

Class 10

UNIT TEST - 2, AUGUST- 2024

SCIENCE

[Max. Marks: 50]

Time Allowed : 1.30 Hours]

PART - I

0x1= 9

I. Choose the best answer.

1. The value of Universal gas constant
 - a) $3.81 \text{ J mol}^{-1} \text{ K}^{-1}$
 - b) $8.03 \text{ J mol}^{-1} \text{ K}^{-1}$
 - c) $1.38 \text{ J mol}^{-1} \text{ K}^{-1}$
 - d) $8.31 \text{ J mol}^{-1} \text{ K}^{-1}$
2. If a substance is Heated or Cooled the change in mass of that substance is -----
 - (a) Positive
 - (b) Negative
 - (c) Zero
 - (d) None of the above
3. Which of the following is the Universal Solvent?
 - (a) Acetone
 - (b) Benzene
 - (c) Water
 - (d) Alcohol
4. Which of the following is Hygroscopic in Nature?
 - (a) Ferric Chloride
 - (b) Copper Sulphate Penta Hydrate
 - (c) Silica Gel
 - (d) None of the above
5. "Heart of Heart" is called -----
 - (a) SA node
 - (b) AV Node
 - (c) Puckinje Fibres
 - (d) Bundle of His
6. Bipolar neurons are found in -----
 - (a) Retina of Eye
 - (b) Cerebral cortex
 - (c) Embryo
 - (d) Respiratory epithelium
7. Vomiting centre is located in -----
 - (a) Muscles
 - (b) Axons
 - (c) Dendrites
 - (d) Cyton
8. Avena coleptile test was conducted by
 - (a) Darwin
 - (b) N.Smit
 - (c) Paal
 - (d) F.W Went
9. Which one is referred as "Master Gland"?
 - (a) Pineal Gland
 - (b) Pituitary Gland
 - (c) Thyroid Gland
 - (d) Adrenal Gland

PART - II

II. Answer any four of the following questions. (Q.No.15 is compulsory)

4x2=8

10. Define Hydrated Salt

11. Match the following.

- | | | |
|------------------|---|---|
| 1. Blue Vitrol | - | $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ |
| 2. Gypsum | - | CaO |
| 3. Deliquescence | - | $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ |
| 4. Hygroscopic | - | NaOH |

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12. Who discovered RH Factor? Why was it named so?
13. Define Reflex Arc.
14. What are Synthetic Auxins? Give Examples?
15. Keeping the temperature as constant, a gas is compressed four times of its initial pressure. The Volume of gas in the container changing from 20 cc (V_1) to V_2 cc. Find the Final Volume V_2 .

PART - III

III. Answer any three of the following. (Q.No.20 is compulsory)

3x4=12

16. i) State Boyle's Law ii) State the Law of Volume
17. Enumerate the Functions of Blood.
18. Differentiate between:
 - i) Voluntary and Involuntary Actions
 - ii) Medullated and Non - Medullated nerve fibre.
19. Name the Gaseous Plant Hormone. Describe its three different Actions in Plants.
20. What happens when $MgSO_4 \cdot 7H_2O$ is Heated? Write the appropriate equation?

PART - IV

IV. Note : Answer in detail.

3x7=21

21. a) i) Derive the Ideal Gas equation.

(OR)

 b) i) Explain the experiment of Measuring the real and apparent expansion of a liquid with a neat diagram.
22. a) i) In what way hygroscopic substances differ from Deliquescent Substance.

(OR)

 ii) A solution is prepared by Dissolving 45g of Sugar in 180 g of water. Calculate the Mass Percentage of Solute.
- b) i) What is Transpiration? give an Importance of Transpiration.
23. a) i) With a neat labelled Diagram explain the structure of a Neuron.

(OR)

 b) i) What are Chemical Messengers?

(OR)

 ii) Write the Physiological effects of Gibberellins.

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