VENUS WORLD SCHOOLS

Academic Session-2021-22

SUMMATIVE ASSESSMENT-1

Grade -IX **Time -90 min**

Sub – Science **Max Marks- 40**

PHYSICS

General Instructions:

1. The Question Paper contains three sections.
2. Section A has 8 questions. Attempt any 6 questions
3. Section B has 8 questions. Attempt any 6 questions
4. Section C has 4 questions. Attempt any 2 questions
5. All questions carry 1 mark.
6. There is no negative marking.

SECTION A

Q1. What is the average velocity open car that moved 60 kilometres in three hours?
A) 60 kilometres per hour
B) 20 kilometres per hour
C) 30 kilometre per hour
D) 10 kilometres per hour

Q2. A body throws a ball up and catch is it when the ball falls back in which part of the motion the ball is accelerating?
A) during downward motion
B) when the ball comes to rest
C) during upward motion
D) when the boy catches the ball

Q3. Choose the correct option
A) distance is a scalar, velocity is a vector , acceleration is a vector
B) distance is a vector, velocity is a scalar , acceleration is a vector
C) distance is a vector, velocity is a vector, acceleration is a vector
D) distance is a scalar, velocity is a vector, acceleration is a scalar

Q4. A man is moving with 36 kilometre per hour. The time of reaction is 0.9 seconds. On seeing an obstacle in the path, he applies brakes and accelerates at 5 metre per second square, the total distance covered before he stops is
A) 19 meter
B) 17 metre
C) 16 metre
D) 18 meter

Q5. When unbalanced forces act on a body, the body
A) must move with uniform velocity
B) must remain at rest
C) must experience acceleration
D) must move in a curved path

Q6. Find the time taken by a body of mass 16 kg to come to rest from a uniform velocity of magnitude 10 metre per second when a force of 4 Newton is applied continuously
A) 30 seconds
B) 40 seconds
C) 50 seconds
D) 20 seconds

Q7. When a 12 Newton force acts on 3 kilogram mass for a second, the change in velocity is in meter per second
A) 36
B) 4
C) 2
D) 18

Q8. What is the momentum of a body of mass 2M and velocity v/2?
A) mv/4
B) mv
C) 2mv
D) mv/2

SECTION B

Directions: In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:
(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
(c) Assertion (A) is true but reason (R) is false.
(d) Assertion (A) is false but reason (R) is true

Q9. Assertion(A) : Newton's laws can be applied to bigger bodies
Reason (R): During any kind of collision the centre of mass of the system is not acceleration.
(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q10. Assertion(A) : A cloth covers a table. Some dishes are kept on it. The cloth can be pulled out without dislodging the dishes from the table.
Reason (R): For every action there is an equal and opposite reaction.
(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q11. Assertion(A): When a person moves out of a boat, it moves backward.
Reason (R): Newton's third law of motion says To every action there is equal and opposite reaction**.**
(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q12. Assertion(A): Newton's first law states that an object at rest will stay at rest and an object in motion will stay in motion with the same speed and direction unless and until an external force is applied on the object
Reason (R:Law of conservation of momentum states that initial momentum is equal to final momentum

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q13. Assertion(A): The numerical ratio of displacement to distance is equal to one or less than 1
Reason (R) : Displacement is a vector quantity and distance is a scalar quantity
(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q14. Assertion(A): The Speedometer of a car or a motorcycle measures its average speed.
Reason (R) : Average velocity is equal to total displacement divided by total time taken
(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q15. Assertion(A): Motion with uniform velocity is always along a straight line path.
Reason (R) : In uniform velocity, speed is the magnitude of the velocity and is equal to the instantaneous velocity.
(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q16. Assertion(A): In uniform motion the average and instantaneous velocity have the same value
Reason (R): reason in uniform motion the velocity of the object increases uniformly
(a) ◯ (b) ◯ (c) ◯ (d) ◯

