

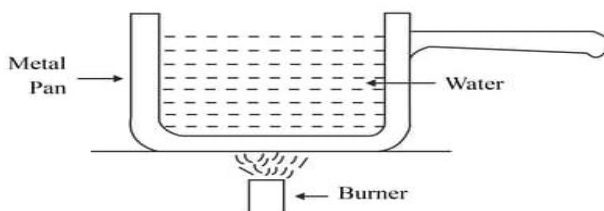
**Half Yearly Syllabus**  
**SCIENCE (Question Bank)**  
**CLASS - VII**

**CHAPTER – 2 (Nutrition in Animals)**

1. Name the mode of nutrition in which solid whole food particles is ingested. How paramecium obtain its food?
2. Name the part used by the following organisms to engulf the food particle inside their body:
  - (a) Hydra
  - (b) Spider
  - (c) Butterfly
3. Why doctors use floss to clean between the teeth?
4. In which part of the alimentary canal digestion process is maximum and why? What are the end products of carbohydrate, protein and fats.
5. Why we get hiccups or a choking sensation when we eat food in a hurry?
6. What is the location of Gastric gland? What are its secretions? Give one function for each secretion.
7. What is gastroenterology? Name the largest gland in our body. What is its secretion? What are the function of this secretion.
8. How villi designed to absorb maximum food? Draw its diagram.
9. Name the wet solid waste that leaves the body through anus. In which part it is formed and how it s formed?
10. What is cud? In which chamber of ruminant it is formed? How it is processed later in ruminants?
11. What do you mean by food vacuole? What are its functions? Name and explain the process by which amoeba obtain its nutrients
12. What causes diarrhoea in human beings? How it can be prevented and cured?
13. Can we survive only on raw, leafy vegetables/grass? Discuss.
14. A person gall bladder removed surgically as he/she was diagnosed with stone in his/her gall bladder .What kind of food items he/she should advised to avoid and why?

**CHAPTER – 3 (Heat)**

1. What is the relation between degree Celsius, degree Fahrenheit and Kelvin. Convert  $-40^{\circ}\text{C}$  into  $^{\circ}\text{F}$ .
2. Why are the pipes of solar heater and the containers of solar cooker painted black?
3. Two objects A and B have temperature  $80^{\circ}\text{C}$  and  $45^{\circ}\text{C}$  are placed together. In which direction will the heat be transferred? Give reason.
4. Why is a room heater placed near the floor and an air conditioner near the ceiling?
5. One end of the objects such as a steel spoon, a plastic scale, a pencil and a divider is put in a beaker of hot water. In which of these objects the other end will get hot?
6. Which would you prefer to keep you warm on a cold winter night: one thick woollen blanket or two thin woollen blankets joined together? Why?
7. A person has a white shirt and a black shirt. Which shirt will make him more comfortable in: (a) winter, and (b) summer? Give reasons for your answer.
8. Look at the Figure given alongside. Mark where the heat is being transferred by conduction, by convection, and by radiation.



9. What are the conditions required for the transfer of heat?
10. What do you mean by upper and lower fixed point? Give its value in degree Celsius and degree Fahrenheit.
11. What is the function of kink in clinical thermometer? Why a jerk is given to clinical thermometer after taking the reading?
12. Which thermometer is used to measure infant thermometer and explain how it is used?
13. Out of conductors and insulators which are used to cover the vehicles having inflammable substances and why?
14. What do you mean by convection current? Explain by giving an example.
15. What determines the colour of an object?

### **(CHAPTER – 4, Acids, Bases and Salts)**

1. What do you mean by alkalies? Give any four example of alkali.
2. How acids and bases are important for body metabolism?
3. Name the relationship used by lichen plant. Which indicator is obtained from lichen plant and explain how this indicator is used to identify acidic and basic solution?
4. What is the colour of china rose indicator in neutral, acidic and basic solution?
5. What happens when lime water is treated with sulphuric acid? Give its chemical equation. Also name the type of chemical equation.
6. Why neutralization reaction is considered as an exothermic reaction? Explain.
7. What is the chemical name and chemical formula of milk of magnesia, baking soda, quick lime, slaked lime or lime water, limestone and calamine.
8. Name the term used for burning sensation in stomach. Explain how it can be cure?
9. A person is stung by wasp sting, which solution (acidic/basic) you advised to person to apply on skin and why?
10. Differentiate between acids and bases chemically.
11. What is the nature of factory waste? Why it should be treated first before disposing it into the water bodies?
12. You are having water, baking soda and vinegar in three test tube. How will identify these three solution without smelling and tasting it.

### **(CHAPTER – 5, Physical and Chemical changes)**

1. What kind of change is curdling of milk and why?
2. Cutting of paper is an irreversible change, but it is a physical change. Give reason for your answer.
3. What kind of change is taken place by conversion of states of water? Justify your answer.
4. Is there any change in the mass taken place during a chemical change. If no, give reason for your answer.
5. Give an example of a change that involve both physical and chemical change other than the burning of candle.
6. Which gas is produced when baking soda is added into vinegar? How we can test the presence of this gas? Explain the help of a chemical equation.
7. What happens when an iron nail is dipped in blue colour copper sulphate solution. Also name the type of chemical equation involved.
8. Give an example of a chemical change where evolution of gas is taken place. Give its chemical equation.
9. What is the chemical formula and chemical name of rust? What are the conditions necessary for rusting?
10. What do you mean by alloy? What is its importance? Write composition of stainless steel and alnico alloy.
11. What do you mean by galvanization? For which purpose this process is used?
12. Two substances X and Y are used in our kitchen. Substance X is used as a preservative and Y is used for baking cake. When X and Y is mixed with each other a new substance Z is formed along with the evolution of carbon dioxide gas and water is also formed. Identify X, Y and Z. write the chemical equation taken place.

