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| **SINDHI HIGH SCHOOL, HEBBAL**  **PERIODIC TEST-1 [2023-24]**  **SUBJECT: SCIENCE (MARKING SCHEME)**  **Grade**: **X** **Total marks** : **30**  **No of Sides: 03 Date: 28.6.2023** |

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| 1 |  | 1 |
| 2 | (b) cathode, anode | 1 |
| 3 | (a) displacement reaction | 1 |
| 4 |  | 1 |
| 5 | (a) Both A and R are true and R is the correct explanation of A. | 1 |
| 6 | (b) A and R are correct and R is not the correct explanation of A | 1 |
| 7 | (i) Silver salts decompose into when exposed to sunlight. It is known as photolytic decomposition. Dark colour bottles prevent the reaction. Hence Silver chloride is stored in dark-coloured bottles  (ii) In the process of respiration heat energy is released along with carbon dioxide and water. So, it’s an exothermic reaction. | 1  1 |
| 8 | Those reactions in which oxidation and reduction takes place simultaneously are called redox reactions.  i) PbO is getting reduced and C is getting oxidised.  ii) MnO2 is getting reduced and HCl is getting oxidised. | 1  ½  ½ |
| 9 |  | 1  Dig.  1  labelling |
| 10 | **(i) Potential difference across the 45 Ω resistor**        (ii) Resistance of the resistor labelled R.        The effective resistance **DECREASES to**    as the current takes the least resistance path through S. | ½  ½  ½  ½  ½  ½ |
| 11 | Substance X is ferrous sulphate heptahydrate or green vitriol (FeSO4 .7H2O). Two gases are sulphur dioxide and sulphur trioxide.  Substance Y is ferric oxide (Fe2O3 ).  FeSO4.7H2O→ FeSO4 + 7H2O  On heating anhydrous ferrous sulphate further, we get ferric oxide, sulphur dioxide and sulphur trioxide.  Ferric oxide is **reddish-brown** in colour.  2FeSO4 heat→  Fe2O3 + SO2↑+ SO3↑ | ½  1  ½  1 |
| 12 | i) Events which occur during photosynthesis are:-  a) Absorption of light energy by chlorophyll  b) convertion of light energy to chemical energy / splitting of water molecule.  c) reduction of CO2 to Carbohydrates.  ii) a) absorbs the carbon di oxide present in the jar.  b) Due to lack of Carbondioxide, photosynthesis does not take place in the plant in Jar A. When a leaf is subjected to starch test , the colour change is not observed due to lack of starch | 1½  1½ |
| 13 | **(i) Ohm’s Law Circuit**  **(ii) Ohm’s Law Statement**  Ohm's law states that the potential difference across a conductor is directly proportional to the current through it, provided temperature and all other physical conditions, remain constant.  (Full marks can be awarded even if **all other physical conditions is not written**)   1. **Area of cross section of wire**   Diameter of the copper wire,  of the copper wire        **Length of the copper wire required for 0.12**  **()**    The ammeter reads the **half the original/initial value** as **resistance is proportional to length** **of the conductor** or resistance is inversely proportional to current. | 1  1  ½  ½  ½  ½  ½  +  ½ |
| 14 | 1. The conversion of pyruvate into ethanol, CO2 & energy take place in the absence of air (oxygen),  it is called anaerobic respiration.  2. In muscles the conversion of pyruvate to lactic acid( 3 carbon molecule) takes place and energy released would be less due to the lack of oxygen.  3. **The glucose is converted to pyruvate in the cytoplasm and the site where Energy is released is the mitochondria.**  4. The amount of O2 dissolved in water is low as compared to amount of O2 present in air. therefore, aquatic animals have faster breathing rate.  **OR**  fish- gills, ii) frog- skin, lungs | 1  1  1  1 |