QM

QUARTERLY EXAMINATION - 2024
SCIENCE

X - Std

Time : 3.00 Hrs

Marks : 75

PART - I

12 X 1 = 12

I   **Choose the best answer :-**

1. One kilogram force equal to
   a) 9.8 dyne   b) 9.8 X 10⁴N   c) 98 X 10⁴ dyne   d) 980 dyne

2. Which of the following one is used in camera
   a) Convex mirror   b) Convex lense   c) Concave mirror   d) Concave lense

3. The value of universal gas constant
   a) $3.81J\ mole^{-1}K^{-1}$ b) $8.03J\ mole^{-1}K^{-1}$ c) $1.381\ Jmole^{-1}K^{-1}$ d) $8.31\ Jmole^{-1}K^{-1}$

4. SI unit of resistance is
   a) mho   b) joule   c) ohm   d) ohm meter

5. Mass of 1 mole of Nitrogen atom is
   a) 28 amu   b) 14 amu   c) 28g   d) 14g

6. In modern periodic table the fourth group consist .... number of elements.
   a) 8   b) 18   c) 32   d) 34

7. .... is an important metal to form Amalgam
   a) Ag   b) Hg   c) Mg   d) Al

8. Which of the following is the universal solvent?
   a) Acetone   b) Benzene   c) Water   d) Alcohol

9. .... is ATP factory of the cell
   a) Chlorophyll   b) Cytoplasm   c) Mitochondria   d) Nucleus

10. Vomiting centre is located in
    a) Medulla Oblongata   b) Stomach   c) Cerebrum   d) hypothalamus

11. Which hormone is known as life "Saving hormone"
    a) Thyroxine   b) Insuline   c) Cortisol   d) Melatonin

12. Okazaki fragments are joined togather by ....
    a) Helicase   b) DNA ligase   c) RNA Primer   d) DNA Polymerase

PART - II

II   **Answer any seven question. Question No. 22 is compulsory :-**   7 X 2 = 14

13. *Identify whether the statement is are true (or) false. Correct the false statement.*
    (i) apparent weight of a person is always equal to him actual weight
    (ii) Momentum - m X a

14. What are the causes of "Myopia".

15. State the law of volume.

16. Give an two examples for heteroatomic molecules.

17. Filling the blank.
    (i) The Chief ore of Aluminium is ....
    (ii) The Chemical name of rust is ....

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18. (i) What is the common step in aerobic and anaerobic pathyway?

    (ii) Glycolysis take place in .... ?

19. Write the dental formula of rabbit.

20. **Match the following.**

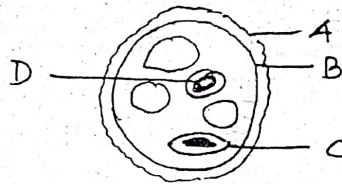| *Hormones*		*Diborders*
(i) Thyroxine	-	Tetany
(ii) Insulin	-	Simple Goitre
(iii) Parathormone	-	Diabetes insipidus
(iv) ADH	-	Diabetes mellitus

21. Identify the part A, B and C.

22. A solution was prepared by dissolving 25g of sugar in 100g of water. Calculate the mass percentage of solute.

PART - III

III   **Answer any seven question. Q. No. 32 is compulsory :-**   7 X 4 = 28

23. Define Inertia. Give its classification.

24. (i) Define - power of a lens.   (ii) Write any two advantages of telescopes.

25. What is the advantage of LED TV over the normal TV?

26. (i) Differentiate Atom and molecules.

    (ii) What is rust? Give the equation for Formation of rust.

27. In what way hygroscopic substance differ from deliquescent substance.

28. List out the parasitic adaptation in leech

29. (i) Draw and label any four parts of neuron

    (ii) What is bolting? How can it be induced artificially?

30. (i) Why is the sinoatrial node called the pacemaker of heart.   (ii) Define reflex arc.

31. (i) Define - triple fusion   (ii) What are Okazaki fragments?

32. A torch bulb is rated 3V and 600m A calculate.   a) power   b) resistance

PART - IV

IV   **Answer all the questions. Draw diagrams wherever necessary :-**   3 X 7 = 21

33. (i) Describe rocket propulsion.

    (ii) Differentiate convex lense and concavel lense. *(OR)*

    (i) State Ohm's law. (ii) Derive the ideal gas equation.

34. (i) Write value of Avogadro's number. (ii) State Avogadro hypothesis.

    (iii) Write any four application of Avogadro's law. *(OR)*

    Write notes on various factors affecting solubility.

35. (i) What is respiratory quotient. (ii) Write the physiological effect of gibberlins. *(OR)*

    (i) What is transpiration? (ii) Explain the structure of Chromosomes.

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