CLASS   :   X   **MARKS   : 75**

EXAM NO.   :   **DURATION   : 3 Hrs.**

PART – I

Note   : i) Answer all questions.   **12 x 1 = 12**

ii) Choose the correct answer form the four alternatives and write the option code and the corresponding answer

1. The mass of a body is measured on planet Earth as M kg. When it is taken to a planet of radius half that of Earth then its value will be _____ kg.

   a) 4M   b) 2M   c) M/4   d) M

2. The eye defect presbyopia can be corrected by

   a) convex lens   b) concave lens   c) convex mirror   d) bifocal lens

3. Sound propagates maximum in

   a) gas   b) liquid   c) solid   d) all

4. Mass of 1 mole of nitrogen atom is

   a) 28 amu   b) 14 amu   c) 28 g   d) 14 g

5. The molecular formula of an open chain organic compound is C_3H_6. The class of the compound is

   a) alkane   b) alkene   c) alkyne   d) alcohol

6. _____ forms the basis of modern periodic table.

   a) Atomic number b) Mass number   c) Proton   d) Electron

7. Anticoagulant Hirudin is produced by

   a) Leech   b) Tapeworm   c) Earthworm   d) Rabbit

8. _____ play an important role in clotting of blood

   a) Leucocytes   b) Platelets   c) Lymphocytes   d) Monocytes

9. A neuron contains all cell organelles except

   a) Nucleus   b) cytoplasm   c) centrioles   d) axon

10. Organisms with modified endogenous gene or a foreign gene are also known as

    a) transgenic organism   b) genetically modified organism
    c) mutated organism   d) both a and b

11. The theory of natural selection for evolution was proposed by

    a) Charles Darwin b) W F.Libby   c) Ernst Haeckel   d) Leonardo da vinci

12. 2n-2 is known as

    a) Monosomy   b) Trisomy   c) Nullismy   d) none of the above

PART – II

Note   : Answer any seven questions:

Q.No. 22 is compulsory.   **7 x 2 = 14**

13. Correct the statement:

    a) Weight of a body is greater at the equator and lesser at the polar region.

    b) Apparent weight of a person is always equal to his actual weight.

14. Define power of a lens.

15. Which hazardous radiation is the cause for the genetic disorders?

16. Give an example for each

    i. gas in liquid   ii. solid in liquid   iii. solid in solid   iv. gas in gas

17.   Differentiate soaps and detergents.

18   Explain excretory system in leech.

19.   What is transpiration pull?

20   What is synapse?

21.   What is acromegaly?

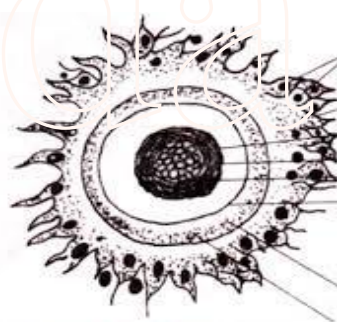22.   A charge of 20 Coulomb flows through a bulb in 5 seconds. How much current passes through the bulb?

PART – III

Note : Answer any seven questions:

    Q.no. 32 is compulsory.   **7 x 4 = 28**

23.   i. Differentiate mass and weight.

      ii. State the principles of moments.

24.   i. Draw a ray diagram to show the image formed by a convex lens, when the object is placed between F and 2F.

      ii. What is the use of simple microscope?

25.   i. With the help of a circuit diagram, derive the formula for the resultant resistance of three resistance connected in series.

26.   Give the salient features of Modern Atomic Theory.

27.   How will you classify hydrocarbons?

28.   Identify the picture and label the parts.

29.   Describe the structure of chromosome.

30   i. What are extermophiles?

      ii. How is a mule produced?

31   i. What are the symptoms of AIDS?

      ii. What are the advantages of using biogas?

32   i. Identify saturated and unsaturated compound containing double and triple bond.

      ii. The amount of work done to move 20 C charges from one point to another is 220 J. What is the potential difference between these two points?

PART – IV

Note : Answer all the questions:

Draw diagram wherever necessary.   **3 x 7 = 21**

33.   a) i Explain the construction and working of a compound microscope

        ii. What is refractive index?

(OR)

    b) Determine the following quantities of the given equivalent:

    i. the equivalent resistance.

    ii. Total current through the circuit.

    iii. The current through each resistor

    iv. Voltage drop across resistor.

    v. Power dissipated in each resistor.

34.   a)i. Explain the classification based on the direction of the reaction.

        ii. Define combination reaction.

(OR)

    b) i. Calculate the weight of a molecule of the compound $C_{60}H_{122}$.

        ii. Calculate the gram of 4 moles of glucose.

        iii. 7.5 litres of ethanol is present in 15 litres of aqueous solutions of ethanol. Calculate volume percent of ethanol solution.

35.   a) i. Bring out the physiological activities of abscisic cid.

        ii. Trace the pathway followed by water molecules from the time it enters a plant root to the time it escapes into the atmosphere from a leaf.

    iii. What does CNS stand for?

(OR)

    b) Explain the structure of neuron.

Answer key

Q.No.	Option	Answer
1	D	M
2	D	Bifocal lens
3	C	solid
4	B	14amu
5	B	Alkene
6	A	Atomic number
7	A	Leech
8	B	Platelets
9	C	Centrioles
10	D	Both a and b
11	A	Charles Darwin
12	C	Nullisomy

Prepared by,

Ms.Anu M.Sc., B.ed.,

9585597785