FIRST MID TERM TEST - 2024

Standard X

Reg.No

SCIENCE

Time : 1.30 hrs *Marks : 50*

Part - I

I. Choose the correct answer: 10 x 1 = 10

1. The unit of 'g' is ms^{-2}. it can be also expressed as _____.
   a) cms^{-1} b) $N\,kg^{-1}$ c) $Nm^2\,Kg^{-1}$ d) $cm^2\,s^{-2}$
2. Power of lens is –4D, then it's focal length is _____.
   a) 4 m b) –40 m c) –0.25 m d) –2.5 m
3. 1 mole of any substance contains _____ molecules.
   a) 6.023×10^{23} b) 6.023×10^{-23} c) 3.0115×10^{23} d) 12.046×10^{23}
4. Neon shows zero electron affinity due to _____.
   a) stable arrangement of neutrons b) stable configurations of electrons
   c) reduced size d) Increased density
5. Oxygen is produced at what point during photosynthesis?
   a) when ATP is connected to ADP b) when CO_2 is fixed
   c) when H_2O is splitted d) all of these
6. In Leech locomotion is performed by _____.
   a) Anterior sucker b) Parapodia
   c) Setae d) Contraction and Relaxation of muscles
7. Atrioventricular bundle was discovered by _____.
   a) William Harvey b) His
   c) Edward Jenner d) None of the above
8. The wall of human heart is made of
   a) endocardium b) epicardium c) myocardium d) all the above
9. In Reflex action, the reflex arc is formed by _____.
   a) brain, spinal cord, muscle b) receptor, muscle, spinal cord
   c) muscle, receptor, brain d) receptor, spinal cord, muscle
10. The eye defect "Presbyopia" can be corrected by _____.
    a) convex lens b) concave lens c) convex mirror d) bifocal lenses

Part - II

II. Answer any 5 questions. (Q.No.18 is compulsory) 5 x 2 = 10

11. Define Inertia. Give its classification.
12. State Snell's Law.
13. Differentiate Convex lens and Concave lens.
14. Give any two examples for hetero diatomic molecules.
15. Why should the light dependent reaction occur before the light independent reaction?
16. State whether the statements are True or False. (Correct the false statement)
    i) Anaerobic respiration produces more ATP than Aerobic respiration.
    ii) Plant lose mater by the process of transpiration.

17. Fill in the blanks.
    i) Water enters into the root hair cell through _____ membrane.
    ii) _____ is the longest cell in our body.
18. Calculate the velocity of a moving body of mass 5 kg whose linear momentum is 2.5 kg ms^{-1}.

Part - III

III. Answer briefly any 4 questions. (Q.No.25 is compulsory) 4 x 4 = 16

19. List out any five properties of light.
20. A is a silvery white metal. A combines with O_2 to form B at 800°C.
    a) The alloy of A is used in making the aircraft. Find A and B.
    b) what is Rust?
21. Match the following :

a)	1. Amphicribal	-	Dracaena
	2. Cambium	-	Fern
	3. Amphi Vasal	-	Secondary growth
	4. Xylem	-	Conduction of water

    b) Why is the Sinoatrial node called the pacemaker of heart?
22. i) Draw the structure of neuron and label the parts. (2 marks)
    ii) Write the reaction of photosynthesis.
23. Enumerate the functions of blood.
24. Differentiate between Aerobic and Anaerobic respiration.
25. Calculate the number of moles in
    i) 27 g of Al ii) 1.5 x 10^{23} molecules of NH_4Cl

Part - IV

IV. Answer in detailed. 2 x 7 = 14

26. Deduce the equation of a force using Newton's second law of motion.

(OR)

    i) Give the salient features of modern atomic theory. (5 marks)
    ii) Assertion and Reason - (2 marks)
    Assertion : An uncleaned copper vessel is covered with greenish layer.
    Reason : Copper is not attacked by Alkali
    a) A is wrong, R is correct
    b) A and R are correct, R does not explain A
27. Describe and name three stages of cellular respiration that aerobic organisms use to obtain energy from glucose.

(OR)

    i) List out the parasitic adaptations in Leech. *(5 marks)*
    ii) Define 'Reflex arc'

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