5.2 Once you have built the circuit you will need to **program your circuit** to meet the design brief.	**/ 12**
Step 1 - **Open** the Arduino IDE software on your laptop / computer. Step 2 - **Complete** the blank spaces in the given code on the Arduino IDE software provided by your teacher. Step 3 - **Save** your program. Step 4 - **Select** your Arduino Board. Step 5 – **Select** port. Step 6 – **Upload** and **Verify** your program.	

Section 3

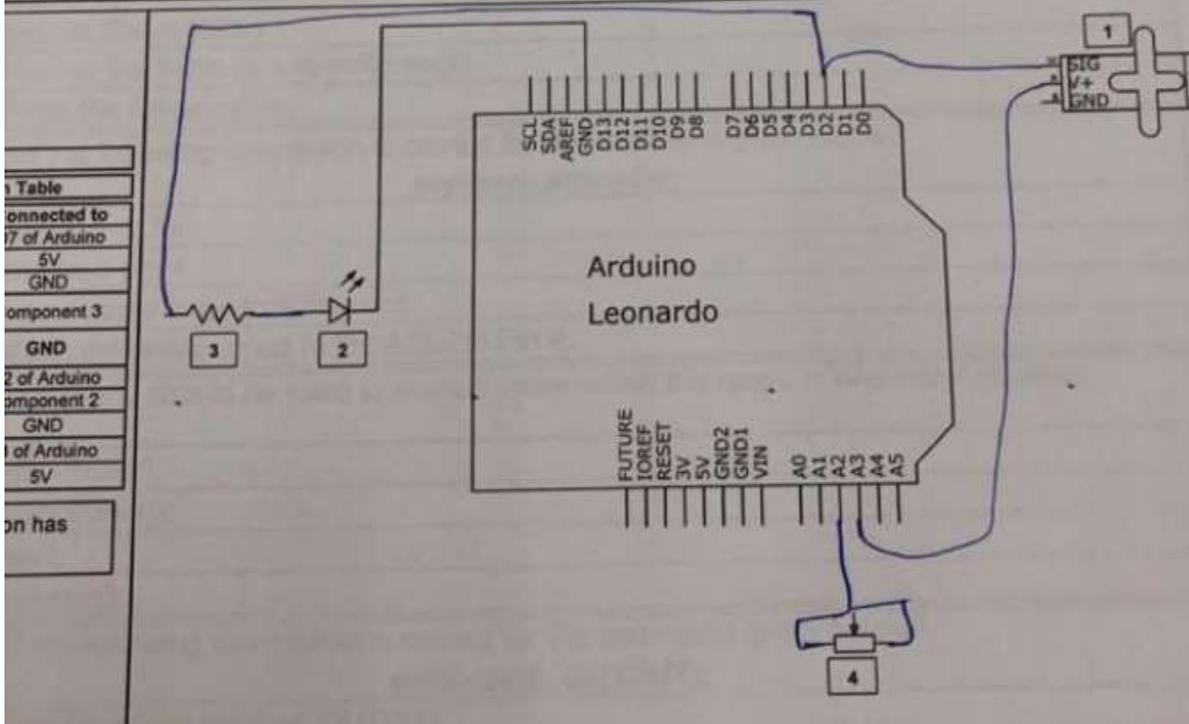matic diagram that meets the design brief using Table 3 given below.

| | / 9 |

Table
onnected to
7 of Arduino
5V
GND
omponent 3

GND

2 of Arduino
omponent 2
GND
of Arduino
5V

on has

Arduino

Leonardo

SCL SDA AREF GND D13 D12 D11 D10 D9 D8 D7 D6 D5 D4 D3 D2 D1 D0

FUTURE IOREF RESET 3V 5V GND2 GND1 VIN A0 A1 A2 A3 A4 A5

SIG
V+
GND

1

3

2

4

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Section 2	/ 4
Match the **name of the components** connected to the **Arduino Board** with arrows in Table 2.	

