

KENDRIYA VIDYALAYA NDA PUNE

PERIODIC TEST – I (2018-2019)

Subject – Science

SET- 2

Max Marks – 40

Class – 9

Max Time – 90 Min

Marking scheme

S. No.	Answer of the questions	marks						
1.	Lysosomes contain digestive enzymes. When cell is damaged then lysosomes burst to digest whole cell. That's why known as suicidal bags.	1						
2.	Copper sulphate solution is homogeneous mixture so it does not show Tyndall effect. But milk is colloid so it shows Tyndall effect.	1						
3.	Latent heat of fusion – the amount of heat required to convert one kg of solid into liquid is known as latent heat of fusion. Boiling point – the temperature at which vapour pressure of a liquid becomes equal to the atmospheric pressure.	1+1						
4.	a. We should wear cotton cloths in summer. Because these can absorb sweat well and expose for evaporation. b. 20°C & 300 °C	1 ½+ ½						
5.	Well labelled Plant cell diagram.	2						
6.	<table border="1" style="width: 100%;"> <thead> <tr> <th>Displacement</th> <th>Distance</th> </tr> </thead> <tbody> <tr> <td>1. Shortest distance between initial and final position.</td> <td>1. Actual path length travelled by the object.</td> </tr> <tr> <td>2. Vector quantity.</td> <td>2. Scalar quantity.</td> </tr> </tbody> </table>	Displacement	Distance	1. Shortest distance between initial and final position.	1. Actual path length travelled by the object.	2. Vector quantity.	2. Scalar quantity.	2
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7.	Well labelled nerve cell diagram.	2						
8.	Characteristics of matter – 1. Particles of matter always have some space between them Example – we can walk through air. 2. Particles of matter always have some force of attraction between them. Example – we can not break a wooden log easily. 3. Particles of matter are always in motion. Example – smell of hot food reaching several meters.	3						
9.	a. Plasma membrane can allow only some selected particles to enter or exit the cell, that's why known as selectively permeable. b. Similarity – mitochondria and chloroplast both are double membrane organs, both have own genetic material. Difference – mitochondria helps in ATP formation. Chloroplast helps in food synthesis. c. <table border="1" style="width: 100%;"> <thead> <tr> <th>Prokaryotic cell</th> <th>Eukaryotic cell</th> </tr> </thead> <tbody> <tr> <td>1. Undeveloped nucleus.</td> <td>1. Well developed nucleus.</td> </tr> <tr> <td>2. Small ribosome 70S.</td> <td>2. Large ribosome 80S.</td> </tr> </tbody> </table>	Prokaryotic cell	Eukaryotic cell	1. Undeveloped nucleus.	1. Well developed nucleus.	2. Small ribosome 70S.	2. Large ribosome 80S.	1 ½+ ½ ½ + ½
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10.	Sublimation – the process by which solids directly convert into vapours. Ammonium chloride being sublimable can be separated from salt by sublimation process. Well labelled diagram.	3						
11.	a. Given – Solute = 40g Solvent = 320 g Solution – Mass of solution = mass of solute + mass of solvent = 40 g + 320 g = 360 g Now – Mass by mass % concentration = (mass of solute / mass of solution) X 100 = (40/360) X 100 = 11.1% b.	2						
	<table border="1"> <thead> <tr> <th>Element</th> <th>Compound</th> </tr> </thead> <tbody> <tr> <td>1. Simplest form of matter.</td> <td>1. Pure substance made of two or more elements.</td> </tr> <tr> <td>2. Made of one type of atoms.</td> <td>2. Made of one type of molecules.</td> </tr> </tbody> </table>	Element	Compound	1. Simplest form of matter.	1. Pure substance made of two or more elements.	2. Made of one type of atoms.	2. Made of one type of molecules.	½ + ½
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12.	a. Given – Initial velocity = 80km/h=22.2 m/s Final velocity = 60 km/h = 16.6 m/s Time = 5 s To find – acceleration =? Solution - Acceleration = (final velocity – initial velocity) / time $a = (v-u) / t$ $a = [(16.6 – 22.2) / 5] \text{ m/s}^2$ $a = -1.11 \text{ m/s}^2$ b. second equation of motion – area of trapezium in graph = area of rectangle + area of triangle $s = (AO \times AD) + \frac{1}{2} \times AD \times BD$ $s = ut + \frac{1}{2} at^2$ a. Uniform motion - when an object travels equal distance in equal time intervals then it is said to be travelling with uniform motion. Graph – straight line graph.	2						
13.	<ul style="list-style-type: none"> • bones are hardest connective tissue. These provide shape and support to body. • <table border="1"> <thead> <tr> <th>Ligament</th> <th>Tendon</th> </tr> </thead> <tbody> <tr> <td>Connects bone to bone.</td> <td>Connects muscle to bone.</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • 1. Meristematic tissue have dense cytoplasm. • 2. Prominent nucleus. • Xylem. 	Ligament	Tendon	Connects bone to bone.	Connects muscle to bone.	2 1 1 1		
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15.	1. separation of dye from ink. 2. separation of drugs from blood.	2						

16.	Striated muscles	Smooth muscles	Cardiac muscles	2
	1. Unbranched.	1. Unbranched.	1. Branched.	
	2. Presence of light and dark bands.	3. Absence of light and bands.	2. Presence of light and dark bands.	