SHORT NOTICE INVITING EOI
(https://eproc2.bihar.gov.in).

I. Bihar Education Project Council (BEPC), Patna, invites "Expression of Interest (EoI) from experienced & qualified manufacturer/OEMs for Empanelment as supplier for Supply, Installation & Training for operationalization of Tinkering Lab at Government Secondary/Senior Secondary Schools in Bihar."

II. The complete EoI documents can be seen on and downloaded from the website https://www.eproc2.bihar.gov.in.

III. This EoI does not constitute an offer by the Department and is not a financial bid.

IV. Schedule of EoI Process (Events):

SI	Information	Details
1.	EoI No. and Date of availability	BEPC/LAB/2024/3292, Dated: 05.08.2024 available for download from 05.08.2024, 05:00 PM onwards on website www.eproc2.bihar.gov.in
2.	Last date for submission of EoI	20.08.2024, 4:00 PM Submission of Response through website www.eproc2.bihar.gov.in
3.	Review of Received EoI proposals (Tentative)	20.08.2024, 4:30 PM onwards
4.	Presentation-cum-Demonstration (if required)	Intimated through formal letter.
5.	Contact person	Shri Shahjahan, Administrative Officer, BEPC, Shiksha Bhawan, Bihar Rastrabhasha Parishad Parishar, Saidpur, Rajendra Nagar, Patna 800004. Contact No: 7258888166

(Shahjahan)
Administrative Officer
Bihar Education Project Council

EOI Reference No: BEPC/LAB/2024/3292 Dated: 05.08.2024

EXPRESSION OF INTEREST (EOI)
(Not a Financial Bid)

For

SUPPLY, INSTALLATION & TRAINING FOR OPERATIONALIZATION OF TINKERING LAB AT GOVERNMENT SECONDARY/SENIOR SECONDARY SCHOOLS IN BIHAR

Issued by:
Bihar Education Project Council,
Shiksha Bhawan, IInd & IIIrd Floor,
Bihar Rastra Bhasha Parishad,
Saidpur, Rajendra Nagar - 800004.

1. Background Introduction of BEPC

Bihar Education Project Council (BEPC) an autonomous body of Education Department, Govt. of Bihar, has now completed about two and half decade in implementing various education programme in the state up to secondary/Senior secondary level. At the onset, BEPC had successfully implemented World Bank assisted five-year District Primary Educational Programme (DPEP) which concluded in the Financial Year 2005-06 in eleven educational districts i.e. twenty revenue districts of Bihar as State Implementation Society (SIS).

The council has also honour of successfully implementing the Government of India sponsored ten-year Sarva Shiksha Abhiyan (SSA) as State Implementation Society (SIS) in all the 38 districts of Bihar. One Society, namely "State Programme for Elementary Education Development (SPEED)" which was earlier implementing the SSA in four districts (Saharsa, Nalanda, Patna and Supaul) has also been merged with BEPC as per the decision of the state Government.

Bihar Education Project Council has now been entrusted to implement Samagra Shiksha, a holistic school education programme in the backdrop of National Education Policy, 2020 after the successful implementation of BEP, DPEP III, Sarva Shiksha Abhiyan along with NPEGEL. Considering the approval of Cabinet Committee on Economic Affairs, the Samagra Shiksha Abhiyan- an integrated scheme for school education (ISSE), Bihar Government has taken decision to run this centrally sponsored Scheme which has submerged three schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shikhsa Abhiyan (RMSA) and Teacher Education (TE) through the Bihar Education Project Council (BEPC) – the single State Implementation Society (SIS). The integrated scheme on School Education envisages the school as a continuum from pre-school, primary, upper primary, Secondary to Senior Secondary levels. The vision of the scheme is to ensure inclusive and equitable quality education from pre-school to senior secondary stage in accordance with Sustainable Development Goal (SDG) for Education.

