



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL



PERIODIC TEST-I 2026-27 SCIENCE MARKING SCHEME SET-I

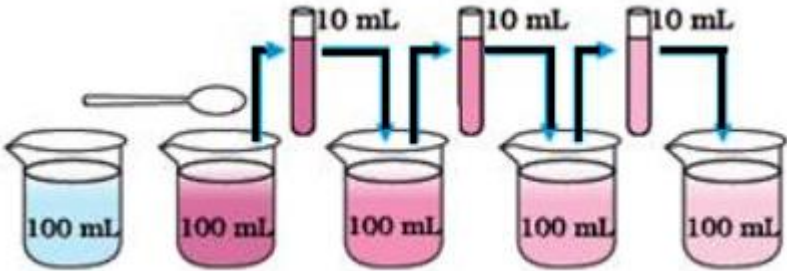
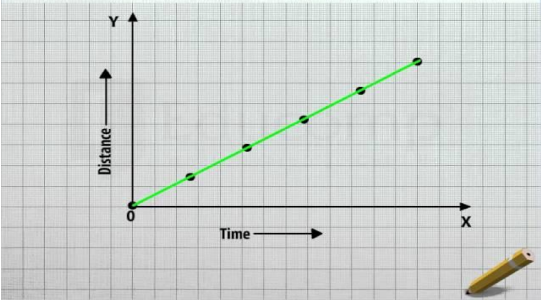
Class: IX

Time: 1 hour

Date: 16.06.25

Max Marks: 25

Section A (Biology)		
1.	c) It can be the site of energy generation	1
2.	Schleiden and Schwann	1
3.	(a) Plant cell vs Animal cell Plant cell: Cell wall present, chloroplast present, large vacuole Animal cell: No cell wall, no chloroplast, small or no vacuole (b) Diffusion vs Osmosis Diffusion: Movement of particles from high to low concentration Osmosis: Movement of water through a semi-permeable membrane from high to low water concentration	2
4.	Nucleus consists of nuclear membrane, nucleoplasm, nucleolus, and chromatin.	2
5.	Plant cell in different solutions Hypotonic solution: Cell becomes turgid (swells, does not burst due to cell wall) Isotonic solution: Cell becomes flaccid (no pressure) Hypertonic solution: Cell shrinks, plasmolysis occurs	3
Section B (Chemistry)		
6.	b) Liquid.	1
7.	d) Iron	1
8.	To show that particles of matter are extremely small, dissolve 2-3 crystals of potassium permanganate in 100 mL of water. Repeatedly diluting 10 mL of this solution into 90 mL of clear water 5-8 times will still result in colored water, demonstrating that millions of tiny particles exist in only a few crystals. Activity: Dilution of Potassium Permanganate This experiment, as described in educational materials like those on , demonstrates that particles of matter are small: Initial Solution: Take 100 mL of water in a beaker and add 2-3 small crystals of Potassium Permanganate Observation: The water turns deeply purple. Dilution 1: Take 10 mL of this solution and add it to 90 mL of clear water in a second beaker. Observation: The water is still purple, though slightly lighter. Subsequent Dilutions: Repeat this dilution process (taking 10 mL from the previous beaker and adding to 90 mL of fresh water) 5 to 8 times.	3

	Observation: The purple color becomes lighter and lighter, but the water remains colored. Conclusion Extremely Small Size: A few crystals of potassium permanganate can color a large volume of water. Particles Divide: The crystals divide into millions of tiny particles that continue to split into even smaller particles with each dilution. Result: This proves that matter is composed of particles that are incredibly small 	
9.	a) A wooden table is classified as a solid because it exhibits the key physical properties of the solid state: it possesses a definite shape, a distinct boundary, and a fixed volume. It is rigid, hard, cannot be compressed, and does not flow, with its particles being tightly packed. b) CNG :- Compressed natural gas and LPG:- Liquefied petroleum gas c) Convert : $213^{\circ}\text{C} + 273 = 486\text{ K}$	3
	Section C (Physics)	
10.	(c) Motion of a racing car on a circular track	1
11	Yes, If its initial and final positions are the same.	2
12.	displacement is the shortest distance covered, it will be the diagonal of the track= 14.1 m	2
13.	Distance-Time Graph of an Object Moving with a Uniform Speed  To calculate speed at any time, I will draw a perpendicular on time axis at the time a, where this line touches the graph one perpendicular on distance axis. Now the distance divide by time will give speed at that time.	3

*****ALL THE BEST*****