

Class : 10

Register

COMMON QUARTERLY EXAMINATION - 2024 - 25**SCIENCE**

[Max. Marks : 75]

Time Allowed : 3.00 Hours]

PART - I

12x1=12

Choose the correct answer.

- Impulse is equal to
 - Rate of change of momentum
 - Change of Momentum
 - Change of Mass
 - Rate of change of mass
- Atomicity of Phosphorous is
 - 4
 - 3
 - 6
 - 7
- Which one is referred as "Master Gland"?
 - Pineal Gland
 - Pituitary Gland
 - Thyroid Gland
 - Adrenal Gland
- In India domestic circuits are supplied with an alternating current of Potential
 - $\frac{230}{220}$ V
 - $\frac{220}{230}$ V
 - $\frac{230}{240}$ V
 - $\frac{240}{230}$ V
- Deliquescence is due to
 - Strong affinity to water
 - Less affinity to water
 - Strong hatred to water
 - Inertness to water
- The _____ Units form the backbone of the DNA
 - 5 Carbon Sugar
 - Phosphate
 - Nitrogenous base
 - Sugar Phosphate
- Which of the following lens would you prefer to use while reading small letters found in a dictionary?
 - A convex lens of Focal length 5 cm
 - A concave lens of Focal length 5cm
 - A convex lens of Focal length 10 cm
 - A concave lens of Focal length 10 cm
- Neon shows Zero electron affinity due to
 - Stable arrangement of neutrons
 - Stable configuration of electrons
 - Reduced size
 - Increased density
- _____ is an instrument which records the electrical impulses, of brain
 - ECG
 - EGG
 - EEG
 - EGE
- "Heart of Heart" is called
 - SA node
 - AV node
 - Purkinje fibres
 - Bundle of His
- Nerve cells donot Possess
 - Neurilemma
 - Sarcolemma
 - Axon
 - Dentrites
- Across the period, ionic radii _____
 - Increase and then Decrease
 - Increases
 - Decreases
 - Remains constant

PART - II

II. Answer any seven questions. Q.No. 22 is compulsory.

- Define: Co efficient of real expansion, and mention its Units.
- What is Rust? Give the equation for the Formulation of Rust.
- Why is Sinoatrial node Called as Pacemaker of Heart.
- Match the items in column I to items in Column II

Column I	-	Column II
i) Electric Current	-	a) Volt
ii) Potential difference	-	b) Ohm meter
iii) Specific resistance	-	c) Watt
iv) Electrical energy	-	d) Joule
	-	e) Ampere

- Why the Relative molecular mass has no Unit?

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18. What do you understand by the term Phenotype and Genotype?
19. Difference between Systemic Circulation and Pulmonary Circulation?
20. While catching a cricket Ball, the Fielder lowers his hands Backwards. Why?
21. What is respiratory Qnotient?
22. Calculate the number of water Molecules present in one drop of water which weights 0.18g.

PART - III

Answer any seven questions .Q.No: 32 is compulsory.

7x4 = 28

23. a) Differentiate Mass and Weight (any two)
- b) Write any two properties of Light
24. a) Why are traffic signals Red in Colour?
- b) What is Power of Accommodation Eye?
25. a) Will the cool drinks give more fizz at the top of the hills or at the foot . Explain.
- b) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$ i) How many moles of Calcium carbonate are involved in this reaction
ii) How many moles of CO_2 are their in this equation
26. Differentiate between hygroscopic substances and deliquescence substances.
27. a) Minerals in the plants are not lost, when the leaf falls. Give Reason.
- b) Draw the structure of Human sperm and label the parts.
28. a) Write the Chargaff rule of DNA base pairing.
- b) Why the mature RBC in Mammals do not have Cell Organelles?
29. The electronic configuration of metal 'A' is 2, 8, 18,1 the metal 'A' with Con. H_2SO_4 forms C and D along with water. 'D' is a gaseous compound. Find A, B, C and D.
30. a) What is Guttation?
- b) Where are Estrogens Produced? What is the role of Estrogens in the Human body?
31. Identify whether the statement are True or False. Correct the False statement.
i) An anticoagulant present in the saliva of leech is called heparin.
ii) Cerebrum controls the voluntary actions of our body.
- b) Define: Reflex arc
32. Calculate the coefficient of Cubical expansion of Zine bar, whose volume is increased 0.25 m^3 from 0.3 m^3 due to the change in temperature of 50k

PART-IV

Answer all the questions in detail.

3x7=21

33. a) "Wearing helmet and fastening the seat belt is highly recommended, for safe Journey". Justify your answer using Newton's Laws of Motion.
- b) State Newton's Third Law.
- c) Give any two examples for moment of a Couple.

(OR)

- a) Differentiate series and Parallel circuit (any two)
- b) State Joule's law of Heating.
- c) What is the role of the Earthwire domestic circuits.
34. a) Give the salient features of Modern atomic theory.
- b) Identify the bond between the 'H' and 'F' in HF Molecule
- c) Name the Acid that renders Aluminium Passive.

(OR)

- a) What happens when $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ is heated? Write the appropriate equation.
- b) Write notes on Various features affecting solubility.
35. a) Luteal Phase of the Menstrual cycle is also called the secretory Phase. Give Reason.
- b) Define: Triple Fusion.
- c) Why family planning methods are not adopted by all the people of our country?

(OR)

- a) List out the Parasitic adaptations of Leech.
- b) What are the structures involved in the Protection of Brain.

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