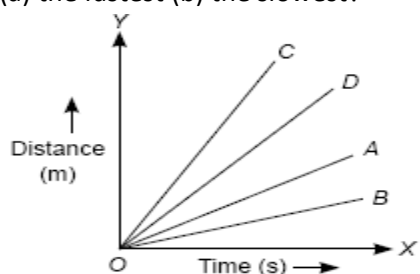
### **(CHAPTER – 6, Respiration)**

1. Name the energy currency of the cell. Where it is formed and by which process it is formed?
2. What is the site of aerobic respiration and anaerobic respiration? Give chemical equations for the two types of respiration.

- When someone runs or walk too fast, he/she may feel a throbbing pain in muscle. Why this happen? Why that person is advised to take hot water bath or massage?
- Differentiate between internal and external respiration (any four).
- What is meant by tidal volume? What is its importance? Give its average value.
- Where the lungs are located? What is the function of diaphragm in the human respiratory system?
- How alveoli are designed to exchange the gases? Explain.
- Name and explain the process by which unicellular organism take in oxygen and give out carbon dioxide.
- What is the function of gills in fish other than the exchange of gases?
- What are the different ways by which plant respire? Name the cells present on outer surface of root that help in exchange of gases through roots.
- Why one is not advised to sleep under a tree during the night?
- Plants do respiration all the time, why do we then say that plants supply oxygen to the air?

### (CHAPTER – 9, Motion and Time)

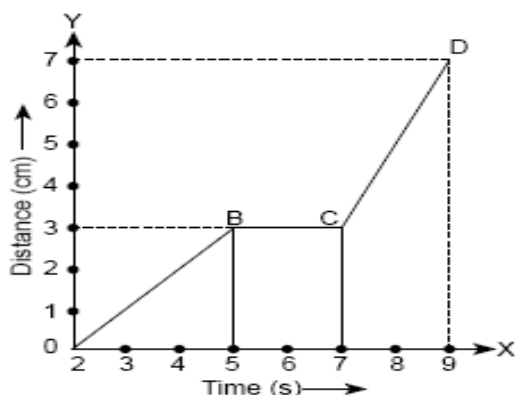
- On what factors the speed of a body depends? How these factors are related to speed? Explain mathematically.
- What do you mean by instantaneous speed? By which instrument it is measured in vehicles? What is its S.I unit?
- What do you mean by time? What is its S.I unit? In earlier time how people used to measure time?
- Why the event such as sunrise and sunset could not be used as a standard unit of time?
- Explain how water clock is used by ancient people to measure time?
- Differentiate between quartz clock and pendulum clock. How both are used to measure time?
- What do you mean by mean and extreme position of a pendulum? Draw a pendulum and label its mean and extreme position.
- What do you mean by time period? Demonstrate an activity to measure time period.
- Name the smallest unit of time and why it is known as smallest?
- How speed is related to slope of a distance – time graph? How slop of a line is calculated? Draw distance time graph for the constant and non- constant speed.
- The motion of four cars A, B, C and D is represented below. Which of the cars is travelling  
(a) the fastest (b) the slowest?



- Represent the given data graphically.

Time (in sec)	0.0	2.0	4.0	6.0
Distance (in m)	0.0	5.0	10	15.0

- A car travels from stop A to stop B with a speed of 30 km/h and then returns back to A with a speed of 50 km/h. Find the average speed of the car.
- A car travels at 54 km/h for first 20 s, 36 km/h for next 30 s and finally 18 km/h for next 10 s. Find its average speed.
- A man is walking at a uniform speed of 48 km/h. How much distance in metre as well as in kilometer he could cover in 20 minutes?
- The graph given below shows the position of a body at different times. Predict the nature of motion and calculate the speed of the body as it moves from (i) A to B (ii) B to C (iii) C to D



### (CHAPTER – 11, Light)

1. What do you mean by an image? How many types of images are there, Differentiate between them. Out of these what type of image can be obtained on screen.
2. Differentiate between regular and diffuse reflection. Which type reflection gives rise to image formation and which type of reflection helps to see various objects around us
3. When you raised your left hand in plane mirror it appears right. Name and explain the phenomenon involved in it. Why the word AMBULANCE is written in reverse order on the vehicle?
4. What is the speed of light in vacuum? Which mirror is used in periscope and kaleidoscope? On what principle it is based?
5. What do you mean by curved mirror? Why these are known as curved mirror? In what way they are different from plan mirror?
6. What type of image is formed by concave mirror? Explain with the help of an activity and draw diagram for any two cases.
7. What type of image of sun is formed by concave mirror on a sheet of paper? Why it cause the burning of paper? Explain.
8. Why concave mirror is used in solar furnace?
9. Which mirror is known as rear view mirror and explain why it is known as rear view mirror?
10. How will you identify two types of lenses without touching them? Which lens is used in magnifying glass and why?
11. Which lens is known as diverging lens and why? Draw the ray diagram to show the parallel incident rays after the refraction through the diverging lens.
12. What do you mean by dispersion of light? How it caused for rainbow formation? State two conditions that necessary for rainbow formation.
13. Who invented the Newton's disc? When it appear white? How will you show that white light composed of seven colours?
14. John is observing his image in a plane mirror. The distance between the mirror and his image is 8 m. If he moves 2 m towards the mirror, then find out the distance between John and his image.