

Class: 7

Basic Science

Time: 2 hrs

**Instructions**

- ♦ 15 minutes is given as cool - off time. This time is to be used for reading the question paper.
- ♦ Attempt any 6 from the 8 activities given below.

**Activity -1**

- A) The branch of high yielding Neelam mango tree is grafted to a Moovandan mango tree with roots to produce a new high yielding mango sapling. What are the characteristics of the mango tree produced through this method?
- i)
  - ii)
- B) A farmer did not get better yield even though he planted saplings produced by hybridisation. Write three suggestions for getting a better yield.
- C)



Which method should be adopted to produce a new variety of a pea plant with the properties of both the pea plants shown in the figure?

- (1) Budding
- (2) Self pollination
- (3) Cross pollination
- (4) Artificial pollination

**Activity -2**

- A) Whose opinion do you agree with? Why?

- B) Following are the use of some substances. Complete the table on the basis of their uses.

- Used in batteries of Motor vehicle
- Used in medicines
- Used to make chemical fertilizers
- Used in glass manufacturing
- Used to reduce the acidity of soil

<b>Acid</b>	a. ....
b. .... used to make chemical fertilizer	c. .... d. .... used to reduce the acidity of soil

- C) Which of the following statements related to soap making are correct.

1. Aluminium hydroxide is used to make soft soap.
2. Calcium hydroxide is used to make soap.
3. Sodium silicate and stone powder are used to increase the hardness and quantity of the soap
4. Potassium hydroxide is used to make soft soap.

i) 1 & 2 are correct    ii) 1 & 3 are correct

iii) 2 & 3 are correct    iv) 3 & 4 are correct

### Activity - 3

- A) Given below are some of the characteristics of fertilizers used by a farmer to get better yield. Analyse the statements and complete the table.

- Required in large quantities
- Excessive use destroys soil structure
- Not harmful to soil
- Necessary components can be supplied separately
- Required in lesser quantity

<b>Organic fertilizers</b>	a. ....
• Required in large quantity structure	Excessive use destroys soil
b. ....	c. .... d. ....

- B) Mechanical pest control is a method of controlling pests using traps or removing them manually. Besides these, write two other methods practised by farmers for pest control?

- C) Find out the relation between the word pairs and fill in the blanks.

Rearing rabbits

Cuniculture

Growing flower

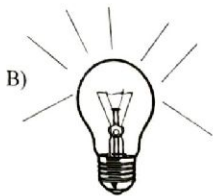
a. ....

b. ....

Apiculture

#### Activity - 4

- A) A circuit is made using torch cell, insulated copper wire and LED module. The copper wire is shorter than required. Which of the following materials can be used to complete the circuit?



pin, coin, wooden piece, wet paper,  
pencil graphite, plastic bangle



Did you noticed the pictures? Draw a closed circuit using their symbols.

- C) Which metal is used in electric lines?

i. Aluminium

ii. Copper

iii. Iron

iv. Steel

#### Activity - 5

- A) Following is a table related to vegetative propagation . Complete the table appropriately.

a. ....	Stem	c. ....	d. ....
Curry leaf plant	b. ....	Bryophyllum	Colocasia

- B) Buds of different varieties of hibiscus plants are grafted onto a red hibiscus plant to produce flowers of different colours. Write down the other stages in the correct order. One is done for you.

- Chiselled off the buds with the bark from different coloured hibiscus plants.
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- C) Various agricultural research centres and crops developed there are given below. Complete the table.

Research Centres	Crops
• Central Tuber Crops Research Institute (CTCRI)	• tuber crops
.....	• coconut, arecanut

### Activity - 6

When Pathimugam water is added to lemon juice, vinegar, tamarind water and butter milk, their colour changed to yellow.

- A) Write any two common characteristics of these types of solutions.  
B) Complete the table of food items that we eat and the major acids present in them.

Food items	Major acids
a. .... Tomato	Tartaric acid b. ....
c. .... Apple	Ascorbic acid d. ....

- C) When a strong acid spills your body, it burns. Write any four precautions to be taken to avoid accidents while handling chemicals.

### Activity - 7

Observe the pictures of some of the tools used by electricians.



A



B



C



D

- A) Which tools are suitable for the following purposes?  
i. To remove the insulation of a wire.  
ii. To test electric current.  
B) What are the specialities of the materials used to make the handle of the above tools? What is the reason?  
C) Write any two other examples for such materials.

### Activity - 8

Some materials in the Science Kit are given below.

baking soda, test tube, magnesium ribbon, vinegar, lime water, match box

- A) A student conducted an experiment to achieve the objective given below using suitable materials from the Science Kit. The objective of the experiment is given. Complete the experiment note.

Objective : To identify the gas produced when acids react with metals.

Materials required: .....

Procedure: .....

Observation: .....

Inference: .....

- B) Write any two uses of acids.