

	BCM SCHOOL, BASANT AVENUE, DUGRI, LUDHIANA  CLASS- IX Date- Aug 25,2026 SUBJECT- SCIENCE
	SECTION-A (BIOLOGY)
I.	MCQ
1.	A gardener removes the tip of a plant shoot. After some time, the plant shows reduced increase in height. Which tissue was mainly affected by this action? a) Lateral meristem. b) Apical meristem c) Permanent tissue. d) Collenchyma
	Assertion- Reason a) Both A and R are true, and R is the correct explanation of A. b) Both A and R are true, but R is not the correct explanation of A. c) A is true, but R is false. d) A is false, but R is true.
2	Assertion (A): Cardiac muscles do not get tired easily. Reason (R): Cardiac muscles are involuntary and show rhythmic contraction throughout life.
3	Assertion (A): Xylem is called a complex permanent tissue. Reason (R): Xylem consists of more than one type of cell working together for the transport of water and minerals.
II.	Give answers of the following questions
4.	Differentiate between parenchyma and sclerenchyma on the basis of: a Nature of cell wall b.Main function
5.	A student compares two plant tissues under a microscope: Tissue A: Living cells, thin cell wall, large intercellular spaces Tissue B: Dead cells, thick lignified walls, no intercellular spaces Identify both tissues and explain how their structure helps them perform their functions in plants.

6	Case study A biology student observes two animal tissues during a lab activity using a microscope. One tissue is responsible for covering and protecting the body surface as well as lining internal organs. The other tissue is highly specialized for transmitting electrical impulses rapidly throughout the body, enabling quick responses to stimuli. Answer the following: a Identify both tissues. b.State one function of each tissue. c Explain how their structural features are suited to their functions.
7	Long answer type question Explain how the following tissues contribute to these functions in a coordinated manner: 1. How xylem ensures efficient transport of water and minerals. 2. How phloem transports food throughout the plant. 3. How sclerenchyma provides strength and rigidity to the plant. 4. How parenchyma helps in storage and basic metabolic activities. 5. How the structural adaptations of these tissues make the plant efficient in survival and growth.
	SECTION-B(PHYSICS)
1	A car travels 5 km towards north, then turns right and travels 3 km further, the car again turns right and travel 1 km and comes to rest. What is the distance travelled and displacement of the car? A Distance: 5 km and Displacement: 9 km B Distance: 9 km and Displacement: 5 km C Distance: 9 km and Displacement: 7 km D Distance: 7 km and Displacement: 9 km.
2	A car travels on a straight road with a velocity of 30 km/h in first one hour and in the next one hour it changes its velocity to 40 km/h. What is the average velocity of the car? A 5 km/h. B 10 km/h. C 35 km/h. D 60 km/h
3	A bullet of 20 g strikes a sand bag at a speed of 200 m/s and gets embedded after travelling 2 cm, then the resistive force exerted by sand on the bullet is A 2×10^3 N B. 2×10^4 N

	C. 2×10^6 N D. 2×10^5 N
4	Why does a passenger move forward when a moving bus suddenly stops? Name the phenomenon involved. Explain it.
5	A body of mass 4 kg is moving with a velocity of 5 m/s. A constant force acts on it and increases its velocity to 10 m/s. Calculate the change in kinetic energy of the body.
6	A stone of mass 2 kg is dropped from a height of 20 m. Assume that there is no loss of mechanical energy and take $g = 10 \text{ m/s}^2$. (a) Calculate its gravitational potential energy at the initial position. (b) What will be its kinetic energy just before reaching the ground? (c) Calculate its velocity just before reaching the ground.