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| **SINDHI HIGH SCHOOL, HEBBAL**  **PERIODIC TEST-1 [2023-24]**  **SUBJECT: SCIENCE**  **Grade**: **X** **Total marks** : **30**  **Date: 28.06.2023 Reading Time: 8:05-8:15am**  **No of Sides: 03 Writing Time: 8:15-9:15am**    **G GENERAL INSTRUCTIONS:**   * This Question Paper has 5 Sections A-E. * Section A has 6 questions carrying one mark each consisting MCQs and assertion and reasoning * type questions. * Section B has 3 questions carrying 2 marks each. * Section C has 3 questions carrying 3 marks each. * Section D has 1question carrying 5 marks. * Section E has 1 case based question carrying 4 marks. |

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|  | **Section A** |  |
|  | **Section A consists of 6 questions of 1 mark each.** |  |
| 1 | A current of 1 A is drawn by a filament of an electric bulb. The number of electrons passing through a cross section of the filament in 16 seconds would be | 1 |
| 2 | In the electrolysis of water, at which electrodes are hydrogen and oxygen collected respectively?  a) graphite rods, metal rods b) cathode, anode  c) anode, cathode d) graphite rods, non-metal rods | 1 |
| 3 | Fe2O3 + 2Al → Al2O3 + 2Fe the above reaction is an example of a  a) displacement reaction b) double displacement reaction  c) combination reaction d) decomposition reaction | 1 |
|  | **Assertion Reason based question:**  **In the following questions a statement of assertion (A) is followed by a statement of Reason(R).Choose the correct option.**  **a) Both A and R are true and R is the correct explanation of A.**  **b) Both A and R are true and R is not the correct explanation of A.**  **c) A is true but R is false.**  **d) A is false but R is true**. | 1 |
| 4 | **ASSERTION**: Connecting an ammeter in parallel to the circuit component damages the ammeter.  **REASON:** Net resistance of the circuit decreases which draws more current from the battery | 1 |
| 5 | **ASSERTION (A):** Chemical equations should be balanced.  **REASON (R):** As per the law of conservation of mass, mass can neither be created nor be destroyed. | 1 |
| 6 | **ASSERTION:** The direction of diffusion depends upon the environmental conditions and the requirement of the plant.  **REASON:** At night there is no photosynthesis occurring. | 1 |
|  | **Section B** |  |
|  | **Section B consists of 4 questions of 2 marks each.** |  |
| 7 | Give reason:  (i) Silver salts are stored in dark coloured bottles.  (ii) Respiration is considered as exothermic reaction. . | 2 |
| 8 | What is redox reaction? Identify the substance oxidised and the substance reduced in the following reactions.   1. 2PbO + C→ 2Pb + CO2 2. MnO2 + 4HCl →MnCl2 + 2H2O + Cl2 | 2 |
| 9 | Draw neat labelled diagram of the part of the alimentary canal where the first step of Acidic food converts into alkaline medium | 2 |
|  | **Section C** | 2 |
|  | **Section C consists of 3 questions of 3 marks each.** |  |
| 10 | C:\Users\Pramod K\Desktop\WhatsApp Image 2023-06-12 at 06.45.30.jpegA student set up the electrical circuit shown in the figure below. The ammeter displays a reading of 0.10 A.  (i) Calculate the potential difference across the 45 Ω resistor.  (ii) Calculate the resistance of the resistor labelled R.  (iii)State what happens to the total resistance of the circuit and the current through the circuit when switch S is closed. | 3 |
| 11 | Seeta took a pale green substance X in a test tube and heated it over the flame of a burner. A brown coloured residue Y was formed along with evolution of two gases with smell of burning sulphur. Identify X,Y and the two gases formed in the reaction. Write the chemical reaction involved. | 3 |
| 12 | i) List out the events which occur during Photosynthesis.  ii) Observe the given diagram and answer the following  a)What is the role of KOH.  b) How does it effect the plant . Justify your answer with suitable proof .    **KOH**  **Bell Jar** | 3 |
|  | **Section D consists of 1 question of 5 mark** |  |
| 13 | (i) A student would like to investigate the dependence of current and potential difference. Draw circuit diagram to perform the experiment in laboratory.  (ii) State the law that the above circuit governs.  (iii) She needs to make a 0.12Ω resistor to perform the above experiment for which she has a copper wire of diameter 0.8mm. Show that the cross section area of the wire is approximately Also, find the length of the wire needed to make the resistance coil if the resistivity of copper is .  (iv) What change does she observe in the ammeter if the two copper wires are joined to double its length? Justify your answer. | **(1+1+2+1=5)** |
|  | **SECTION E** |  |
|  | **Section E consists of one Case base study questions of 4 mark** |  |
| 14 | Read the given passage and answer the following questions:-  The food material taken in during the process of nutrition is used in cells to provide energy for various life processes. Diverse organisms do this in different ways – some use oxygen to break-down glucose completely into carbon dioxide and water, some use other pathways that do not involve oxygen. In all cases, the first step is the break-down of glucose, a six-carbon molecule, into a three-carbon molecule called pyruvate.  **1) Define anaerobic respiration.**  **2) How is this process different in our muscle cells?**  **3) Name the sites where the glucose is converted to pyruvate and the site where Energy is released.**  **4) Why there is a faster breathing rate of aquatic animals then the terrestrial animals?**  **OR**  **Write the name of organ used for respiration by fish and frog** | 4 |

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