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INDIAN SCHOOL SALALAH

FIRST TERM EXAMINATION – SEPTEMBER 2025

SCIENCE (086)

Class: VII **Date: 29/09/2025**

Time: 3 hrs. **Maximum Marks: 80**

General Instructions:

i) This question paper consists of 5 pages with 37 questions in all.
ii) All Questions are compulsory.
iii) Questions 1 -12 in Section A are multiple choice questions. Each question carries 1 mark. You should select one most appropriate option out of the four provided.
iv) Questions 13-25 in Section B carry 2 marks each.
v) Questions 26-34 in Section B carry 3 marks each.
vi) Questions 35 -37 in Section B carry 5 marks each.

SECTION A

1 Conduction is the method of transfer of heat in - **1**

(A) Gases (B) Vacuum

(C) Liquid (D) Solid

2 What is the green pigment that captures sunlight for photosynthesis? **1**

(A) Hemoglobin

(B) Stomata

(C) Chlorophyll

(D) Melanin

3 Phenolphthalein is a synthetic indicator. On adding it to acid and base separately, which colours would be observed? **1**

(A) red in acid and blue in base

(B) blue in acid and red in base

(C) pink in acid and colourless in base

(D) colourless in acid and pink in base

4 Which of these are the characteristics of a chemical change? **1**

(A) It is irreversible

(B) It is permanent

(C) New substance is formed

(D) All of the above

5 Which of the following is not a unit of speed? **1**

(A) Metre/second

(B) Second/metre

(C) km/hour

(D) km/minute

6 What is the role of xylem in plants? **1**

(A) Transport of water and minerals

(B) Transport of food

(C) Production of oxygen

(D) Exchange of gases

7 The time period of a simple pendulum depends on its: **1**

(A) Mass of the bob

(B) Amplitude

(C) Length of the string

(D) Speed

8 A solution turns the red litmus paper to blue. Excess addition of which of the following solutions would reverse the change? **1**

(A) Vinegar

(B) Baking soda

(C) Lime water

(D) Sugar solution

9 Which mode of heat transfer is responsible for the formation of sea and land breezes? **1**

(A) Conduction

(B) Radiation

(C) Convection

(D) Convection and conduction

10 Which of the following instruments is used for measuring the distance traveled by a vehicle? **1**

(A) Barometer

(B) Odometer

(C) Thermometer

(D) Speedometer

11 The raw material which is not required for photosynthesis? **1**

(A) Water

(B) Sunlight

(C) Oxygen

(D) Chlorophyll

12 Match the substances in Column I with their chemical formula in Column II **1**

Column 1	Column II
(1) Vinegar	(i) Sodium hydrogen carbonate
(2) Lime water	(ii) Iron oxide
(3) Baking soda	(iii) Acetic acid
(4) Rust	(iv) Calcium hydroxide

(A) 1 – iii, 2 – i, 3 – ii, 4 - iv

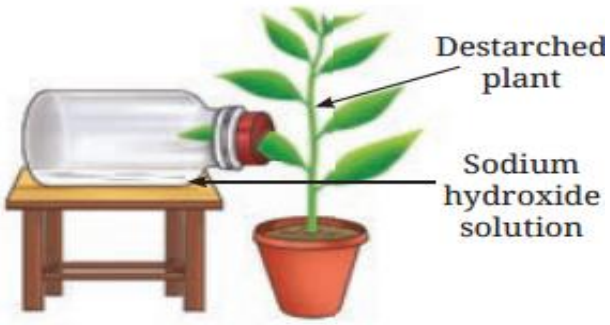
(B) 1 – ii, 2 – iv, 3 – iii, 4 - i

(C) 1 – iii, 2 – iv, 3 – i, 4 - ii

(D) 1 – iv, 2 – i, 3 – ii, 4 – iii

SECTION B

13 Given below is an experimental set up. Observe the activity and answer the following **2**



a. What is the role of sodium hydroxide solution (caustic soda) in this experiment?

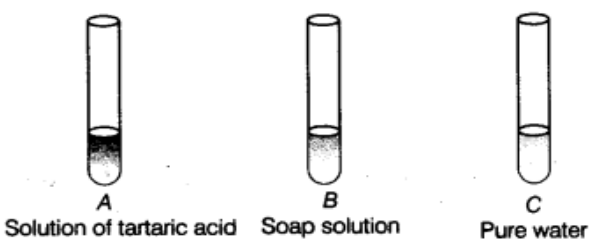
b. What is the aim of this experiment?

14 Write any two differences between sea breeze and land breeze. **2**

15 You are provided with three test tubes A, B and C as shown in figure with different liquids. **2**

(a) Write the nature of solution B and C

(b) What will you observe when you add a few drops of red rose extract on solutions A and B?



16 Define the following terms: (i) Rusting (ii) Ignition temperature **2**

17 (a) What is the uniform linear motion? **2**

(b) Data for the motion of an object are given, mentioning whether motion is non-uniform or uniform linear motion giving reason.

