Government Polytechnic, Vaishali

Letter no...305   Date : 20.05.23

Notice

This is to inform to all the students of 6th semester of Government Polytechnic Vaishali that Smart Bihar Hackathon 2023 is to be held at KNS G.P. Samastipur from **07.06.2023 to 09.06.2023**. The registration is open for the Hackathon program on 3D printing technology. Hence, all of you are directed to register on the link given below latest by **02.06.2023**

Link for registration : https://forms.gle/boMmAw8bhj8CRLGk9 .

Instructions to students for registration :

1. Maximum 4 members are allowed in a team.
2. Registration link is to be submitted by team leader on or before 2nd, June 2023
3. The application should be related solving a problem in any of the following domains using 3D printing techniques :
   - Water Problem
   - Healthcare problem
   - Electricity problem
   - Education Problem
4. Describe the problem clearly that you would be solving and technical approach that the team will take to address the aforesaid problems.
5. Mention the items/components required besides the standard technical kit components that you will be provided. (list enclosed)

20.05.23

Principal 20.05.23
Government Polytechnic Vaishali

Smart Bihar Hackathon 2023

Standard Components List

Sl No.	Item description	Qty	Application
1	General Purpose PCB, Zero PCB	1	For rapid prototyping design
2	Electronics Bread Board	1	Building temporary circuits
3	soldering iron kit (soldering iron, paste, wire, cutter, tweezer, wicks, desoldering pump, screw driver, multimeter)	1	For soldering support
4	Arduino UNO R3 board with DIP ATmega328P	1	For programming based smart execution of task
5	General purpose electrolytic Capacitor Kit	1	To block direct current while allowing alternating current to pass
6	General purpose ceramic Capacitor Kit	1	Capacitors for RFI/EMI suppression
7	General purpose resistor Kit	1	To reduce the flow of current in a circuit
8	IC base 16 pin	1	For 16 pin IC base
9	IC base 8 pin	2	For 8 pin IC base
10	9V Battery	1	Dc power supply 9 V
11	Battery cell snapper	1	Battery Connector
12	5V passive buzzer mini alarm speaker	1	For alarm
13	Led RGB-2, Red-5, Green-5, Blue-5, White-5	2	Led for indicating purpose
14	7 Segment Display 1 Digit Common Anode	2	Display Alphabet or numeric
15	IR LED and PHOTO Diode pairs	2	IR LED and Photo diode
16	10K Preset	1	Variable resistor
17	DC Motor 5 volt	2	DC geared Motor for mechanical movement
18	Relay	2	5V DC relay, control a circuit by an independent low-power signal
19	LDR	2	To detect the presence and absence of light or to measure the light intensity
20	IC 555 Timer	1	variety of timer, delay, pulse generation, and oscillator applications
21	op amp 741	1	To perform both mathematical operations and amplification functions
22	L298 2A Dual motor driver module with pwm control	1	This chip allows for direct drive of two bi-directional DC motors
23	7805 Voltage regulator	1	Fixed output regulators 5V DC
24	7812 Voltage regulator	1	Fixed output regulators 12V DC
25	Push Button	5	Switch
26	2 pin connector	2	connector
27	10 Pin Header male	1	connector
28	10 Pin Header female	1	connector
29	Aligator clip	2	To establish temporary electrical connections
30	SPDT switch	2	Three-way circuit for controlling a load from two locations
31	433 MHz RF Transmitter and receiver	1	To send and receive radio signals between any two devices
32	electrical tape PVC	1	Insulation, protection, bundling, maintenance, colour coding
33	cello tape	1	Cable insulation and pasting
34	Steel blade Cutter	1	Fast cutter