SUMMATIVE ASSESSMENT - TERM I 2025 – 2026

BASIC SCIENCE

Class :7 **Time : 2 Hours 15 minutes**

Instructions

- **15 minutes cool off time** is allotted for reading and understanding the questions.
- Answer all the 6 questions. Answer all the sub question in it.
- For questions with **internal choice,** answer **either A or B**.

(1A)

Look at the statements below.

Statement I : The stamens of a flower in which artificial pollination is to be done are removed.

Statement II : The stamens of the flower are removed to prevent self-pollination.

a) Read the Statements carefully and select the correct answer.

A. I is true, II is false

B. I is false, II is true

C. I, II are true and II is not reason of I

D. I, II are true and II is reason of I

b) Complete in the missing stages of artificial pollination.

Stage (1) .....

.....

.....

Stage (2) This flower is wrapped well to prevent pollen grains from other flowers falling on it.

Stage (3) .....

.....

.....

Stage (4) The pollen grain that are collected are deposited on the stigma of the flower.

OR

(1B)

a) Find the correct pair from the following.

A. Apiculture - Rearing Fishes

B. Cuniculture - Rearing Rabbits

C. Floriculture - Rearing Honeybee

D. Pisciculture - Growing flowers

b) How vegetable plants can be protected by mechanical control? Explain with an example.

c) Write any two examples for friendly insects in biological control.

(2A)

a) The gas produced when acid reacts with metal is ----

A. Carbon dioxide

B. Hydrogen

C. Oxygen

D. Nitrogen

b) Some acids and their uses are listed below. Complete the table.

Acid	Uses
Acetic acid	. . . . .
Citric acid	Manufacturing of chemical fertilizers
Nitric acid	Paint, Dyes
Tannic acid	. . . . .

c) You know that Methyl Orange is an indicator. How can you identify acids and bases using Methyl Orange.

OR

(2B)

The details of an experiment conducted in class using three solutions (Solution 1, Solution 2, Solution 3) are given below.

- When red litmus paper was dipped into solution 1, it turned blue.
- When turmeric was added, the colour of solution 2 turned red.
- When phenolphthalein was added, the colour of solution 3 turned pink.

a) Select the group that is likely to be the characteristic of solutions 1, 2 and 3.

A. 1-Acid, 2-Acid, 3-Base

B. 1-Base, 2-Base, 3-Acid

C. 1-Base, 2-Base, 3-Base

D. 1-Acid, 2-Base, 3-Acid

b) Vinegar and clear baking soda solution are kept in separate beakers. Write an experiment to identify the solution using phenolphthalein.

c) Design an experiment to determine whether the given part of a plant can be used as a natural indicator?

(3)

The observations of an experiment conducted using blue litmus paper and red litmus paper is given below.

Name of substances	**Colour change observed**	
	Blue litmus	**Red litmus**
Cucumber	Red	No colour change
Grapes	Red	No colour change

Lemon	Red	No colour change
Apple	Red	No colour change
Tomato	Red	No colour change
Baking soda	No colour change	Blue

a) Analyse the table and write two conclusions.

b) Write the common name of the substances that turn blue litmus paper red. Write one common characteristic of such substances.

c) Examine the statements given below and identify the correct ones.

i. Curd contains a bacteria called lactobacillus

ii. The acid found in lemon is lactic acid.

iii. Acids have sour taste.

iv. The acid found in apple is citric acid.

A. (i) and (ii) are correct

B. (ii) and (iv) are correct

C. (iii) and (iv) are correct

D. (i) and (iii) are correct

(4)

The following materials are included in the Science Kit for a class 7 student.

Science Kit

LED strip, 9V battery, conducting wire, safety pin, wooden block, pencil graphite, plastic bangle, metal bangle, plastic string, paper, wet paper.

a) Design a suitable experiment using materials from the Science Kit to find out which materials conduct electricity.

b) During the experiment, the LED strip did not light up when dry paper was placed on it. What change occurs when wet paper is placed on it? What is the reason for this?

c) The table prepared on the experiment using different materials is given below.

Materials used	Observation	Inference
Safety pin	LED lit up	Electricity passed
Plastic bangle	LED lit up	Electricity passed
Pencil graphite	LED did not lit up	No Electricity
Metal bangle	LED lit up	Electricity passed

Which of the following pairs of observations and inferences are correct?

A. Plastic bangle and metal bangle

B. Plastic bangle and pencil graphite

C. Safety pin and plastic bangle

D. Safety pin and metal bangle.

(5)

a) Examine the situations given below.

i. Changing bulb when the switch is on

ii. Using footwear while ironing clothes.

iii. Turning on the switch with wet hand

iv. Changing bulb when the switch is off

Identify the situations that may cause electric shock.

A. i and ii

B. ii and iii

C. i and iii

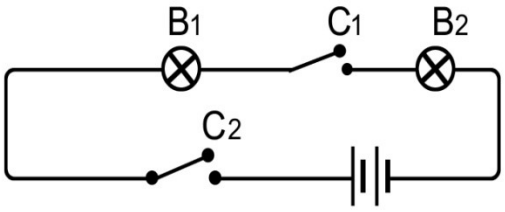
D. ii and iv

b) A broken electric line is lying on the mango tree by the road side. Write a safety measure that you would take in this situation and the reason for it.

c) Write any two initial steps to be taken to rescue a person experiencing an electric shock.

(6)

a)



i. In figure which bulbs will light up if switches C_1 and C_2 are in the off position?

ii. Which bulbs will light up if the switches C_1 and C_2 are in the on position?

b) Draw a circuit diagram that lights two bulbs using only one switch.

c) Select the correct pair from the options below.

i) LED –

ii) Buzzer –

iii) Battery –