COMMON QUARTERLY EXAM - 2024
Standard - X

Time : 3.00 hrs   SCIENCE   Marks: 75

Part - I

I. Choose the correct answer and write it with option code: 12×1=12

1) Impulse is equal to
   a) rate of change of momentum   b) rate of force and time
   c) change of momentum   d) rate of change of mass

2) The eye defect "presbyopia" can be corrected by
   a) Convex lens   b) Concave lens   c) Convex mirror   d) Bi focal lenses

3) The value of universal gas constant
   a) 3.81 $Jmol^{-1}K^{-1}$ b) 8.03 $Jmol^{-1}K^{-1}$ c) 1.38 $Jmol^{-1}K^{-1}$ d) 8.31 $Jmol^{-1}K^{-1}$

4) SI unit of resistance is
   a) Ohm   b) Joule   c) mho   d) ohm meter

5) Which of the following represents 1 amu?
   a) Mass of a C - 12 atom   b) Mass of a hydrogen atom
   c) 1/12th of the mass of a C - 12 atom d) Mass of O - 16 atom

6) What is the formula of Blue vitrol _____
   a) $CuSO_4 \times H_2O$ b) $CaSO_4.2H_2O$ c) $FeSO_4.7H_2O$ d) $CuSO_4.5H_2O$

7) The process of coating the surface of metal with a thin layer a zinc is called _____
   a) painting   b) thinning   c) galavanization   d) electroplating

8) Kreb's cycle take place in
   a) chloroplast   b) mitochondrial matrix
   c) stomata   d) inner mitochondrial membrane

9) The segments of leech are known as _____
   a) metameres   b) proglottids   c) strobila   d) All the above

10) Which of the correct sequence of blood flow
    a) Ventricle → atrium → Vein → arteries
    b) atrium → Ventricle → Vein → arteries
    c) atrium → Ventricle → arteries → Vein
    d) Ventricles → Vein → atrium → arteries

11) Which harmone secreted thymus gland
    a) oxytosin   b) Thymosin   c) pinial gland   d) Thyroxin

12) The _____ units form the backbone of the DNA
    a) 5 carbon sugar   b) phosphate   c) Nitrogenous base   d) Sugar phosphate

Part - II

**II. Answer any 7 questions:- (Q.No.22 is compulsory)**   7×2=14

13) State Newton's second law.
14) Distinguish between ideal gas and real gas.
15) What is rust? Give the equation for formation of rust?
16) Classify the following substance into deliquescent hydroscopic.
    Con sulphuric acid, Copper sulphate penta hydrate, Silica gel, Calcium chloride and Gypsum salt.
17) Write the reaction for photosynthesis?
18) a) Give the common name of the Hirudinaria granulosa.
    b) What does CNS stands for?

(2)   **X SCIENCE**

19) Draw and label the diagram.
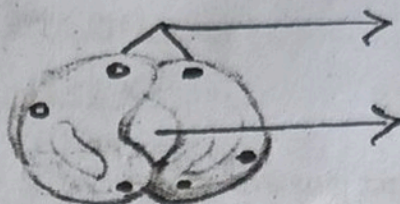
20) What is bolting? How can it be induced artificially?
21) What do you understand by the term phenotype and genotype?
22) The work done in moving a charge of 10C across two points in a circuit is 100J. What is the potential difference between the points.

Part - III

III. Answer any 7 questions:- (Q.No.32 is compulsory)   7×4=28
23) Define inertia. Give its classification.
24) a) List any 2 properties of light.
    b) Why does the sky appear in blue colour?
25) Match the items in column I to the items II
    i) electric current   -   volt
    ii) potential difference   -   ohm meter
    iii) specific resistance   -   watt
    iv) electric power   -   ampere
26) a) What happens when $MgSO_4.7H_2O$ is headed: Write the appropriate equation.
    b) Define Solubility.
27) Fill in the blanks:-
    a) .... forms the basis of mordern periodictable
    b) The chief ore of Aluminium is ....
    c) Assertion: Magnesium is used to protect steel from rusting.
       Reason: Magnesium is more reactive than iron
    i) A and R are correct. R explain the A
    ii) A is correct R is wrong   iii) A is wrong R is correct
28) Differentiate the following
    aerobic and anaerobic respiration.
29) List out the parasitic adaptation in leech.
30) State whether true or false.
    a) The phloem is responsible for the translocation of food.
    b) When guard cells lose water the stomata opens.
    c) Bring out any two physiological activities of abscisic acid?
31) Enumerate thge functions of blood.
32) a) Identify the bond between H and in HF molecule
    b) What property forms the basis of Identification?
    c) How does the property vary in periods and in groups?

Part - IV

IV. Answer in detail:-   3×7=21
33) What are the types of inertia? Give an example for each.   [or]
    Derive the ideal gas equation.
34) a) Give the sailent feature of "Modern atomic theory". [5 marks]
    b) Calculation of molecular mass of CO_2. [2 marks]   [or]
    Write note on Various factors affecting solubility.
35) With a neat labelled diagram explain the structure of a neuron.
                            [Explanation -5, Diagram - 2] [or]
    With a neat labelled diagram describe the parts of a typical angiospermic ovule.
                            [Diagram - 2 , Explanation - 5]

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