Reg. No.: | | | | | | |

COMMON QUARTERLY EXAMINATION - 2025

Std - X

SCIENCE

Time : 3.00 Hours | Marks:75

Part - I

12 x 1 = 12

I. Answer all the questions:

1. One kilogram force equals to
   a) 9.8 dyne b) 9.8 x 10^4N c) 98x10^4 dyne d) 980 dyne
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 abov
3. 1 horse power is equal to .....
   a) 746 watt b) 476 watt c) 674 watt d) 764 watt
4. The volume occupied by 4.4 g of CO_2 at S.T.P.
   a) 22.4 litre b) 2.24 litre c) 0.24 litre d) 0.1 litre
5. Which of the following is an oxide ore?
   a) Fe_2O_3 b) $FeCO_3$ c) NaCl d) ZnS
6. Which of the following is hygroscopic in nature?
   a) ferric chloride b) copper sulphate pentahydrate
   c) silica gel d) none of the above
7. Which is formed during anaerobic respiration.
   a) carbohydrate b) Ethyl alcohol c) Acetyl CoA d) Pyruvate
8. The heart chambers in Amphibians
   a) three b) two c) four d) one
9. Node of Ranvier is found in
   a) muscles b) axons c) dendrites d) cyton
10. Which one of the following hormones is naturally not found in plants.
    a) 2,4-D b) GA3 c) Gibberellin d) IAA
11. Match the following:

Column I	Column 2
1) Fission	i) Spirogyra
2) Budding	ii) Amoeba
3) Fragmentation	iii) Yeast

    a) 1-iii 2-i 3-ii b) i-ii 2-iii 3-i c) 1-i 2-iii 3-ii d) 1-iii 2-ii 3-i
12. The ..... units form the backbone of the DNA.
    a) Deoxy Ribose sugar b) Phosphate c) Nitrogenous bases
    d) sugar phosphate

Part - II

II. Answer any 7 of the following questions.
(Question No. 22 is compulsory) 7 x 2 = 14

13. Define inertia. Give its classification.
14. Why does the sky appear in blue colour?
15. Give any two examples for heterodiatomic molecules.
16. What is rust? Give the equation for formation of rust.
17. The aquatic animals live more in cold region why?

18. Why are the rings of cartilages found in trachea of rabbit?
19. Why is the sinoatrial node called the pacemaker of heart?
20. Differentiate between the voluntary and involuntary actions.
21. Draw the following diagram and mention its parts.

22. Calculate the current and the resistance of a 100W, 200V electric bulb in an electric circuit.

Part - III

III. Answer any 7 f the following questions (Q. No. 32 compulsory): **7 x 4 = 28**

23. Give the applications of universal law of gravitation.
24. Derive the ideal gas equation.
25. a) Name any two devices, which are working on the heating effect of the electric current? (2)
    b) State Ohm's law. (2)
26. Write the difference between atoms and molecules.
27. Differentiate between aerobic and Anaerobic respiration.
28. How does locomotion take place in Leech?
29. What is transpiration? Give the importance of transpiration.
30. Name the gaseous plant hormone. Describe its three different actions in plants.
31. a) What are allosomes? (2)
    b) What are okazaki fragments? (2)
32. Metal 'A' belongs to period 3 and group 'B'. 'A' in red hot conditions reacts with steam to form 'B'. 'A' with strong alkali forms 'C'. Find A, B and C with reactions.

Part - IV

IV. Answer all the questions. **3 x 7 = 21**

33. a) i) Differentiate the eye defects. Myopia and Hypermetropia. (5)
    ii) What is power of accommodation of eyes? (2) **(OR)**
    b) i) State Joule's law of heating.
    ii) An alloy of nickel and chromium is used as the heating element. Why?
    iii) How does a fuse wire protect electrical appliances?
34. a) i) Define corrosion. (2)
    ii) What are the types of corrosion? (2)
    iii) What are the methods of preventing corrosion? **(OR)**
    b) i) Write notes on (a) saturated solution b) unsaturated solution. (4)
    ii) What happens when $MgSO_4.7H_2O$ is heated? Write the appropriate equation. (3)
35. a) Why are leucocytes classified as granulocytes and agranulocytes? Name each cell and mention its functions. **(OR)**
    b) With a neat labelled diagram describe the parts of a typical aniospermic ovule.
