Class 2

# Answer Key

RoboGenius Pro

## 1. Simple and Complex Machines

### ROBO CHECK

A. 1. (ii) 2. (iii) 3. (ii) 4. (iv) 5. (ii)

B. 1. F 2. T 3. F 4. T 5. F

C. 1. Crane 2. Simple 3. Complex 4. Escalator
5. Motors, Electricity

### COMPETENCY-BASED QUESTIONS

1. Ankita should use an inclined plane to do so.
2. A wheelbarrow uses a wheel and axle to move loads easily and a lever to lift heavy materials with less effort.

### CASE STUDY

1. A lever is used in see-saw.
2. In a slide an inclined plane reduces the effort needed to climb up, providing a smoother way to descend.
3. The pulley system allows the swings to move back and forth easily with a small force on one end.

## 2. Robot Helpers in the Real World

### ROBO CHECK

A. 1. (iii) 2. (ii) 3. (i) 4. (ii) 5. (ii)

B. 1. T 2. F 3. T 4. F 5. F

C. 1. Plan, Decide 2. Sensors 3. Algorithmic 4. GO 5. Machine

## COMPETENCY-BASED QUESTIONS

1. Sensor
2. Sense → Think → Act

## CASE STUDY

1. In space, robots like NASA's Curiosity Rover help scientists explore other planets, like Mars.
2. The Curiosity Rover robot sends back pictures and information about the planet's surface.

# 3. Sequence it Right: Early Algorithm Thinking

## ROBO CHECK

A. 1. (i) 2. (iii) 3. (iv) 4. (iv)

B. 1. F 2. T 3. T 4. T 5. F

C. 1. Loop 2. Blocks 3. Debugging 4. Play 5.Certificate

## COMPETENCY-BASED QUESTIONS

1. Kiran can use a loop to repeat the action of picking up coins until all 5 coins are collected.
2. The robot's movement instructions may be incorrect, causing it to move in circles instead of reaching the bin.

# 4. Build Circuits

## ROBO CHECK

A. 1. (ii) 2. (i) 3. (i) 4. (iii)

B. 1. T 2. F 3. F 4. T

C. 1. PhET lab 2. Virtual tools 3. Bulb 4. Electricity

## COMPETENCY-BASED QUESTIONS

1. The components are as follows:
   - Battery: Supplies power to the circuit.
   - Light bulbs: Acts as a load, converting electrical energy to light.
   - Wires: Connect the components together.
2. The switch helps control the flow of electricity in the circuit.