Time (s)	2	4	6	8	10	12	14
Distance (m)	4	7	8	12	17	20	22

18 The water cycle is driven by energy from the sun's heat. Explain the four processes involved in the water cycle. **2**

19 What is respiration? Glucose is broken down using X to release Y, water and energy. What do X and Y stand for? **2**

20 While playing in the garden, Nilesh was stung by a honeybee and was in great pain. Immediately, his mother applied baking soda solution on the affected area. **2**

(a) What could be the reason for this pain and irritation?

(b) Why did his mother apply baking soda solution on the affected area?

21 A sheet of paper was first torn into pieces and then burned. What changes does this sheet of paper undergo? Explain. 2

22 Write the difference between conductors and insulators of heat. Give suitable examples. 2

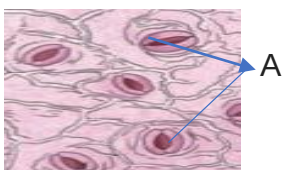
23 Chennai Express takes 5 h to reach Lucknow at a speed of 60 km/h. Find the distance it travels. 2

24 (a) Define olfactory indicator. Give an example. 2

(b) Name one natural indicator which turns red on adding a base.

25 (a) Identify and define the structure A. 2

(b) What is the role played by the structure A in plants?



26 Give reason 3

(a) It is comfortable to wear white clothes in summer.

(b) Smoke from incense or firewood rises upward.

(c) The other end of a wooden spoon will not become cold when it is dipped in a cup of ice cream.

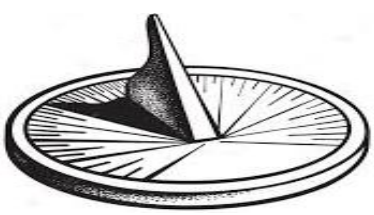
27 (a) What is combustion? What happens when magnesium ribbon is burned? 3

(b) What are the conditions necessary for combustion?

28 (a) Identify the time-measuring device given below. 3

(b)What was the principle behind the working of the device?

(c) Name any two time-measuring devices used in ancient times.

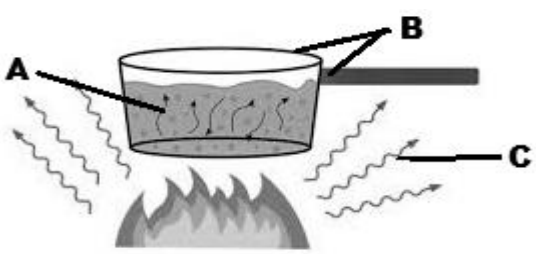


29 (a) Write the names of the acids present in (i) Lemon (ii) Tamarind 3

(b) Differentiate between acids and bases. (any two points)

30 Rahul covers a distance of 300 m in 30 s, and Rita covers the same distance in 50 s. Calculate their speeds. Who travels at a greater speed and by how much? 3

31 Diagram below shows different processes involved in heat transfer. 3



(a) Identify the processes A, B and C.

(b) Which of the process of heat transfer doesn't need any medium?

(c) Explain the process of heat transfer in B.

32 (a) How does food get transported to other parts of the plants? 3

(b) Write an experiment to observe if water transportation in plants is quicker in warm or cold conditions.

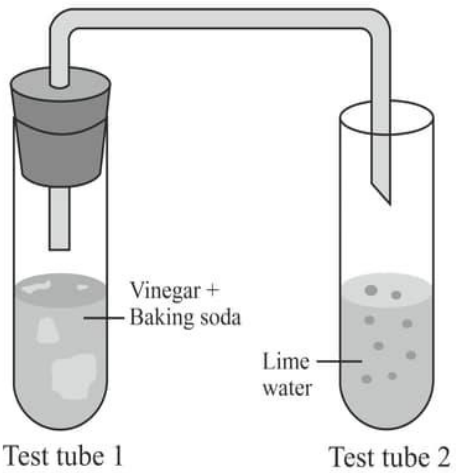
33 Observe the given activity and answer the questions- 3

(a) What do you observe when a pinch of baking soda is added to vinegar?

(b) Which gas is produced when baking soda reacts with vinegar?

(c) What happens when the gas is passed through lime water?

(d) Write a word equation for chemical change taking place in test tube-1.



34 (a) Write an activity to test the presence of starch in leaves. 3

(b) Why is alcohol not heated directly in the above activity?

35 (a) What is a simple pendulum? 5

(b) Explain with the help of a labelled diagram how it performs oscillatory motion.

(c) A simple pendulum takes 75 seconds to complete 15 oscillations. Calculate the time period of the pendulum.

36 (a) What is a neutralisation reaction? Write the general equation to explain. 5

(b) Why is the test tube found to be hot, after carrying out the neutralisation reaction?

(c) When the soil is too basic or too acidic, plants do not grow well. To improve the quality, what must be added to the soil?

(i) If the soil is too basic (ii) If the soil is too acidic

37 (a) Give a brief description of the process of synthesis of food in green plants. 5

(b) Complete the equations and name the processes:

Carbon dioxide + water $\rightarrow$ ____A____ + ____B____

(c) How is photosynthesis and respiration essential to maintain balance in nature?

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