SECTION C

Isaac Newton's First Law of Motion describes the behavior of a massive body at rest or in uniform linear motion, i.e., not accelerating or rotating. The First Law states, "A body at rest will remain at rest, and a body in motion will remain in motion unless it is acted upon by an external force." This simply means that things cannot start, stop or change direction all by themselves. It requires some force acting on them from the outside to cause such a change. While this concept seems simple and obvious to us today, in Newton's time it was truly revolutionary. There are many excellent examples of Newton's first law involving aerodynamics. The motion of an airplane when the pilot changes the throttle setting of the engine is described by the first law. The motion of a ball falling down through the atmosphere, or a model rocket being launched up into the atmosphere are both examples of Newton's first law. The motion of a kite when the wind changes can also be described by the first law.

Q17. A football and a stone has same mass,
A) Both have same inertia
B) Both have same momentum
C) Both have different inertia
D) Both have different momentum

Q18. The inertia of a moving object depends on:
A) Mass of the object,
B) Momentum of the object
C) Speed of the object
D) Shape of the object

Q19.When a balloon held between the hands is pressed, its shape changes. This happens because,
A) Balanced forces act on the balloon
B) Unbalanced forces act on the balloon
C) Frictional forces act on the balloon
D) Gravitational force acts on the balloon

Q20. There are two statements,
Statement A Newton’s first law in valid from the pilot in an aircraft which is taking off,
Statement B Newton’s first law in valid from the observer in a train moving with constant velocity,
Which of the following is correct,
(a) A only
(b) B only
(c) Both A and B are correct
(d) Both A and B are wrong

CHEMISTRY

Q.1 Alloys are

a) Homogeneous b) Heterogeneous c) Both a and b d) none of these

Q.2 Fog is an example of……mixture.

a) Liquid -Gas b) Liquid-liquid c) Liquid-Solid d) Gas-Solid

Q.3 A solution contains 20 gm of solute in 640 gm of water. The correct concentration in terms of mass by mass will be

a) 4.5% b) 3.5% c) 4% d) 3.125%

Q.4 The particles of ……can be seen by naked eyes.

a) True solution b) Suspension

c) Colloidal solution d) Both b and c

Q.5 A solution of iodine with ……. is known as tincture of iodine

a) Water b) Alcohol c) Milk d) Kerosene

Q.6 Two liquids having close boiling points can be separated by……..technique.

a) Separating funnel b) Evaporation c) Distillation d) Fractional distillation

Q.7 In aerated drinks……gas is dissolved in water.

a) H_2 b) O_2 c) CO_2 d) N_2

Q.8 Which of the following solutions will show Tyndall effect?

a) Milk b) aq. NaCl c) Smoke d) Both a and c

Q.9 Which of the following mixture can be separated by magnetic separation?

a) Fe+S b) C+S c) O_2+N_2 d) Both b and c

Q.10 The major constituent of air is

a) CO_2 b) O_2 c) N_2 d) H_2

Q.11 Separating funnel can be used to separate…….

a) alcohol and water b) Oil and water c) Mud and water d) NaCl and water

Q.1 2

Statement 1 – Particles of a true solution can never settle down.

Statement 2 – Particles of a true solution can be seen by neked eyes.

a) Both are correct b) Both are incorrect

c) 1st is correct but 2nd is incorrect d) 1st is incorrect but 2nd is correct.

Q.13

Statement 1 – The composition of a compound varies.

Statement 2 – A mixture is always heterogeneous.

a) Both are correct b) Both are incorrect

c) 1st is correct but 2nd is incorrect d) 1st is incorrect but 2nd is correct.

BIOLOGY

General Instructions –

Read all questions carefully.
Present your work neatly.
Revise the answer sheet before submitting it.