2. Rationale for this EoI

i. The BEPC, Education Department, Bihar is inviting Expressions of Interest (EoI) from experienced & qualified manufacturer/OEMs for Empanelment as supplier for Supply, Installation & Training for operationalization of Tinkering Lab at Government Secondary/Senior Secondary Schools in Bihar. The purpose of this EoI is to identify and shortlist manufacturer/OEMs who can meet our requirements and demonstrate the ability to establish high-quality Tinkering Lab in a timely and cost-effective manner.

ii. The manufacturer/OEMs are expected to examine the project requirements and other information in this documents. Failure to furnish all information required as mentioned in this documents or submission of a proposal not substantially responsive to this EoI documents in every respect will be at the manufacturer/OEM 's risk and may result in rejection of the proposal.

3. Schedule of EoI Process

Sl	Information	Details
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4. Scope of Work (SOW)

i. The Department of Education, Government of Bihar invites proposals (EoI) from only qualified & experienced manufacturers/OEMs of Tinkering Lab at 76 secondary/senior secondary schools in Bihar within pre-defined budgetary provision of Rs. 10,00,000/- (Ten Lakh) per schools. The Department of Education, Bihar is willing to establish high quality Tinkering Lab which allow students to explore scientific concepts through experiments, demonstrations and observation, fostering a deeper understanding of scientific principles & concepts. This project shall be carried out under "**Samagra Shiksha**".

ii. All interested manufacturers/OEMs regarding Tinkering Lab are requested to submit their detailed proposals regarding supply, installation & training for operationalization of these lab at 76 secondary/senior secondary schools of Bihar. The proposals must have contained the detailed specification of materials, rate per unit etc. along with standard terms and conditions for delivery, installation & training for operationalization at school level.

iii. The detail of budgetary provisions under Tinkering Lab are as follows:

No. of Secondary/Senior Secondary Schools	Rate per Schools/Lab	Total Amounts (Rs. in Cr.)	Remarks
76	Rs 10,00,000/- per Lab	7.60	

5. Instructions to the Manufacturers/OEMs

5.1 General

The Eol proposal should include followings: -

1) Detailed manufacturers/OEMs profile, which should include details of authorized representative.
2) All documentary evidence to suffice the eligibility and qualification criteria.
3) Skills and experience addressed through the proposed solution.
4) Details of Product along with detailed technical specifications.
5) Complete Breakdown of tentative Cost Implications item wise.
6) Template for Tinkering Lab are as follows:

Package 1: Electronics Development, Robotics, Internet of Things and Sensors					
Category	**Name**	**Specification**	**Quantity**	**Type**	**Tentative Rate**
Electronics Development	Arduino Uno or equivalent	ATmega328P - 8 bit AVR family microcontroller, equivalent or better.	30	Consumable	
		Operating Voltage: 5V			
		Digital I/O Pins: 14 (of which 6 provide PWM output)			
		PWM Digital I/O Pins : 6			
		Accessories : Case shell enclosure, compatible USB cable (length - 6 inch or more)			
Electronics Development	Arduino Nano or equivalent	ATmega328P - 8 bit AVR family microcontroller, equivalent or better.	10	Consumable	
		Operating Voltage: 5V			
		Digital I/O Pins : 14 (of which 6 provide PWM output)			
		Analog Input Pins : 8			
		Accessories : Compatible USB cable (length -6 inch or more)			
Electronics Development	Arduino Mega or equivalent	ATmega 2560P - 8 bit AVR family microcontroller, equivalent or better.	10	Consumable	
		Operating Voltage: 5V			
		Digital I/O Pins : 54 (of which 6 provide PWM output)			
		Analog Input Pins: 16			

