CLASS: IX   MAX. MARKS: 20
DATE: 17/01/2024   TIME: 40 MINUTES

General Instructions:
  i. This question paper consists of 10 questions in 5 sections.
  ii. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
  iii. **Section A** consists of six objective type questions carrying 1 mark each.
  iv. **Section B** consists of one very short question carrying 2 marks.
  v. **Section C** consists of one short answer type question carrying 3 marks.
  vi. **Section D** consists of one descriptive question carrying 5 marks.
  vii. **Section E** consists of one case-based question carrying 4 marks with sub-parts.

SECTION – A		
Select and write one most appropriate option out of the four options given for each of the questions 1 to 4		

Q.No	Questions	Marks
1	How are skeletal muscles similar to unstriated muscles? (a) Shape of the muscle fibres (b) Multinucleated cells (c)Presence of contractile proteins (d)Involuntary mode of action	1
2	Which type of tissue correctly matches with its location? <table><tr><td>Tissue</td><td>Location</td></tr><tr><td>A)Cuboidal epithelium</td><td>Lining of trachea</td></tr><tr><td>B)Ligament</td><td>Joints of limbs</td></tr><tr><td>C)Cartilage</td><td>Inner ear</td></tr><tr><td>D)Smooth muscle</td><td>Heart</td></tr></table> (a)A (b)B (c) C (d)D	1
3	How does the buoyant force change when an object is fully immersed in a fluid? (a)Increases (b) decreases (c)remains the same (d)depends on the shape of the object	1
4	What is the molecular mass of Ethanol (C_2H_5OH)? (a) 38u (b) 68u (c) 46u (d) 30u	1
	Q. no 5 and 6 are Assertion - Reasoning based questions. **These consist of two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option from below:** **(a) Both A and R are true and R is the correct explanation of A** **(b) Both A and R are true and R is not the correct explanation of A** **(c) A is true but R is false** **(d) A is false but R is true**	
5	Assertion (A) : Specialisation of cells is advantageous for organisms. Reason(R) : It increases the operational efficiency of the organism.	1
6	Assertion (A) : On burning magnesium in oxygen, the mass of magnesium oxide formed is equal to the total mass of magnesium and oxygen. Reason(R) : In a chemical substance, the elements are always present in a definite proportion by mass.	1

	SECTION – B	

7	An element 'X' has a valency 3:
	    (a) Write the formula of its bromide.
	    (b) Write the formula of its carbonate.
		2

	SECTION – C	

8	(a) Give the chemical formulae of the following compounds and compute the ratio by mass of the combining elements in each one of them.
	        (i) Hydrogen chloride
	        (ii) Carbon dioxide
	(b) Give an example of a triatomic molecule.
		3

	SECTION-D	
9	(a) A light and a heavy object have the same momentum. What is the ratio of their kinetic energies? Which one has a larger kinetic energy? (b) A ball is dropped from a height of 10 m. If the energy of the ball reduces by 40% after striking the ground, how much high can the ball bounce back? ($g = 10 \text{ m/s}^2$)	5
	SECTION – E	
10.		4

Test	Patient's value	Normal value
RBC count(cells/mmc)	2.8	3.8-5.2
Haemoglobin(g/dl)	7.5	12-16
Platelet count(number/mmc)	285	150-400

The table given above is the blood test result of an anaemic patient.

   a) The time taken for clotting of blood in this person is normal. Why?
   b) In the above blood test result , the number of RBCs and the amount of haemoglobin is less. How are these two related?
   c) Which component of blood is considered as "Soldiers of our body"? Why?
                    OR
   c) State any four functions of blood.

*****THE END*****