

**KENDRIYA VIDYALAYA SANGATHAN, HYDERABAD REGION**  
**SAMPLE PAPER 02 FOR HALF YEARLY EXAM (2017-18)**

SUBJECT: SCIENCE (086)

**BLUE PRINT FOR HALF YEARLY EXAM: CLASS IX**

Chapter	VSA (1 mark)	SA – I (2 marks)	SA – II (3 marks)	LA (5 marks)	Practical Based Questions	Total
Matter in our Surroundings	--	--	6(2)	5(1)	2(1)	<b>13(4)</b>
Is matter around us pure	1(1)	--	6(2)	5(1)	2(1)	<b>14(5)</b>
The Fundamental Unit of life	--	2(1)	3(1)	5(1)	--	<b>10(3)</b>
Tissue	--	--	3(1)	5(1)	2(1)	<b>10(3)</b>
Improvement in food resources	--	2(1)	3(1)	--	2(1)	<b>7(3)</b>
Motion	--	--	3(1)	5(1)	2(1)	<b>10(3)</b>
Force and law of motion	1(1)	--	3(1)	5(1)	--	<b>9(3)</b>
Gravitation	--	2(1)	3(1)	--	2(1)	<b>7(3)</b>
<b>Total</b>	<b>2(2)</b>	<b>6(3)</b>	<b>30(10)</b>	<b>30(6)</b>	<b>12(6)</b>	<b>80(27)</b>

**MARKING SCHEME FOR HALF YEARLY EXAM**

SECTION	MARKS	NO. OF QUESTIONS	TOTAL
VSA	1	2	02
SA – I	2	3	06
SA – II	3	10	30
LA	5	6	30
Pract Based Quest.	2	6	12
<b>GRAND TOTAL</b>			<b>80</b>

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**SAMPLE PAPER 02 FOR HALF YEARLY EXAM (2017-18)**

**SUBJECT: SCIENCE**  
**CLASS : IX**

**MAX. MARKS : 80**  
**DURATION : 3 HRS**

**General Instructions:**

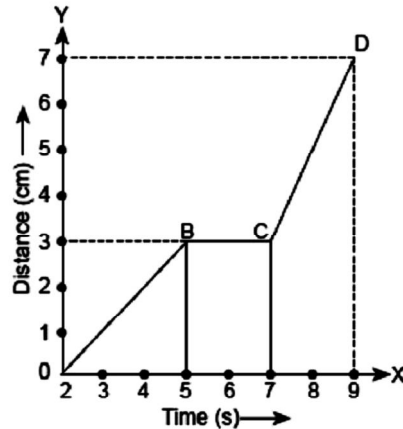
1. All questions are compulsory.
2. The question paper comprises of **two Sections, A and B**. You are to attempt both the sections.
3. All questions of **Section-A** and **Section-B** are to be attempted separately.
4. Question number **1 to 2** in **Section-A** are **one mark** question. These are to be answered in **one word** or in **one sentence**.
5. Question numbers **3 to 5** in **Section-A** are **two marks** questions. These are to be answered in about **30 words** each.
6. Question numbers **6 to 15** in **Section-A** are **three marks** questions. These are to be answered in about **50 words** each.
7. Question numbers **16 to 21** in **Section-A** are **five marks** questions. These are to be answered in about **70 words** each.
8. Question numbers **22 to 27** in **Section-B** are questions based on practical skills and are **two marks** questions.

**SECTION – A**

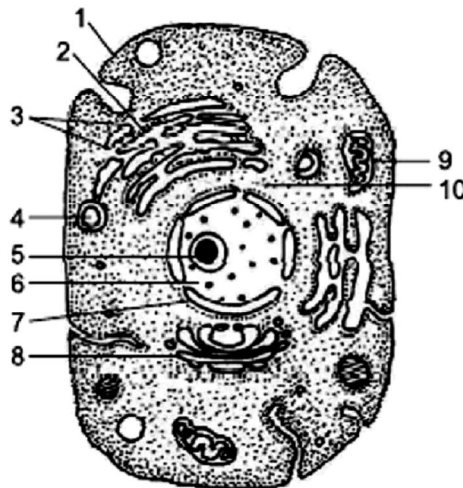
1. How can you convert a saturated solution into an unsaturated saturation?
2. State the name and type of force which is responsible for the formation of tides in the sea.
3. What is DNA? Explain its functions.
4. Derive the formula for the gravitational force using the factors on which it depends.
5. Differentiate between kharif and rabi crops. Mention the months in which these are sown. Give one example of each.
6. Define the following terms. (a) Latent heat of fusion. (b) Melting point. (c) Fusion.
7. (a) “Evaporation causes cooling”. Explain the reason for this effect.  
(b) Explain two examples from our daily life where we feel the effect of cooling due to evaporation.
8. (a) List any three characteristic of colloid.  
(b) Name the two components of a colloid.  
(c) Identify colloid from the following mixtures: Muddy water, sugar in water, ink, blood, soda water, foam
9. Calculate the amount of water required to prepare 500 g of 2.5% solution of sugar.
10. Define the following terms: Protoplasm, cytoplasm, nucleoplasm
11. (a) State two important functions of areolar tissue.  
(b) Why are skeletal muscles known as striated muscles?
12. State Archimedes’ principle. Explain the reason that a cork floats in water whereas an iron nail sinks.
13. Explain the following briefly:  
(a) A cricket ball causes much severe injury than a tennis ball on hitting a spectator.  
(b) An applied unbalanced force causes a change in momentum.  
(c) A greater force is required to impart greater velocity to an object.

