THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

GRADE: IX Date:06/11/2024	MT 2 (2024-25) SCIENCE	Marks: 20 Time: 50 minutes

Q.No.	Questions	Mark
	Section A	
	Choose the correct answer	
1	The relative atomic mass of the atom of an element is the $1/12^{th}$ mass of one atom of _____ a. C^{13} b. C^{12} c. C^{14} d. P^{15}	1
2	SI unit of Energy is (a)KW (b) W (c) V (d) J	1
3	The atomic theory was proposed by a. Antoinne L Lavoisier b. Joseph Priestly c. John Dalton d. Louis Pasteur	1
4	A battery lights a bulb. The sequence of energy transfer in the process is (a) electrical energy to heat and light (b) chemical energy to electrical energy and then heat and light (c) chemical energy to heat and light ()chemical energy to light	1
5	Rapid elongation of a bamboo stem is due to a. Lateral meristem b. Intercalary meristem c. Apical meristem d. Cambium	1
	Section B	
	Answer The Following	
6	State the essential condition for work to be done and define one joule of work Ans: 1.A force should be applied 2.the object must be displaced	2

7	State the two laws of chemical combination. Ans: law of conservation of mass Law of constant proportion	2
8	Which cell organelle controls most of the activities of the cell? Two structural elements of this cell organelle? Ans:Nucleus Nucleus and nuclear membrane	2
	Short Answer Questions	
9	Define kinetic Energy and derive its mathematical expression for an object of mass m moving with a velocity V due to applied force F. Ans; Energy possess by an object due to motion $W = Fs$ $v^2 - u^2 = 2as, s = \frac{v^2}{2a}$ $F = ma, W = ma \cdot \frac{v^2}{2a}$ $W = KE = \frac{mv^2}{2} = \frac{1}{2}mv^2$	3
10	a. Classify the following as diatomic, triatomic, tetra atomic, and polyatomic molecules of elements. (F_2, S_8, O_3, P_4) b. Find the chemical formula of the following substances 1. Calcium sulphate 2. Magnesium chloride Ans: F_2-diatomic, O_3-Triatomic, S_8-Polyatomic, P_4-Tetraatomic b.1.$CaSO_4$ 2.$MgCl_2$	3
11	Differentiate between parenchyma, collenchyma, and sclerenchyma with suitable diagrams.	3

1. The cells are present in the soft parts of the plants like leaves, fruits etc.	The cells are present in leaves, petiole and young stems.	The cells are present in mature parts of the plant such as herbaceous perennials and woody plants.
2. These are not specialised cells.	These are specialised cells.	These are also specialised cells.
3. Cells are consists of thin cell walls.	Cells are consists of unequally thin cells.	Cells are consists of rigid and thick cell walls.
4. The cell wall of the cell is made up of cellulose.	The cell wall is made up of pectin and cellulose.	The cell wall is made up of lignin which makes it waterproof.