

KENRIYA VIDYALYA NDA PUNE - 23

Class 9th 2018-2019

MARKING SCHEME

PERIODICAL TEST –II 2018-19

SUBJECT- SCIENCE

- A1)density =mass /volume unit is kg/m³. 1
- A2) The negatively and positively charged particles are called ions.Ex---chloride ions ,sodium ions. 1
- A3) The nuclear membrane present as outer covering in the nucleus allows the transfer of material inside and out of the nucleus to cytoplasm. 2
- A4) Object when dropped from certain height fall towards the earth under the gravitational force
Alone is called free fall. 2
- A5) 2,8,8 2
- A6) A is a gas. Properties---
- 1.No fix shape and volume.
 - 2.Large intermolecular space.
 - 3.least force of attraction between molecules.
 - 4.highly compressible. 3
- A7) 1.Mitochondria 2.Endoplasmic Reticulum. 3.Lysosomes 4.vacuoles. 5.Chloroplast
6.Nucleus. 3
- A8) $u=0, s=20m, a=10m/sec, v=?, t=?$
Final velocity= $v^2=u^2+2as$, $V^2=0+2*10*20$
 $V^2=400m/sec^2$
 $V=20m/sec^{\wedge} T=? v=u+at$
 $20=0+10m/sec t=20/10=2sec.$ 3
- A9) 3

True solution	Colloid
1.homogeneous in nature. 2.particle size less than 1 nm.	1.Heterogeneous in nature. 2.particle size between1-100nm.

3.Transparent. 4.Particles not seen under microscope. 5.Donot show tyndall effect.	3.translucent. 4.Particles seen under microscope. 5.Shows tyndall effect.
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A10) 3

Parenchyma	Sclerenchyma
1.Thin walled cells. 2.present in all parts of body. 3.Store food and waste. 4.Cells loosely packed.	1.Dead cells. 2.Cytoplasm absent. 3.cell wall lignified. 4.lumen narrow and it is a mechanical tissue.

A11)1.because AIDS weakens the immunity system of the body.

2.HIV virus.

3.Acquired Immuno Deficiency Syndrome. 3

A12)1. Immunity is the ability of the body to defend against a disease. 1

2. Antibiotics inhibit biosynthetic pathways .This way they die.But viruses do not have components for the biosynthetic pathways.Instead they use the components of the host body to complete their life

Cycles. Therefore antibiotics are not effective against viruses. 2

A13) 1) Archimedes Principle states that When a body is immersed fully or partially in a fluid ,it experience

An upward force that is equal to the weight of the fluid displaced by it. 1

2) Applications-----

a. It is used in designing ships and submarines.

b. Lactometers and Hydrometers. 2

A14) 3

Mass	Weight
1.Quantity of matter in a body. 2.SI unit of mass is kg. 3.Mass remains constant. 4.Mass is never zero. 5.It is a scalar quantity.	1.Force by which earth attracts body . 2.SI unit is newton. 3.It changes from place to place. 4.It is a vector quantity. 5.weight at the centre of earth is zero.

A15)1. No. of molecules=given mass/molar mass*Avogadro no.

=17/17*6.022*10²³=6.022*10²³ 2

2.Al₂(SO₄)₃-----Aluminium Sulphate. 1

A16)1.The diffusion of water or solvent through a semi-permeable membrane from a solution of lower

Concentration of solutes to a solution of higher concentration of solutes is called osmosis. 2

2.Mitochondria as it is the site of cellular respiration.They release energy in the form of ATP. 2

3.Lysosomes and centrioles. 1

A17) let $AB=x$,so $t_1=t/30$ and $t_2=x/20$

Total time= $t_1+t_2=5x/60$ h

Average speed for entire journey=total distance/total time = $2x/5x/60 = 24$ km/h

5

A18) 1. Crystallisation is a process that separates a pure solid in the form of its crystals from a Solution.It is considered better than simple evaporation because---

i)Some solids decompose or get charred on heating to dryness.

ii) some impurities may remain dissolved in the solution even after filtration.On evaporation these contaminate the solid. 3

2.i)Sublimation ii)Chromatography 2

A19)1. Permanent tissues are derived from meristematic tissue but their cells have lost the power Of division and have attained their definite forms. Types----Simple permanent and complex permanent.2

2.complex tissues----

a)Xylem----is a vascular and mechanical tissue. It is a conducting tissue. it has four different cells.

1—tracheids 2—vessels 3---Xylem parenchyma 4--- Xylem sclerenchyma .except parenchyma

All are dead cells.

b)phloem----vascular but no mechanical function. Four types of cells----1----Sieve tubes 2--- Companion

cells 3---Phloem parenchyma 4---phloem fibres. except phloem fibres all other elements are living.

3

A20)1. Acc. To I law of motion .a body at rest or in uniform motion will remain at rest or motion unless an unbalanced force acts on it.

2

2.initial momentum= mu

Final momentum= mv

Change in momentum= $mv - mu = m(v - u)$

Rate of change in momentum= $m(v - u)/t$

Acc. To Newton II law

F is directly proportional to $m(v - u)/t$

$F = km(v - u)/t$

$F = kma$ if $k = 1$ then $f = ma$

A21)1.The acceleration due to the earth's gravitational force is known as acceleration due to gravity.

2

2.it is denoted by g .

Acc to II law of motion----- $F = ma$

Here $F = mg = GMm/d^2$

$G = GM/d^2$

3

A22)1.Osmosis 2.Diffusion 3.Osmosis 4.diffusion

2

A23)Cell walls are incompatible with the way in which an animal moves and grows.Flaccid cell membrane provide the animal cell freedom of mobility and formation of different tissues.

2

A24)Metals.

Characters----Solid ,good conductor of heat and electricity,sonorous ,lusturous,malleable,ductile etc 2

A25)Dispersed medium and dispersed phase.

2

A26)Because this plant body has aerenchyma tissue present in it which provides buoyancy to the

Plant.

2

A27)principle ---Two liquids have different boiling points. difference should be of 20—30 degree C.2