Half Yearly Examination 2023-24

Class-9th

Subject-Science

Set-A

Time-3 Hours M.M.75

Instructions-

(i) All Question are Compulsory.
(ii) Internon options are given in Q.No.6 to 23.
(iii) Question No. 1 to 5 total 30 objective types questions total marks is 1x30=30
(iv) Question No. 6 to 17 carries 02 marks each, give answer in 30 word each.
(v) Question No. 18 to 20 carries 03 marks each, give answer in 75 word each.
(vi) Question No. 21 to 23 carries 04 marks each, give answer in 120 word each.

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1. Choose and Write the correct option. **(1*6=6)**

(i) Tincture is soluble in -

(a) Alcohol solution (b) Iodinesolution

(c) Water (d) All of the above

(ii) The momentum of an object of mass m and velocity v will be-

(a) mv^2 (b) $(mv)^2$

(c) mv/2 (d) mv

(iii) The weight of an object on Earth is 30 N. Its weight on the Moon will he-

(a)30 N (b)24 N

(c) 5N (d) 36 N

(iv)Which of the following elements have atomicity two?

(a) Argon and helium (b) Oxygen and hydrogen

(c) Phosphorus and sulfur (d) All of the above

(v)Which scientist first presented the atomic model?

(a)J.J. Thomson (b) John Dalton

(c) Rutherford (d) Goldstein

(vi)What is the rate of work done is called?

(a) energy (b) power (c) force (d) displacement

2. Fill in the blanks - **(1*6=6)**

(i) Milk is a.....solution.

(ii) The cell wall of plants is made of.....

(iii)The thrust applied per unit area is called.....

(iv)Solid carbon dioxide is also known as .....ice.
(v)The neutral particle in the nucleus of an atom is.....
(vi) Ability to do work is called.....

3. Choose true/false - **(1*6=6)**

(i) Colloid is a homogeneous mixture.
(ii) There are two types of endoplasmic reticulum
(iii) The first law of motion is also called the law of inertia.
(iv)The rate of evaporation decreases as the surface area increases.
(v) The SI unit of power is watt.
(vi) Asil is a local breed of chicken.

4. Match the correct pairs – **(1*6=6)**

(i) High compressibility	(a)F= ma
(ii)Bromine	(b)treatment of cancer
(iii)acceleration	(c)gas
(iv) Second law of motion	(d)vermicompost
(v) Cobalt	(e)velocity change/time taken
(vi) Earthworm	(f)non-metal
	(g)m+a

5. Answer in one word/sentence - **(1*6=6)**

(i) What is the dispersed phase in jelly and cheese?
(ii) Write the SI unit of velocity.
(iii) Name the tissue located in the brain.
(iv) What is the SI unit of force?
(v) What is the melting point of water on the Kelvin scale?
(vi) What are chemically prepared plant nutrients called?

6 Write two properties of metals. 2

Or

Write two properties of non-metals.

What is the function of vacuole? 2

Or

Write two functions of mitochondria.

Or 2

What is average speed?

9. Write two main functions of stomata.

Or 2

Write the functions of sclerenchyma tissue.

10. When a moving bus stops suddenly, why do you lean forward? 2

Or

Write the first law of motion

11. Write Archimedes' principle 2

Or

What is called buoyant force?

12. What do you understand by evaporation? 2

Or

Define sublimation. Give examples also.

13. What are polyatomic ions? Give examples. 2

Or

What do you understand by molecule and atom?

14. What are isotopes? Write an example. 2

Or

What are isobars? Write an example.

15. What is the kinetic energy of an object? 2

Or

What is the potential energy of an object?

16. What are macronutrients and why are they called macronutrients? 02

Or

How do plants get their nutrition?

17. Write the names of two foreign breeds of cow. 2

Or

Write the names of two indigenous breeds of cow.

18. Draw a labeled diagram of an animal cell. 3

Or

Write three features of a plant cell.

19. Write the limitations of Rutherford's atomic model 3

Or

Explain Bohr's atomic model.

20. The gravitational force on the surface of the Moon is 1/6 times the gravitational force on the Earth's surface. What will be the weight in Newton of a 10 kg object on the Moon and on Earth? 3

Or

A stone is dropped from the top of a 19.6 m hir' ·or. Find its final velocity before reaching the earth ($g = 9.8ms^{-2}$)

21. An athlete completes one round of a circular track whose diameter is 200 m in 40s What distance will he cover after 2 min 20s and what will be hisDisplacement? 4

Or

While traveling to school by car, Abdul finds the average speed to be 20 kmh^{-1} While returning via the same route, there is less crowd and the average speed is 40 kmh^{-1} What is Abdul's average speed in the entire journey?

22. Name the elements present in the following compounds - 4

1.Slaked lime, 2. Hydrogen bromide

3. Baking powder (baking soda) 4.Potassium sulphate

Or

Calculate the molar mass of the following substances:

1.Ethyne C_2H_2, 2.Sulfur molecule S_8, 3.Hydrochloric acid HCl 4.Nitric acid HNO_3

23. Write any 4 difference between parenchyma and collenchymas tissue. 4

Or

Write any 4 difference between striated and non striated muscles.