

S**MONTHLY TEST - 2024****Standard - X****Time : 1.30 hrs****SCIENCE****Marks: 50****I. Choose the correct answer:-****7×1=7**

- 1) Plotting a graph for momentum on the Y axis and a time on x axis slope of momentum - time graph gives
 - a) Impulsive force
 - b) Acceleration
 - c) Force
 - d) Rate of force
- 2) Magnification of a convex lens is
 - a) Positive
 - b) Negative
 - c) Either positive or negative
 - d) zero
- 3) The volume occupied by 4.4g of CO₂ at STP
 - a) 22.4 litre
 - b) 2.24 litre
 - c) 0.24 litre
 - d) 0.1 litre
- 4) Krebs's cycle takes place in
 - a) Chloroplast
 - b) Mitochondrial matrix
 - c) Stomata
 - d) Inner mitochondrial membrane
- 5) The brain of leech lies above the
 - a) Mouth
 - b) Buccal cavity
 - c) Pharynx
 - d) Crop
- 6) The wall of human heart is made of
 - a) Endocardium
 - b) Epicardium
 - c) Myocardium
 - d) All of the above
- 7) Choose the correct statements from the following
 - i) Matured mammalian RBC does not have nucleus.
 - ii) Respiratory pigments are present in neutrophils.
 - iii) Percentage of basophils is the lowest among the leukocytes
 - iv) Thrombocytes increase in numbers during infection and inflammation.
 - a) (ii) and (iv) only
 - b) (i) and (iii) only
 - c) (i) and (iv) only
 - d) (i), (ii) and (iii) only

Part - II**II. Answer any five of the following.****(Question number 15 compulsory)****5×2=10**

- 8) Differentiate mass and weight.
- 9) State Rayleigh's law of scattering.
- 10) Write the different types of isotopes of Oxygen and its percentage abundance.
- 11) Draw and label the structure of oxysomes.
- 12) a) How many pairs of testes are present in leech?
b) What does CNS stand for?
- 13) Why are the rings of cartilages found in trachea of the rabbit?

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- 14) a) Normal blood pressure is _____
 b) What is the colour of the blood red?

15) Find the percentage of nitrogen in ammonia.

III. Answer any three of the following questions.

(Question number 20 compulsory)

3×4=12

16) a) State Newton's second law

b) While catching a cricket ball the fielder moves his hands backwards. Why?

17) Differentiate: Aerobic and anaerobic respiration.

18) How does locomotion take place in leech?

19) Enumerate the functions of blood.

20) An object is placed at a distance 20cm from a convex lens of focal length 10cm. Find the image distance and the nature of the image.

IV. Answer all the questions:-

Draw diagrams wherever necessary:-

3×7=21

21) a) i) Deduce the equation of a force using Newton's Second Law of motion.

ii) How does an astronaut float in a space shuttle? [or]

b) i) List any five properties of light.

ii) Draw a ray diagram to show the image formed by a convex lens and object is placed between F and 2F.

22) a) i) Give the salient features of "Modern Atomic theory"?

ii) Calculate the gram molecular mass of H_2O . [or]

b) i) Give the applications of Avogadro's law.

ii) Differentiate: atoms and molecules

23) a) How does the light dependent reaction differ from the light independent reaction? What are the end products and reactance in each. [or]

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