ICI School, Bhosari

PERIODIC TEST :- 2 (2025-26)

Subject :- Ai & Robotics

Name:- _____ Roll.no :- _____

Std :- VII , Div :- _____ Marks Obtained :- _____

Date :- _____ Total Marks :- 25

Marks Obtained :	Supervisor Sign with date :
Total Marks: 25	Subject Teacher's Sign :

Q1. Tick the Correct Answer (5 Marks)

1. A motor or an LED, which performs a physical action , is an example of an:
   - ❑ Sensor
   - ❑ Actuator
   - ❑ Input

2. An LDR sensor works because its _____ changes with light intensity.
   - ❑ Color
   - ❑ Electrical resistance
   - ❑ Speed

3. A variable like count that can be accessed throughout the program is called a:
   - ❑ Conditional Statement
   - ❑ Global variable
   - ❑ Port

4. The process of increasing a variable's value by one is known as:
   - ❑ Decrementing
   - ❑ Evaluating
   - ❑ Incrementing

5. Making a robot turn by setting is left and right motor speeds differently is called:
   - ❑ Differential drive
   - ❑ Event-driven programming
   - ❑ Boolean Login

Q2. Fill in the Blanks (5 Marks)

(Boolean , Ports, Sensor , Conditional , BluetoothClient)

1. A component that detects environmental changes and sends information is a _____.
2. Components connect to the Qbrick motherboard via specific connection points called _____.
3. The "if-then-else" structure used for robot decision-making is a _____ statement.
4. The non-visible component used for wireless communication with an Android Device is the _____.
5. An IR sensor's output can be a _____ value, such as true or false.

Q3. True or False (5 marks)

1. In an LDR, the electrical resistance increases as light intensity increases.
2. An actuator is a device that provides input to the robot's controller.
3. The Basketball Counter project demonstates an analog input controlling a motor.
4. To make a robot move straight, both motors should be set to the same speed and direction
5. The color of an RGB is defined by setting intensity values for Red, Green and Blue.

Q4. Match the following (5 Marks)

1.LDR	❑ Stores data accessible by the whole program
2.Actuator	❑ A control structure like " if-then-else "
3.Global Variable	❑ A component that performs a physical action
4.Conditional Statement	❑ Enable Wireless communication
5.BluetoothClient	❑ A sensor that Measures light level

Q5. Answer in one word (5 Marks)

(Direction , Analog , Proximity , 255 , Boolean)

1. What type of input (digital or analog) does the Light Avoider's LDR sensor provide? _____
2. What general term describes a sensor that detects the nearness of objects without physical contact?_____
3. What is the maximum numerical value for motor speed or RGB color intesity? _____
4. What type of logic uses conditions that evaluate to "True" or "Fakse"? _____
5. What must be set on both motors to make the Light Avoider move backward? _____

"The important thing is not to stop questioning. Curiosity has its own reason for existing." – **Albert Einstein**