

Answer Key - Kerala STD 7 First Term Onam Exam 2025

Subject: Basic Science (English Medium)

Q1.

a) Method: Vegetative propagation by cutting/layering/grafting.

Characteristics:

- Plants are identical to the mother plant (true to type).
- They bear flowers and fruits early.

b) Classification:

- By stem cutting: Guava, Bougainvillea, Jasmine
- By grafting: Almond, Cashew, Sapota
- By layering: Pepper

c) Correct group: 1. A and B are correct

Q2. (Answer any one)

2(A)

a) Substances: C. Baking soda solution, Rice water

b) Acid burns are more dangerous because acids penetrate and corrode tissues deeply.

First aid: Wash with plenty of water, then apply a mild base (e.g. baking soda solution).

c) Other uses of vinegar:

- As a cleaning agent.
- As a preservative in food.

OR

2(B)

a) Corrected table:

- Horticulture – Cultivation of flowering plants
- Apiculture – Rearing honey bees
- Mushroom culture – Growing of mushroom
- Poultry farming – Rearing of poultry



- b) Frogs eat insects; destruction of frogs increases pests, reducing crop yield.
c) Correct group: 4. All are correct

Q3.

a) Poster:

"Save Electricity – Save Nature"

- Switch off fans & lights when not in use.
- Use LED bulbs.
- Avoid wastage of power.

 Save Energy, Save Future 

b) In hydroelectric power stations, water stored in dams is released to rotate turbines. The turbines run generators, converting mechanical energy into electrical energy.

c) Correct answer: A. Solar cells

Q4.

a) Correct option: B. Statement is correct. Reason is suitable for the statement.

b) Steps in soap preparation:

1. Mix caustic soda, water, sodium silicate and coconut oil.
2. Stir well while heating.
3. Add colour and perfume.
4. Pour into mould.
5. Allow to cool.
6. Remove after solidification.

c) Properties of acids (other than sour taste):

- Turn blue litmus red.
- React with metals to produce hydrogen gas.

Q5.

a) Correct group: A. 1-B, 2-C, 3-D, 4-A

b) The better opinion: "I apply both chemical and organic fertilisers."

Reason: Balanced use increases yield and maintains soil fertility.

c) Method: Mechanical pest control (traps or handpicking).

Example: Light trap / sticky trap / pheromone trap.

Q6. (Answer any one)

6(A)

a) Gas: Hydrogen

b) Properties:

- Colourless, odourless, lighter than air.
- Burns with a blue flame.
- Explosive when mixed with air.

c) Experiment: Add magnesium ribbon to vinegar in a test tube. Collect gas evolved by downward displacement of water. Test with burning splinter → 'pop' sound confirms hydrogen.

OR

6(B)

a) Commonly used metal: Copper

b) Open circuit diagram: Battery – switch – minimotor – wire (switch kept open).

c) Findings from table:

- LED has highest efficiency (85–90%).
- LED lifespan longest (25,000 hrs).
- LED consumes less energy (6–20 W).
- Filament bulb is least efficient and consumes more power.

Inference: LED bulbs are the best choice for home use.