**CLASS :XI**

**SUBJECT :Chemistry**

* **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 | How does heavy water differ from ordinary water? | 1 |
| 2 | Give an example of ionic and covalent hydrides. | 1 |
| 3 | Hydrogen not only resembles alkali metals but also differ from them.Justify. | 2 |
| 4 | Why hard water does not form lather with soap solution?Discuss any one method to remove permanent hardness of water. | 3 |
| 5 | Give one reaction each to exhibit acidic,basic,oxidising,hydrolytic and hydration ability of water. | 5 |
| **S. No.** | **Understanding Based** |  |
| 1 | Would you expect the hydrides of N,O and F have lower boiling points than the hydrides of their subsequent group members.Give reason. | 2 |
| 2 | What is formed when steam is passed over red hot coke?Give reaction. | 2 |
| 3 | What type of bonds are broken when water evaporates. | 1 |
| 4 | Give one reaction each to exhibit acidic,basic,oxidising,hydrolytic and hydration ability of water. | 5 |
| **S. No.** | **Application** |  |
| 1 | Why black suspension of lead sulphide in water decolourises on treatment with hydrogen peroxide? | 1 |
| 2 | How do you account for the solubility of ethanol and NaCl in water? | 2 |
| 3 | A white solid is either Na2O or Na2O2.A piece of red litmus paper turns white when it is dipped into a freshly made aqueous solution of the white solid.  i)Identify the substance and explain with balanced equation.  ii)Explain what would happen to the red litmus if the white solid were the other compound? | 3 |
| **S.No.** | **Value Based** |  |
| 1 | In a newspaper article Rahul’s sister studied that now a days hydrogen fuel cell is used in spaceship.Rahul informed to his sister that fuel cell is better than that of thermal plants to produce electricity.What are the two advantages of using fuel cell?What are the values associated with Rahul? | 3 |
| **S.No.** | **HOTS** |  |
| 1 | Hydrogen forms three types of bonds in its compounds.Describe each type of bonding using suitable examples of reactions. | 3 |
| 2 | Point out the difference between the terms hydration ,hydrogenation and hydrolysis with the help of an example. | 3 |