TRICHY

COMMON FIRST MID - TERM TEST - 2019

STANDARD - X

Reg.No.

Time : 1.30 hours

SCIENCE

Marks: 50

SECTION - I

I. Choose the best answer: **5×1=5**

1. The unit of 'g' is ms^{-2}. It can be also expressed as
   a) cms^{-1} b) Nkg^{-1} c) $Nm^{-2}kg^{-1}$ d) cm^2s^{-2}
2. The gram molecular mass of oxygen molecule is
   a) 16g b) 18g c) 32g d) 17g
3. Which of the following is a triatomic molecule?
   a) Glucose b) Helium c) Carbon dioxide d) Hydrogen
4. Kreb's cycle takes place in
   a) Chloroplast b) Mitochondrial matrix
   c) Stomata d) inner Mitochondrial Membrane
5. The body of leech has
   a) 23 segments b) 33 segments c) 38 segments d) 30 segments

II. Fill in the blanks: **5×1=5**

6. The path of the light is called as _____.
7. _____ and _____ are called inner transition elements.
8. Structures in roots that help to absorb water are _____.
9. _____ carries the impulse towards the cell body.
10. The part of human brain which acts as relay center is _____.

SECTION - II

III. Answer any ten questions: **10×2=20**

11. Differentiate mass and weight.
12. If a 10N and a 25N forces are acting opposite to one another. Find the resultant force and the direction of action of the resultant force.
13. State Snell's law.
14. Why are traffic signals red in colour?
15. Give any two examples for heterodiatomic molecules.
16. Find the percentage of nitrogen in ammonia.
17. Assertion and Reason :
    Assertion : The nature of bond in HF moelcule is ionic.
    Reason : The electronegativity difference between H and F is 1.9.
    i) A and R are correct, R explains the A ii) A is wrong, R is correct
    iii) A is correct, R is wrong iv) A and R are correct, R doesn't explains A.
18. A is a silvery white metal. A combines with O_2 to form B at 800°C, the alloy of A is used in making the aircraft. Find A and B.

19. Draw and label the structure of Oxysomes.
20. State whether the statements are true or False. Correct the false statement:
21. Write the dental formula of rabbit.
22. *Match the following:*

Organ	-	Location
a) Brain	-	abdominal cavity
b) Kidney	-	mediastinum
c) Heart	-	enclosed in thoracic cavity
d) Lungs	-	cranial cavity

23. 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.
24. The complete events of cardiac cycle last for 0.8 sec. What is the timing for each event?
25. Define reflex arc.

SECTION - III

IV. Answer any four questions by choosing one question from each part: 4×5=20

PART - A

26. a) State and prove the law of conservation of linear momentum. **(OR)**
    b) List any five properties of light.

PART - B

27. a) Give the salient features of "Modern atomic theory". **(OR)**
    b) The electronic configuration of metal A is 2, 8, 18, 1. The metal A when exposed to air and moisture forms B a green layered compound. A with con.H_2SO_4 forms C and D along with water. D is a gaseous compound. Find A, B, C and D.
28. a) Differentiate the following :
        i) Monocot root and Dicot root
        ii) Aerobic and Anaerobic respiration **(OR)**
    b) How to plants absorb water? Explain.
29. a) Explain the male reproductive system of rabbit with a labelled diagram. **(OR)**
    b) Our body contains a large number of cells 'L' which are the longest cells in the body. L has long and short branch called as 'M' and 'N' respectively. There is a gap 'O' between two 'L' cells, through which nerve impulse transfer by release of chemical substance 'P'.
        i) Name the cells L
        ii) What are M and N?
        iii) What is the gap O?
        iv) Name the chemical substance P
