**CLASS :XI**

**SUBJECT :Chemistry
Chapter:-Redox Reaction**

* **Follow the order of the concepts covered in class. Do not jump from one concept to another.**

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| **Sr. No.** | **Knowledge Based** | **Marks** |
| 1. | What is meant by disproportionation reaction?Give one example. | 2 |
| 2. | In the galvanic cell which process occur at the positive terminal and what is it called? | 1 |
| 3. | What is meant by a galvanic cell? In what respect does it differ from the electrolytic cell? | 2 |
| **S. No.** | **Understanding Based** |  |
| 1. | When magnesium ribbon is burnt in air,two products are formed magnesium oxide and magnesium nitride.Point out the oxidising and reducing agent. | 1 |
| 2. | Write the half reactions for the following redox reaction:a) 2Fe3+(aq.) + 2I-(aq.)🡺 2 Fe2+(aq.) + I2 | 1 |
| 3. | In a binary compound of two non metals,the positive oxidation state is assigned to which element? | 1 |
| 4. | The formation of sodium chloride from gaseous chlorine and gaseous sodium is redox process justify. | 2 |
| 5. | Assign oxidation number to the undrerlined elements in each of the following:-a)NaH2PO4b)NaHSO4c)H4P2O7d)K2MnO4 | 2 |
| 1. | Arrange the species given below in the decreasing order of O.N. of nitrogen.NH3,NO2-,NO,NH3,N2H4,NO3- | 2 |
| 2. | Draw the diagram for the galvanic cell which would have overall chemical reaction asZn + 2 Ag+ 🡺 Zn2+ + 2 Aganswer the following:-a) Write the reactions occurring at each electrode.b)In which directions do the electrons flow in the external circuit?c)How is the electrical neutrality maintained in the solutions of two half cells? | 3 |
| 3. | With the help of standard electrode potential,select an oxidising agent capable of transforming:-i)Cl- to Cl2ii)I- to I2iii) Pb to Pb2+iv)Fe2+ to Fe3+ | 2 |
| 4.  | A student constituted a cell by the two electrodes Zn/Zn2+(1M) and Mg/Mg2+(1M) and represent it as Zn/Zn2+(1M)// Mg2+(1M)/Mg.Is he correct or not?E0 Mg2+/Mg=-2.37V; E0 Zn2+/Zn=-0.76V.Justify | 2  |
| 5. | i)A layer of CuO on copper vessel can be easily cleaned by dilute HCl but oxide layer of aluminium on the aluminium vessel cannot be cleaned by HCl.Give reason.ii)An iron nail accidentally fell into a 1M solution of silver nitrate placed in glass vessel.What observations will be made?  | 2 |
| **S.No.** | **Value Based** |  |
| 1. | A student of science has prepared a cell by dipping a zinc rod in the solution of zinc sulphate and a copper rod in the solution of copper sulphate.Further he connected the two electrodes with the help of wire and galvanometer.He observed the deflection in the needle of galvanometer for a shortwhile and then it stops at zero.Why there is a flow of current for a very small span of time?As a student of science what would you suggest for the continuous flow of current. | 3 |
| **S.No.** | **HOTS** |  |
| 1. | Give appropriate reasons for the following:-a)Colour of KI solution containing starch turns blue when Cl2 water is added.b)Ag does not react with dil.sulphuric acid while zinc reacts.c)In an electrochemical cell ,the electrode with higher reduction potential acts as the oxidising agent. | 3 |