Class IX,Science
General Instructions:

1. This question paper consists of four sections $A, B, C$ and $D$.
2. All the questions are compulsory.
3. Section A: 10 questions of MCQ type and each question carries 1 mark.
4. Section B: 4 Short answer type questions that carry 2 marks each.
5. Section C: 4 Short answer type questions that carry 3 marks each.
6. Section D: 2 Long answer type question that carries 5 marks.
7.Draw a neat labelled diagram wherever necessary.

## Section-A

$1 \mathrm{X10}=10 \mathrm{M}$

1. When a cell divides by mitosis it produces
a. two daughter cells
b. four daughter cells
c.one daughter cell
d. three daughter cells
2.Silver nitrate solution is used to study
a. Endoplasmic reticulum
b. Golgi apparatus
c. Nucleus
d. Mitochondria
2. The cell organelles involved in forming complex sugars from simple sugars are
a. endoplasmic reticulum
b. ribosomes
c. plastids
d. Golgi apparatus
3. When heat is constantly supplied by a burner to boiling water, then the temperature of the water during vaporisation:
(a) Rises very slowly
(b) Rises rapidly until steam is produced
(c) First rises and then becomes constant
(d) Does not rise at all
5.The process in which solid is directly converted to vapour state is called -----
a.vaporisation
b. solidific ation
c.deposition
d. sublimation
4. A particle is moving in a circular path of radius $r$. The displacement after half circle would be $\qquad$
(a) 0
(b) 2 r
(c) $\Pi r$
(d) $2 \pi r$
7.A body is moving with a uniform velocity of $20 \mathrm{~m} / \mathrm{s}$. After 10 seconds ,its velocity would be
(a) $200 \mathrm{~m} / \mathrm{s}$
(b) $20 \mathrm{~m} / \mathrm{s}$
(c) $30 \mathrm{~m} / \mathrm{s}$
(d) $10 \mathrm{~m} / \mathrm{s}$

Directions: Question numbers 8,9 and 10 consists of two statements--Assertion (A) and Reason (R). Answer these questions by selecting an appropriate option from below:
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 of assertion .
c) Assertion is true but reason is false.
d) Assertion is false but reason is true.
8. Assertion : The endoplasmic reticulum which lacks ribosomes is called smooth endoplasmic reticulum Reason : SER is mainly involved in protein synthesis.
9. Assertion : The rate of evaporation increases with increase in temperature.

Reason: Increase in temperature decreases the kinetic energy of the particles.
10. Assertion : An object gradually increasing its speed is said to be accelerated.

Reason: Acceleration is the rate of change of velocity.
11. Convert the following temperatures:
a. 379 K to ${ }^{\circ} \mathrm{C}$
b. $35^{\circ} \mathrm{C}$ to K
12. What is dry ice? What happens when the pressure under which it is stored is decreased to 1atm?
13. List two similarities between mitochondria and plastids.
14.A bus accelerates uniformly from $54 \mathrm{~km} / \mathrm{h}$ to $72 \mathrm{~km} / \mathrm{h}$ in 10 seconds. Calculate
a) acceleration in $\mathrm{m} / \mathrm{s}^{2}$
b) distance covered by the bus in metres during this interval.

## SECTION-C <br> $\mathbf{3 X 4}=12 \mathrm{M}$

15. Define Latent heat of fusion. Differentiate between evaporation and boiling .(twodifferences)
16.Draw a well labelled diagram showing sublimation of camphor. Name two substances which undergo sublimation other than camphor.
16. Draw a plant cell and label the parts which
i. is a fluid inside the nucleus.
ii. packages material coming from ER.
iii. helps in preparing food.
17. a) Differentiate between distance and displacement.
b) State which of the following situations are possible and give an example for each of these :
(i).An object moving in a certain direction with an acceleration in the perpendicular direction .
(ii).A body with a constant acceleration but with zero velocity .

## SECTION-D

$5 \mathrm{X} 2=10 \mathrm{M}$

## Read the passage and answer the questions:

19. Akshaya loves to eat soaked raisins and apricots. Being inquisitive, she asked her mother, how raisins and apricots swell. At that time her mother was cutting vegetables like carrots and cauliflowers into small cubes. After cutting she put it in the sun for $4-5$ hours. After finishing her work she explained that the raisins and apricots absorb water and swell whereas vegetable cubes lose water and become dry.
a. Name and define the process through which dried raisins and apricots absorb water and swell up.
b. What is isotonic solution?
c. What will happen if de-shelled egg is placed in a concentrated salt solution?
d. Give two examples of osmosis.
20. Two cars $P$ and $Q$ are travelling along a straight line path on a highway from city A to city $B$. Car $Q$ travels at a constant speed of $60 \mathrm{~km} / \mathrm{h}$ for 6 hours and reaches city B. Car $P$ travels at $80 \mathrm{~km} / \mathrm{h}$ for 2 hours, stops at a restaurant for 15 minutes, then travels at $60 \mathrm{~km} / \mathrm{h}$ for the next three hours .
a) Find the total distance travelled by car Q.
b) What type of motion is exhibited by car $P$.
c) Find the average speed of car $P$.

OR
c) If car P had to reach the destination, how much total time would it take if it travelled the last 20 km at $40 \mathrm{~km} / \mathrm{h}$ ?

