complete the chemical equations :



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17. Complete the chemical equations :



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18. Identify the type of reactions on the basis of following observations:

Black lead sulphide is heated in presence of  $O_2$  and turns into white lead sulphate.



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**19.** Identify the type of reactions on the basis of following observations:

On heating orange coloured ammonium dichromate, chromium oxide is produced along with nitrogen and water vapour.



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**20.** Identify the type of reactions on the basis of following observations:

In a test tube filled with dilute sulphuric acid, adding small Mg ribbon piece results in brisk effervescence & evolution of hydrogen gas.



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**21.** Give an example of reaction where following are involved: Heat is released



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**22.** Give an example of reaction where following are involved: Heat is absorbed



[Watch Video Solution](#)

23. Give an example of reaction where following are involved: Sound energy



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24. A gas which turns lead acetate paper black.



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25. Name the following:

The gases which mainly contribute for causing acid rain.



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26. The gas which rekindles a glowing splinter.



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## Topic 2 Types Of Chemical Change 5 Marks Questions

1. State the main characteristics of chemical reactions. Give at least one example in each case.



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2. What do you observe :

Iodine crystals are heated strongly in a test tube.



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3. When iron rod is immersed in copper sulphate solution.



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4. What do you observe when

Lead nitrate is heated.





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5. State what would you observe when :

The salt ferric chloride is exposed to the atmosphere.



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6. What do you observe when : Blue copper sulphate crystals are heated?



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7. What do you observe when : Chlorine water is exposed to sunlight.



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8. State one relevant observation - Barium chloride solution is slowly added to sodium sulphate solution.



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9. What do you observe :

Carbon dioxide is passed through lime water first a

little, then in excess.



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**10.** What do you observe when : Opening the soda water bottle.



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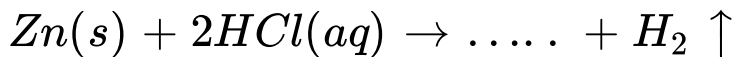
**11.** What do you observe when : Burning sulphur.



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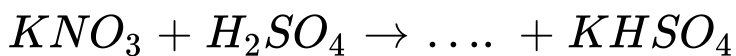


12. Complete the reactions :



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13. Complete the reactions :

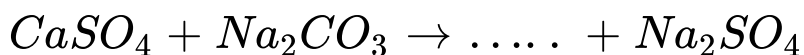


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14. Complete the reactions :  $\text{PH}_3 + 3\text{AgNO}_3$  to ....  
+  $3\text{HNO}_3$

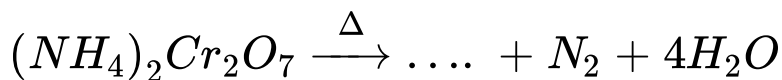
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15. Complete the reactions :



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16. Complete the reactions :



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**17.** Name the gas evolved in each of the following cases : Action of heat on magnesium carbonate.

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**18.** Name the gas evolved in each of the following cases : Action of heat on calcium nitrate.

 [Watch Video Solution](#)

**19.** Name the gas evolved in each of the following cases : Addition of dilute sulphuric acid to sodium

sulphite.



[Watch Video Solution](#)

**20.** Name the gas evolved in each of the following cases : Action of heat on washing soda.



[Watch Video Solution](#)

**21.** Name the gas evolved in each of the following cases : Action of dilute hydrochloric acid on zinc sulphide.



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**22.** Name the type of chemical reaction

When hydrogen burns in oxygen water is formed.



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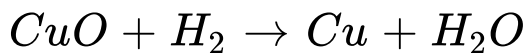
**23.** Name the type of chemical reaction

On passage of electricity, water breaks down to give hydrogen and oxygen.



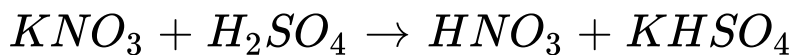
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24. Name the type of reactions for the following chemical equations.



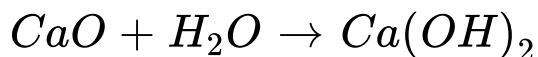
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25. State the type of reactions each of the following equations represent and balance the ones that are not balanced.



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**26.** Name the type of chemical reaction



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**27.** State one relevant observation for each of the following reactions :

Flame test is performed with calcium nitrate.



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**28.** State one relevant observation for each of the following reactions :

Water is added to anhydrous copper sulphate

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**29.** State one relevant observation for each of the following reactions :

Copper carbonate is decomposed on heating.

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**30.** State one relevant observation for each of the following reactions :

Dil.  $H_2SO_4$  is added to zinc sulphide.





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**31.** State one relevant observation for each of the following reactions :

Addition of silver nitrate solution to sodium chloride solution.



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