



**CPE 1 [2023-24]
ANSWERSHEET**

**Max. Marks- 20
Time:50 minutes**

Q.No.	Answers	Mark																
Section A																		
1	a	1																
2	d	1																
3	c	1																
4	c	1																
5	b																	
Section B																		
6	The plasma membrane, also known as the cell membrane is the outermost protective covering of the cell that separates the content of the cell from its external environment. It is called a selectively permeable membrane because it enables only certain chemicals and molecules to enter or exit the cell.	2																
7	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Distance</th> <th style="width: 50%; text-align: center;">Displacement</th> </tr> </thead> <tbody> <tr> <td>The total or complete path travelled by an object.</td> <td>The shortest distance between the final position and the initial position of the motion of the object.</td> </tr> <tr> <td>It can never be negative, always positive.</td> <td>It can be positive, negative or zero, depending on the context.</td> </tr> <tr> <td>It is a scalar quantity.</td> <td>It is a vector quantity.</td> </tr> <tr> <td>Distance doesn't decrease with time.</td> <td>It can increase or decrease with time.</td> </tr> <tr> <td>It is never less than the displacement value.</td> <td>It is either equal to or less than distance</td> </tr> <tr> <td>It is denoted by 'd'.</td> <td>It is denoted by 's'.</td> </tr> <tr> <td>It gives the complete information about the path travelled by the object.</td> <td>It does not give the complete information about the path travelled by the object.</td> </tr> </tbody> </table>	Distance	Displacement	The total or complete path travelled by an object.	The shortest distance between the final position and the initial position of the motion of the object.	It can never be negative, always positive.	It can be positive, negative or zero, depending on the context.	It is a scalar quantity.	It is a vector quantity.	Distance doesn't decrease with time.	It can increase or decrease with time.	It is never less than the displacement value.	It is either equal to or less than distance	It is denoted by 'd'.	It is denoted by 's'.	It gives the complete information about the path travelled by the object.	It does not give the complete information about the path travelled by the object.	2
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8	The intermolecular forces of attraction in solids is very strong, due to which the constituting particles are very closely packed, this closed packing in solids give it a definite shape, but in liquids the intermolecular forces are weak, due to which the constituting particles are loosely packed, and hence the liquids do not have a fixed shape.	2																
9	Distance =140 m Total round=3.5 Displacement= $10\sqrt{2}$ m=14.14 m	3																

10	<p>The process of conversion of a liquid into its vapour state at any temperature below its boiling point is known as evaporation.</p> <p>A liquid has a larger surface area in a saucer than in a cup. Saucer has a large surface area. Due to the large surface area of hot tea taken in the saucer, the evaporation of hot tea from the saucer is faster.</p> <p>The faster evaporation cools the hot tea much more quickly making it convenient to sip. Hence, we are able to sip hot tea or milk faster from a saucer than a cup.</p>	
11	<p>Mitochondria are membrane-bound organelles present in the cytoplasm of all eukaryotic cells, that produces Adenosine Triphosphate (ATP), the main energy molecule used by the cell. They have a largely folded inner membrane to increase the surface area for the synthesis of ATP molecules</p>	