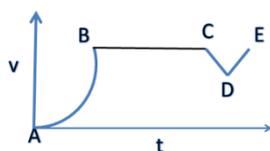**Class: IX; Subject: Science**

1. The displacement of a moving object in a given interval of time is zero. Would the distance travelled by the object absolute zero? Justify your answer. $(\frac{1}{2} + \frac{1}{2})$

2. Draw speed time graph for an object thrown vertically upward and then coming downward after attaining maximum height. (1)

3. Name the structure that protects the plant body from invasion of parasites? (1)

4. A sugarcane plant keeps on growing even if its tip is removed. Which tissue is responsible for it? (1)

    Or

    Why are xylem and phloem called complex permanent tissue? (1)

5. While doing an experiment to determine the melting of ice, state the role of glass stirrer and mention the position of bulb of the thermometer. (1)

6. What conclusion can you draw for acceleration in the following graph from AB, BC, CD, DE

    (2)

7. Give reasons for:
    (a) We get a crunchy and granular feeling when we chew pear fruit.
    (b) Branches of a tree move and bend freely in high wind velocity. (1+1)

8. (a) What is interconversion of matter?
    (b) State any two factors on which interconversion of matter can be carried out?

    (1+1)

    Or

    Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations (2)

9. Name the three types of simple permanent tissues found in plants and give one difference between them on the basis of cell wall only. (3)

10. Is evaporation and boiling are same? If not then why? (Give 3 differences) (3)

11. Derive $S = ut + \frac{1}{2}at^2$ by graphical method. Symbols have their usual meaning. Draw the necessary graph. (3)

    Or

    An object starting from rest travel 20 m in first 2 s and 160 m in next 4 s .What will be the velocity after 7 s. (3)