THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

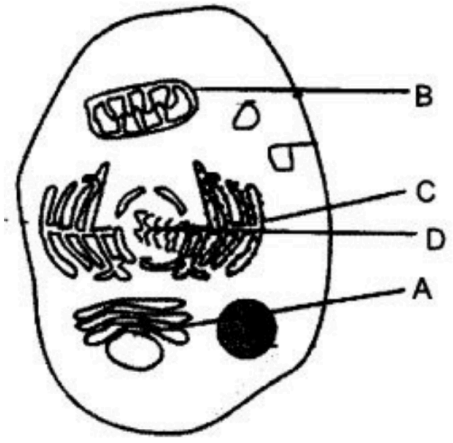
GRADE: IX Date:03-10-2024	TERM I EXAMINATION (2024-25) SCIENCE	Marks: 80 Time: 3h

Q.No.	Questions	Mark
	Section A	
	Choose the correct answer	
1	The animal cell which does not possess a nucleus is (a) egg of hen ‘ (b) white blood cell (c) red blood cell (d) nerve cell	1
2	When a crystal of potassium permanganate is placed at the bottom of the water in a beaker, the water in the whole beaker turns purple on its own, even without stirring. This is an example of: (a)distribution (b) intrusion (c) diffusion (d) effusion	1
3	It is difficult for a fireman to hold a hose that ejects a large amount of water at a high velocity, which law of motion explains it? (a) First (b) Second (c) Third (d) None of the above	1
4	The organelle that helps in membrane biogenesis is (a) lysosome (b) Golgi bodies (c) endoplasmic reticulum (d) ribosome	1

5	Which one of the following is not a chemical change? (a) formation of curd (b) ripening of banana (c) sublimation of naphthalene (d) corrosion of photo frame	1
6	The inertia of an object is measured by its (a) Temperature (b) Mass (c) Shape (d) None of the above	1
7	The opening and closing of stomata are due to (a) sunlight (b) osmosis (c) plasmolysis (d) endocytosis	1
8	Milk is an example of: a) Sol b) Emulsion c) Foam d) Gel	1
9	What is the SI unit of Force? (a) m (b) m s-2 (c) N (d) None of the above	1
10	The inner membrane of mitochondria is folded because (a) it has no space inside (b) it helps in the transportation of material (c) it increases the surface area (d) it stores more food	1
11	The Tyndall effect is seen in: a) Mixtures b) True solution c) Colloids d) None of the above	1

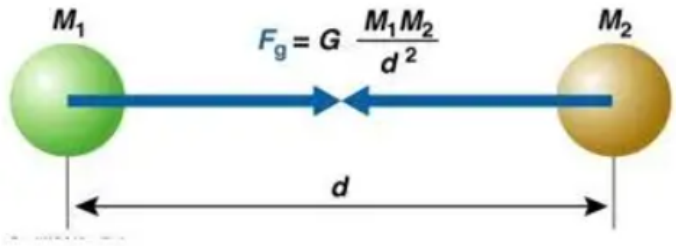
12	How does the force of gravitation between two objects change when the distance between them is reduced to half? a) 4 times increased b) 4 times decreased c)constant d) 1/4 times increased	1
13	Proteins are formed in (a) Golgi bodies (b) nucleus (c) plastids (d) ribosomes	1
14	Convert 393K to Celsius scale: a) 273.15 ^{o}c b) 120k c) 120^{o}c d) 298 ^{o}c	1
15	The slope of the Velocity time graph gives a) distance b) displacement c) acceleration d) speed	1
16	The nucleus of the cell was discovered by (a) Robert Hooke (b) Leeuwenhoek (c) Robert Brown (d) Purkinje	1
17	A particle is moving in a circular path of radius r, the distance after half a circle would be a) 0 b) Πr c) 2r d) 2Πr	1
18	The minimum number of unequal forces that can make zero resultant is (a) two (b) three (c) four (d) one	1

