

Arwachin Bharti Bhawan Sr. Sec. School

Unit Test II

Class 9th

Subject- Science

SET – A

Time:- 1hr

M.M. 20

GENERAL INSTRUCTIONS

1. Read the following questions carefully.
2. Attempt the questions carefully.

Section A – Multiple Choice Questions (1 × 5 = 5 Marks)

Q1. Which of the following is a scalar quantity?

- a) Velocity
- b) Displacement
- c) Distance
- d) Acceleration

Q2. The SI unit of acceleration is:

- a) m/s
- b) m²/s
- c) m/s²
- d) km/h²

Q3. Which tissue provides flexibility and support to the tip of the nose?

- a) Bone
- b) Cartilage
- c) Tendon
- d) Ligament

Q4. Which plant tissue is responsible for the transport of food?

- a) Xylem
- b) Phloem
- c) Epidermis
- d) Collenchyma

Q5. A body moving with constant speed in a circular path has:

- a) Zero acceleration
- b) Constant acceleration
- c) Changing direction of velocity
- d) Constant displacement

Section B – Assertion and Reason (1 × 2 = 2 Marks)

Choose the correct option:

- A. Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.**
- B. Both Assertion and Reason are true, but Reason is not the correct explanation.**
- C. Assertion is true but Reason is false.**
- D. Assertion is false but Reason is true.**

Q6. Assertion: Velocity changes even if speed remains constant during circular motion.

Reason: Velocity depends on both magnitude and direction.

Q7. Assertion: Collenchyma provides flexibility to plants.

Reason: Its cells have unevenly thickened corners.

Section C – Short Answer Questions ($2 \times 5 = 10$ Marks)

Q8. Differentiate between distance and displacement.

Q9. A cyclist starts from rest and accelerates uniformly at 2 m/s^2 for 5 s.

Calculate:

- (i) Final velocity**
- (ii) Distance travelled**

Q10. Differentiate between xylem and phloem.

Q11. A car moving at 15 m/s comes to rest in 3 s.

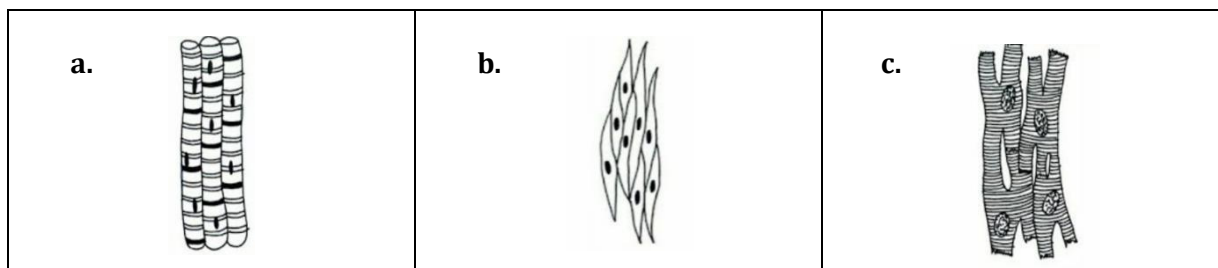
Find its acceleration.

Q12. State any two differences between tendon and ligament.

Section D – Case-Based Question (3 Marks)

Q13. The human body performs a wide variety of functions with the help of different types of tissues. Some of these functions are under our voluntary control, while others occur involuntarily. These tissues are distributed throughout the body and are present in different organs, where they perform specific and essential functions.

- a. A tissue forms the lining of many internal organs in the human body. Identify this tissue and name one organ where it is found.**
- b. Which tissue is responsible for the transport of materials throughout the human body? State its primary function.**
- c. Label any two of them.**



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Unit Test II

Class 9th

SET – B

Time:- 1hr

M.M. 20

GENERAL INSTRUCTIONS

- 1. Read the following questions carefully.**
- 2. Attempt the questions carefully.**

Section A – Multiple Choice Questions (1 × 5 = 5 Marks)

Q1. Which graph represents uniform motion?

- a) Curved distance-time graph**
- b) Horizontal velocity-time graph**
- c) Zig-zag graph**
- d) Random graph**

Q2. The slope of a velocity-time graph represents:

- a) Distance**
- b) Speed**
- c) Acceleration**
- d) Displacement**

Q3. Which animal tissue connects muscle to bone?

- a) Ligament**
- b) Cartilage**
- c) Tendon**
- d) Blood**

Q4. Which plant tissue consists of dead cells with thick walls?

- a) Parenchyma**
- b) Collenchyma**
- c) Sclerenchyma**
- d) Meristem**

Q5. Blood is classified as:

- a) Epithelial tissue**
- b) Muscular tissue**
- c) Connective tissue**
- d) Nervous tissue**

Section B – Assertion and Reason (1 × 2 = 2 Marks)

Choose the correct option:

A. Both Assertion and Reason are true, and Reason is the correct explanation.

- B. Both Assertion and Reason are true, but Reason is not the correct explanation.
- C. Assertion is true but Reason is false.
- D. Assertion is false but Reason is true.

Q6. Assertion: A body can have zero displacement but non-zero distance.
Reason: Distance depends only on the length of the actual path travelled.

Q7. Assertion: Sclerenchyma cells are dead at maturity.
Reason: Their thick lignified walls provide mechanical strength.

Section C – Short Answer Questions ($2 \times 5 = 10$ Marks)

Q8. State any two differences between speed and velocity.

Q9. Numerical

A car travels 120 m in 8 s.

Calculate its average speed.

Q10. Write any two differences between epithelial tissue and connective tissue.

Q11. Numerical

A train moving at 10 m/s accelerates uniformly at 1.5 m/s^2 for 6 s.

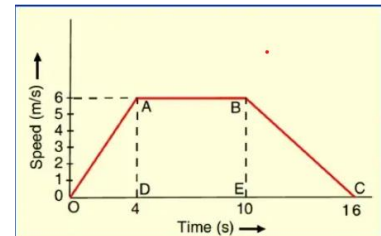
Find:

- (i) Final velocity
- (ii) Distance travelled

Q12. Write functions of nervous tissue and muscular tissue.

Section D – Application-Based Question (3 Marks)

Q13. Aditya started driving his car. He increases the speed till 4 seconds and then he kept his card in constant speed for 6 seconds. Then after he decreased the speed of the car upto another 6 seconds. After reaching at the starting place, he draws the speed-time graph of his 16 seconds driving as shown below:



- i. Find out the acceleration of the body.
- ii. Calculate the retardation of the body.
- iii. What type of motion is represented by OA?