

**SAINIK SCHOOL AMARAVATHINAGAR**

**HOLIDAY HOMEWORK 2019-20**

**CLASS: X**

**SUBJECT: CHEMISTRY**

<b>S. NO</b>	<b>TOPIC</b>	<b>ACTIVITY</b>	<b>TIME PERIOD</b>	<b>SKILL ENHANCED/ LEARNING OUTCOME</b>	<b>ANNEXURE NO</b>
1	Chemical Equations	Writing word and symbol equations and balancing it	1 Hour	Enrichment of the topic through practise	A
2.	Types of chemical reactions	Identification of the type of chemical reaction	1 Hour	Acquiring conceptual knowledge	B
3.	Redox reactions	Identification of substance oxidised, reduced, oxidising agent, reducing agent etc	1 Hour s	Knowing about oxidising agent, reducing agent etc	C
4.	Applications of oxidation	Hot questions	2 Hour s	Explore the concept through higher order thinking to make learning better	D
5.	Rusting	Experimentation and observation	2 days	Learning through doing and experimenting to clarify the conceptual knowledge.	E

Annexure

1. Chemical reaction and Equations :Short answer questions
2. Types of chemical reactions : Short answer and descriptive questions
3. Redox reactions : Short answer questions/Project
4. Applications and ill effects of oxidation: HOT questions
5. Rusting: Experimentation/ Project work

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RECOMMENDED BY VICE PRINCIPAL

Signature

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PRINCIPAL

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## ANNEXURE A

### 1. Chemical reaction and Equations

- Write the word equation and the balanced chemical reaction for the following. (a) Zinc reacts with sulphuric acid producing Zinc sulphate and hydrogen gas. (b) Manganese dioxide reacts with hydrogen chloride to produce Manganese chloride, chlorine gas and water. (c) Ammonium nitrate decomposes to give nitrogen gas and water. (d) Aluminium metal reacts with copper chloride to give Aluminium chloride and copper.

## ANNEXURE B

### 2. Types of chemical reactions

Identify the type of reaction represented by the following equation.

- (a)  $\text{CaO} + \text{CO}_2 \rightarrow \text{CaCO}_3$   
(b)  $\text{Mg} + \text{CuSO}_4 \rightarrow \text{MgSO}_4 + \text{Cu}$   
(c)  $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$   
(d)  $2\text{NaBr} + \text{Cl}_2 \rightarrow 2\text{NaCl} + \text{Br}_2$

## ANNEXURE C

### 3. Redox reactions

Identify the substances oxidised, reduced, oxidising agent and reducing agent for the following reaction.

- (a)  $\text{ZnO} + \text{C} \rightarrow \text{Zn} + \text{CO}$   
(b)  $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$   
(c)  $\text{Fe}_2\text{O}_3 + 2\text{Al} \rightarrow \text{Al}_2\text{O}_3 + 2\text{Fe}$

## ANNEXURE D

### 4. Applications and ill effects of oxidation

- (a) Why do potato chips manufacturers fill the packet of chips with nitrogen gas?  
(b) The marble statues often slowly get corroded when kept in open for long time. Why?  
(c) Aluminium is a reactive metal, still it is used for packing food materials. Why?  
(d) How will you test the gas evolved during a chemical reaction is hydrogen

## ANNEXURE E

### 5. Experimentation/ Project work

- (a) Take little of quick lime, add some water. Observe the changes. Write the chemical equation for the reaction.  
(b) Observe an iron pipe used for water supply. Identify a spot where rust is formed. Identify the factors responsible for rusting. List down the common methods used to prevent rusting of iron.