19	The solution in which a cell will gain water by osmosis is termed as (a) isotonic solution (b) hypertonic (c) hypotonic solution (d) both (a) and (b)	1
20	The weight of a body is measured to be 60 N on the earth. If it is taken to the moon, its weight will be (a) 60 N (b) 6 N (c) 10 N (d) 1 N	1
	Section B **VERY SHORT ANSWER QUESTION**	
21	What are plastids? Name the different types of plastids found in a plant cell.	2
22	Why do we see water droplets on the outer surface of a glass containing ice-cold water?	2
23	Distinguish between mass and weight.	2
24	State the difference between smooth endoplasmic reticulum and rough endoplasmic reticulum.	2
25	A solution contains 60 g of common salt in 340 g of water. Calculate the concentration in terms of mass by mass percentage of the solution.	2
26	Give reasons for the following 1.The recoil of the gun 2.Purpose of seat belts while driving a car	2
	Section C **SHORT ANSWER QUESTION**	
27	Why do plant cells have more in numbers and big-sized vacuoles as compared to animal cells?	3

28	a) Why do gases have neither a fixed shape nor a fixed volume? b) Why does our palm feel cold when we put some sanitizer or perfume on it?	3
29	A train is moving on a straight and levelled track at a speed of 72 km/hr. and passes an electric post in 3 S. Find the time taken by the train to pass a bridge of length 540 m.	3
30	State the law of conservation of momentum and prove mathematically that momentum before and after the collision of two objects moving along a straight line are equal and opposite.	3
31	What is a suspension? Write down the properties of the suspension and give one example.	3
32	Label the figure and answer the questions: (i) A – It is the packaging organelle (ii) B – Provides energy (iii) C – helps in the transport of material (iv) D – Carries the information.  Animal Cell	3

33	a) What are the characteristics of particles of matter? b) How can you separate a mixture of ammonium chloride and sodium chloride?	3
	Section D **LONG ANSWER QUESTIONS.**	
34	a) Draw a neat labeled diagram of a plant cell and label its parts. b)Give five points of differences between plant cells and animal cells.	5
35	a) List down the factors affecting evaporation. b) Classify the following into elements and compounds: Sodium sulphate, Aluminium, water, and Beryllium. c) Give one method to liquefy a gas.	5
36	A cricket fielder moves his arms backward in the direction of the ball while taking a catch why? State the second law of motion. Derive the mathematical expression for the second law of motion.	5
	Section E **CASE-BASED QUESTIONS**	
37	Vasu was helping his mother in laying the table when they had some guests for dinner. Vasu was about to sprinkle salt on the salad for dressing. His mother stopped him from doing so and told him that it was too early to sprinkle salt on the salad, he should do so only when they were seated for dinner. (a) What would happen if salt is sprinkled on the salad? (b) Which property of cells is seen in adding salt to it? (c) What value of cell wall Vasu is seen? d) What is endocytosis?	4

38	In a certain investigatory project, 150 ml of water is taken in each of the four beakers A, B, C, and D. Beakers A and B are maintained at temperature 25°C while C and D are maintained at temperature 65°C. Four crystals of copper sulphate of approximately the same mass (say 2g) are taken and two of them are ground into powder form. Now, crystals are added in beakers A and C while the powdered form of the salt is added in beakers B and D respectively. Mark the correct answer to each of the following questions: (i) In which beaker the intermixing will be the quickest? a) C b) D c) A d) B (ii) The rate of intermixing will be: a) Same in A and C b) Same in A and B c) Quicker in B than in A d) Slower in C as compared to that in A (iii) The colour of the solution after intermixing is: a) Greenish b) Bluish c) Pinkish d) Violet (iv) The phenomenon responsible for intermixing is called a) Diffusion of solid into a liquid b) Diffusion of liquid into solid c) Sedimentation d) Freezing	4
39	Every object in the universe attracts every other object with a force that is proportional to the product of their masses (m1*m2) and inversely proportional to the square of the distance (d^2) between them. The force is along the line joining the centers of two objects.	4

	 (i)Gravitational force does not depend on (a) Masses of objects (b) Separation between objects (c) Charges on objects (d) None of these (ii) Force of gravitation varies with masses of objects as (a) Product of masses (b) Sum of masses (c) Difference of masses (d) None of these (iii) When the mass of one body is doubled then the force of gravitation will become (a) Force will remain the same (b) Force will become double (c) Force will become halved (d) None of these (iv) Two objects of masses 10kg and 20kg separated by a distance of 10m. What is the gravitational force between them? G=6.6*10-7 N	