

Class : 10Register
Number**UNIT TEST - 2, AUGUST- 2024**

Time Allowed : 1.30 Hours]

SCIENCE

Chennai Dt

[Max. Marks : 50

PART - I

9x1= 9

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

- Blue Vitriol - $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
- Gypsum - CaO
- Deliquescence - $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
- 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 cc). to V_2 cc Find the Final Volume V_2

PART - III

3x4=12

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

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

3x7=21

IV. Note : Answer in detail.

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.

ii) A solution is prepared by Dissolving 45g of Sugar in 180 g of water. Calculate the Mass Percentage of Solute.

(OR)

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?

ii) Write the Physiological effects of Gibberellins.

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