SHIKSHA CLASSES

Subject : Science-I **QUESTION PAPER** **Total Marks : 20**

Class : X **3. Chemical Reactions and Equations** **Time : 45 Min.**

Q. 1 : A) Choose the correct alternatives : **(1+1=2)**

1) $Fe_2O_3 + 2Al \longrightarrow Al_2O_3 + 2Fe$

The above reaction is an example of a

a) Combination b) double displacement

c) decomposition d) displacement

2) Which among the following changes are exothermic in nature?

a) Formation of ice b) Dissolution of sodium hydroxide

c) Both a & b d) None of these

Q. 1 : B) Solve the following question (Any One) **(01)**

1) Identify from the following reactions that which element undergo oxidation and reduction.

$2Mg + O_2 \longrightarrow 2MgO$

2) Define corrosion.

3) Identify the type of reaction

$KNO_3 + H_2O + Heat \rightarrow KNO_3$

Q. 2 : A) Give scientific reason(Any One) **(02)**

1) It takes time for pieces of shahabad tile to disappear in HCl but its powder disappears rapidly.

2) It is recommended to use air tight container for storing oil for long time.

Q. 2 : B) Solve the following equation (Any Two) **(2+2=4)**

1) Balance the following equation stepwise

$SO_2 + H_2S \rightarrow S + H_2O$

2) Explain the following term with example

a) Combination reaction b) decomposition reaction

3) Write the difference between oxidation and reduction reaction.

4) Define rancidity.

Q. 3 : Solve the following questions (Any Two) **(3+3=6)**

1) How can the rate of the chemical reaction, namely, decomposition of hydrogen peroxide be increased?

2) Define displacement and double displacement reactions write equations for these reactions.

3) Study the entries in the following table and rewrite them putting the connected items in a same row.

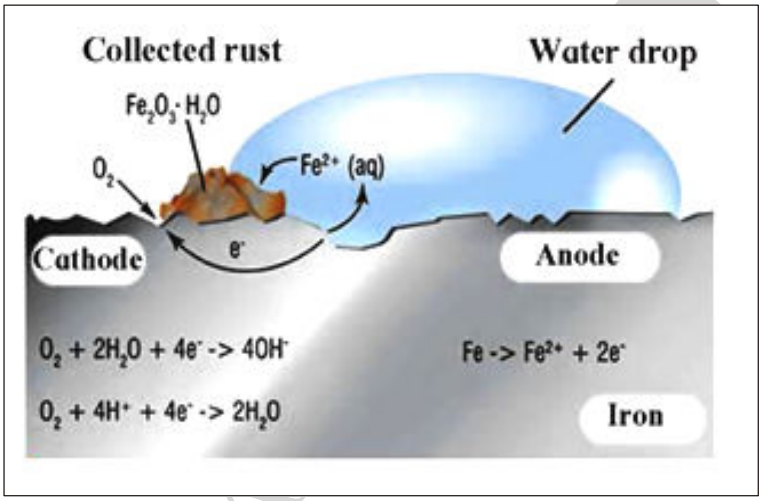
Reactant	Product	Types of chemical reaction
Fe + S	2CuO	Oxidation
$CuSO_4 + Zn$	$ZnSO_4 + Cu$	displacement
$2Cu + O_2$	Fes	combination

4) What is the reaction called when oxidation and reduction take place simulataneously? Explain with one example.

Q. 4 : Solve the following question (Any One). **(05)**

1) Explain the factors affecting the rate of a chemical reaction.

2) Observe the following picture and write down the chemical reaction with explanation.



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