Table 2	
Name of the Component	**Arduino Board**

Servo motor

Resistor

LED

GND
V+
SIG
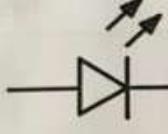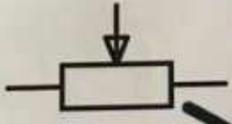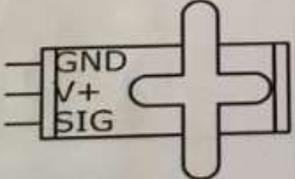
Potentiometer

Section 4

Using your answers in Section 1 and Section 3, **build the circuit** to meet the brief.

Collect the required components from your teacher.

Section 5

5.1 Choose and **circle** the correct answer regarding the commands you will to program your circuit -

		Which of the following description is correct for the command given below #include <Servo.h>
(a)	A	Create servo object to control a servo.
	B	Include Servo library.
	C	Rotates the servo to a specific angle.
	D	Prints the Servo value.
		Which of the following description is correct for the command given be myservo.attach(4);
(b)	A	Set pin 4 to 5V.
	B	Initializes pin 4.
	C	Makes servo to go to 4 degrees.
	D	Attach the servo object to the Arduino Pin 4.
		Which command should be used to scale a value within the range to range?
(c)	A	digitalRead();
	B	analogRead();
	C	map();
	D	pinMode();
		Which of the following description is correct for the command given pinMode(6, OUTPUT);
(d)	**A**	Initializes digital pin 6 as OUTPUT.
	B	Initializes digital pin 6 as INPUT.
	C	Initializes analog pin 6 as OUTPUT.
	D	Initializes analog pin 6 as INPUT.

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Section 4

Using your answers in Section 1 and Section 3, **build the circuit** to meet the design brief. **Collect** the required components from your teacher.	/ 10

Section 5

5.1 **Explain** the function of the commands given below in your own words.	/ 3

	#include <Servo.h>
(a)	Servo library. This library allows an Arduino board to control RC serve motors.
	myservo.attach(4);
(b)	Attach the serve to pin 4
	Servo myservo;
(c)	My sero library

5.2 Once you have built the circuit you will need to **program your circuit** to meet the design brief.	/ 12

Step 1 - **Open** the Arduino IDE software on your laptop / computer.

Step 2 - **Complete** the blank spaces in the given code on the Arduino IDE software provided by your teacher.

Step 3 - **Save** your program.

Step 4 - **Select** your Arduino Board.

Step 5 – **Select** port.
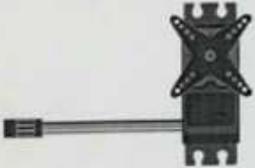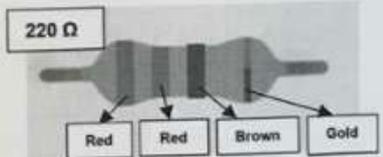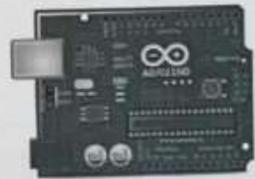
Step 6 – **Upload** and **Verify** your program.

Section 1

Name the components in Table 1 given below.	/ 7

Table 1

SL.NO.	Name of the component	Quantity	Component Image
(a)	Servo motor	1	
(b)	**Potentiometer**	1	
(c)	LED	1	
(d)	Resistor	1	220 Ω — Red Red Brown Gold
(e)	Arduino (AVR)	1	
(f)	Breadboard	1	
(g)	**Jumper Wires**	As per requirement	

ꓳu have built the circuit you will need to **program your circuit** to meet the	/ 12

en the Arduino IDE software on your laptop / computer.

mplete the blank spaces in the given code on the Arduino IDE software provided by

ꓱr.

ve your program.

lect your Arduino Board.

lect port.

ꓲload and **Verify** your program.

Section 6

ꓱsigned circuit and **record** your findings in Table 4. ꓳrrect state of your LED.	/ 4

Table 4

	1. Motor rotates between	2. LED status
ꓱentiometer	_60_ degrees	(ON) OFF
	_180_ degrees	ON (OFF)

task paper to your teacher.

Total Marks Obtained	/ 50

3

2

GND

5V
GND2
GND1
A0
A1
A2
A3
A4
A5

D7
D6
D5
D4
D3
D2
D1

4

5V

Σ GND
R2