H

COMMON FIRST MID-TERM TEST – 2023

Standard X

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

SCIENCE

Time: 1.30 hrs. Part - I Marks: 50

I. Choose the correct answer: 7 x 1 = 7

1. Plotting a graph for momentum on the y-axis and time on x-axis slope of momentum-time graph gives
   a) Impulsive force b) acceleration
   c) force d) rate of force
2. A convex lens from a real, diminished point sized image at focus. Then the position of the object is at
   a) focus b) infinity
   c) at 2f d) between f and 2f
3. Which of the following is a triatomic molecule?
   a) glucose b) helium
   c) carbon dioxide d) hydrogen
4. Which group consists noble gases
   a) 14 b) 15 c) 17 d) 18
5. Kerb's cycle takes place in
   a) chloroplast b) mitochondrial matrix
   c) stomata d) inner mitochondrial membrane
6. The segments of leech are known as
   a) metamers b) proglottids
   c) strobila d) all the above
7. 'Heart of heart' is called
   a) SA node b) AV node
   c) purkinje fibers d) bundle of His

Part - II

II. Answer any 5 questions. (Q.No.15 is compulsory) 5 x 2 = 10

8. Define inertia. Give its classification.
9. What is molar volume of a gas?
10. What is rust? Give the equation for formation of rust.
11. What are the uses of copper?
12. Draw and label the structure of oxysomes.
13. Who discovered Rh factor? Why was it named so?
14. What are the structures involved in the protection of brain?
15. Draw a ray diagram to show the image formed by a convex lens when the object is placed between F and 2F.

Part - III

III. Answer any 3 questions. (Q.No.20 is compulsory) 3 x 4 = 12

16. Describe rocket propulsion.
17. Differentiate convex lens and concave lens.
18. a) How is diastema formed in rabbit?
    b) List out the parasitic adaptations in leech.
19. a) ***Match the following :***

i) Missil's granules	-	Fore brain
ii) Hypothalamus	-	Peripheral nervous system
iii) Cerebellum	-	Cyton
iv) Schwann cell	-	Hind brain

    b) Give an example for conditioned reflexes.
21. Calculate the number of moles in
    i) 27 g of Al
    ii) 1.51×10^{23} molecules of NH_4Cl

Part - IV

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

21. a) i) Classify the types of force based on their application.
    ii) Deduce the equation of a force using Newton's second law of motion.

(OR)

    b) i) List any five properties of light.
    ii) State Snell's law.
22. a) i) Derive relationship between Relative molecular mass and Vapour density.
    ii) Define : Atomicity

(OR)

    b) i) A is a reddish brown metal, which combines with O_2 at <1370K gives B, a black coloured compound. At a temperature >1370K, A gives C which is red colour. Find A, B and C with reaction.
    ii) What is Amalgam?
23. a) i) Differentiate monocot root and dicot root.
    ii) Give an account on vascular bundle of dicot stem.

(OR)

    b) What is Transpiration? Give the importance of transpiration.

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