Section A

Q.1 A cell will swell up if **1**

(a) The concentration of water molecules in the cell is higher than the concentration of water molecules in the surrounding medium

(b) The concentration of water molecules in the surrounding medium is higher than water molecules concentration in the cell

(c) The concentration of water molecules is the same in the cell and the surrounding medium

(d) Concentration of water molecules does not matter

Q.2 Which of these options are not a function of Ribosomes? **1**

(i) It helps in the manufacture of protein molecules

(ii) It helps in the manufacture of enzymes

(iii) It helps in the manufacture of hormones

(iv) It helps in the manufacture of starch molecules

(a) (i) and (ii)

(b) (ii) and (iii)

(c) (iii) and (iv)

(d) (iv) and (i)

Q.3 Following are a few definitions of osmosis **1**

Read carefully and select the correct definition

(a) Movement of water molecules from a region of higher concentration to a region of lower concentration through a semipermeable membrane

(b) Movement of solvent molecules from its higher concentration to lower concentration

(c) Movement of solvent molecules from higher concentration to lower concentration of solution through a permeable membrane

(d) Movement of solute molecules from lower concentration to a higher concentration of solution through a semipermeable membrane

Q.4 Organelle other than nucleus, containing DNA is **1**

(a) endoplasmic reticulum

(b) Golgi apparatus

(c) mitochondria

(d) lysosome

Q.5 Select the odd one out **1**

(a) The movement of water across a semi-permeable membrane is affected by the number of substances dissolved in it.

(b) Membranes are made of organic molecules like proteins and lipids

(c) Molecules soluble in organic solvents can easily pass through the membrane.

(d) Plasma membranes contain chitin sugar in plants

Q.6 Match the following A and B **2**

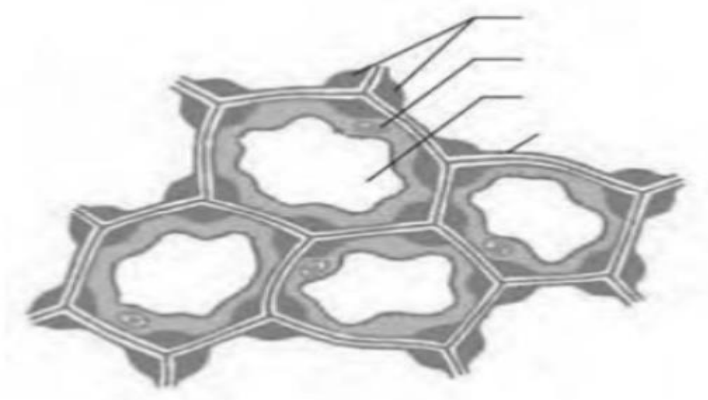
(A)	**(B)**
(a) Smooth endoplasmic reticulum	**(i) Amoeba**
(b) Lysosome	**(ii) Nucleus**
(c) Nucleoid	**(iii) Bacteria**
(d) Food vacuoles	**(iv) Detoxification**
	(v) Suicidal bag

A . a-iii ,b-iv, c-ii, d- i,

B. a-iv; b-v; c-iii; d-i;

C. a-iv , b-iv, c-ii, d- i,

Q.7 What are the characteristics of collenchyma tissue. **1**



a. Nucleus is small vacuoles are large.
b. Nucleus absent

c. Nucleus present and vacuole absent
d. Both absent

Q.8. Small pores present epidermis of leaf called…….
1

a. Stomata

b .Lignin

c .Thick walls

d. Epidermis

Q.9 Xylemis the specialised tissues transport water and nutrients from the soil to the upper part likes teams and leaves of plant and provide mechanical support to them it is composed of four different types of cell which of the following is not one type of cell found in Xylem tissue ?
1

a. Tracheids

b. Vessels

c. Xylem parenchyma

d. Sieve tubes

Q.10 …… tissues are loosely held and store food in plant.
1

a. Parenchymatous issue

b .Meristematic tissue

c. Permanent issues

d. None of them

Q.11 Adipose tissue is found below the ……and between …… 1

a. Heart ,lungs

b. Skin, internal organs

c. Brain, kidneys

d. Hairs, eyes

Q.12 While doing work and running you move your organs like hands legs etc which among the following is correct?
1

a. Smooth muscles contract and pull the ligament to move the bones interna

b. Smooth muscles contract and pull the tendons to move the bones

c. Skeletal muscles contract and pull the ligament to move the bones

d. Skeletal muscles contract and pull the tendon to move the bones