14. The graph given below shows the position of a body at different times. Calculate the speed of the body as it moves from:

(i) A to B (ii) B to C (iii) C to D



15. What are weeds? Give two examples. Mention any two methods of preventing the growth of weeds.
16. Given below is a diagrammatic sketch of electron microscopic view of an animal cell : (a) Label the parts indicated by lines as 1 to 10. (b) Give two reasons to support that it is an animal cell (c) How many mitochondria are shown in the diagram?



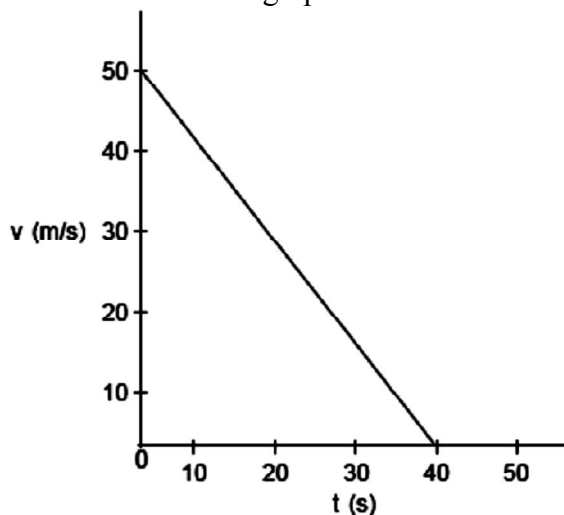
A type of animal cell

17. (a) What do you mean by a meristematic tissue?  
 (b) Mention different types of meristematic tissues present in plants. Draw a diagram showing the three types of meristematic tissues.
18. (a) Define matter. Name the state of matter in which the forces between the constituent particles are: (i) strongest. (ii) weakest.  
 (b) Give reasons for the following:  
 (i) A liquid generally flows easily.  
 (ii) Ice at  $0^{\circ}\text{C}$  appears colder to the mouth than water at  $0^{\circ}\text{C}$ . Why?  
 (iii) Doctors advise to put strips of wet cloth on the forehead of a person having high temperature.
19. A student was given a mixture of iron filing and sulphur? He was told to heat it and observe the compound.  
 (a) What is colour of the compound formed?  
 (b) Write the effect of magnet on it.  
 (c) Write the action of carbon disulphide on it.  
 (d) Describe the effect of adding dilute hydrochloric acid to it. Identify the gas and write its two properties.

20. (a) Draw a velocity-time graph for an object in uniform motion. Show that the slope of velocity time-graph gives acceleration of the body.  
 (b) An aeroplane starts from rest with an acceleration of  $3 \text{ ms}^{-2}$  and takes a run for 35 s before taking off. What is the minimum length of runway and with what velocity the plane took off?
21. (i) Define momentum. State its SI unit.  
 (ii) An object of mass 50 kg is accelerated uniformly from a velocity of 4 m/s to 8 m/s in 8 s. Calculate the initial and final momentum of the object. Also find the magnitude of the force exerted on the object.

**SECTION – B**

22. Identify the animal tissues from the given descriptions and also mention their location in the human body. Tissue 'A' - cells are filled with fat globules and the tissue acts as an insulator. Tissue 'B' – has cylindrical branched cells and the tissue shows rhythmic contraction and relaxation thought life.
23. (a) What can be depicted from the graph regarding the motion of the object?  
 (b) Find the value of acceleration from the graph.



24. (i) Arrange the following substances in increasing order of force of attraction between the particles. (a) water (b) hydrogen (c) sand  
 (ii) Why does the temperature remain constant at the melting point?
25. On dissolving chalk powder in water, a suspension is obtained. Give any four reasons to support the fact that mixture so obtained is a suspension only.
26. If the distance between two objects is increased four times, then by how many times will the mass of one of the objects be changed to maintain the same gravitational force?
27. India is a country with three fourth of the population engaged in agriculture. Even though financial conditions of some farmers do allow them to take higher level farming practices and improved agriculture technology, yet they are hesitant to use of HYV seeds with traits such as resistance to diseases and pests, high quality that would finally result in higher yield. The Government's Kisan channel solved all their apprehensions.  
 (i) What is meant by genetically modified crops?  
 (ii) What are the desired agronomic characters for fodder and cereal crops?