		Accessories: Case shell enclosure, Compatible USB cable (length -6 inch or more)			
Electronics Development	Raspberry Pi 3 Model B+	RASPBERRY PI 3 MODEL B+, equivalent or better			
		Accessories - Micro SD card - 32 GB, USB 3.0 cable (1 meter), HDMI to VGA - 1 meter, HDMI to VGA adapter, Case shell enclosure	5	Consumable	
Electronics Development	Breadboards & Mini Breadboard	Solderless 400 pin breadboard	30	Consumable	
		Solderless 800 pin breadboard	20		
		Self-Adhesive Proto Shield	20		
	General Purpose solderable Board	FR2 A Grade Material (140 x 90 mm)	30	Consumable	
		FR2 A Grade Material (80 x 55 mm)	30	Consumable	
Electronics Development	Berg Strips	Female Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin	30	Consumable	
		Male Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin	30	Consumable	
Electronics Development	16x2 LCD display	Dot matrix LCD display. 16 characters X 2 lines. I2C	20	Consumable	
Electronics Development	USB Cables	USB Cable Set (A to B, 12 inch or more)	10	Consumable	
Electronics Development	USB Cables	USB Cable Set (Mini, 12 inches or more)	10	Consumable	
Electronics Development	Battery	9-12V 2000 to 2500 mAh rechargeable battery with 2 chargers. Equivalent or better	10	Consumable	
Electronics Development	Resistor Kit	One kit contains - 30 carbon film resistors of 20 different resistance values each assorted, packaged together and labelled.	20	Consumable	
		Wattage: 0.125W to 1W			
		Values: 0Ω, 1.5Ω, 4.7Ω, 10Ω, 47Ω, 100Ω, 220Ω, 330Ω, 470Ω, 680Ω, $1k\Omega$, $2.2k\Omega$, $3.3k\Omega$, $4.7k\Omega$, $10k\Omega$, $22k\Omega$, $47k\Omega$, $100k\Omega$, $330k\Omega$, $1M\Omega$			

Electronics Development	Capacitor Kit	One kit contains - 20 electrolytic capacitors of 10 different capacitance values each.	20	Consumable	
		Assorted kit packaged together and labelled.			
		Values: 10pF, 22pF, 100pF, 1nF, 10nF, 100nF, 1µF, 10µF, 100µF, 1000µF			
Electronics Development	Linear Voltage Regulator	7805, 7812,7809	30	Consumable	
Electronics Development	Water Pump module	DC12V 3W Submersible Water Pump	4	Consumable	
Electronics Development	Piezoelectric Plate	Normal Copper based 4 cm Diameter approx.	30	Consumable	
Electronics Development	8*8 LED Matrix Module	Max7219 Dot LED Matrix Module. MCU Control LED Display Module	10	Consumable	
Electronics Development	Bluetooth module	HC 05 Bluetooth module	15	Consumable	
		Voltage Rating: 5 V			
Electronics Development	7 Segment Led Display	LED 4-Digit Display Module	20	Consumable	
		Voltage Rating: 2.4V to 5.5V			
		4-Pin interface:			
		Vcc, Gnd, Data, Clock			
Electronics Development	GSM	Sim900 GPRS Transfer Board Micro Sim Gsm Core TTL Port Module for Arduino	4	Consumable	
Electronics Development	GPS	GY-NEO6MV2 new GPS module	4	Consumable	
Electronics Development	Laser Diode Emitter	650 nm 5mW Mini Laser Dot Diode Module	10	Consumable	
Electronics Development	LDR Module	5mm/12mm, Photosensitive LDR Light Sensor Module	30	Consumable	
Electronics Development	Keypad	Universal 16 Key Switch Keypad	10	Consumable	
Electronics Development	JoyStick	2-axis joystick with push button function	10	Consumable	
Electronics Development	Active Buzzer	Small 5 volt	40	Consumable	
		Big 5 volt	40	Consumable	

Electronics Development	Motor driver Module	L293D	10	Consumable	
Electronics Development	Sound Playback Module	ISD1820 voice recording module or equivalent	10	Consumable	
Electronics Development	DC Plastic Gear motor with wheel	12V, 150RPM, Side Shaft BO (Battery operation) Motor	40	Consumable	
Electronics Development	Node MCU	ESP 8266	6	Consumable	
		I2C, 1 wire, plug and play			
Electronics Development	WeMos D1 R2	WeMos D1 R2 with WiFi ESP 8266	6	Consumable	
		Operating Voltage: 5V			
Electronics Development	Vibrating Motor	Weight: 10 Grams	20	Consumable	
		Operating Voltage: 1.5 to 3V			
Electronics Development	Alligator Connectors	Multi-Colour Alligator Connectors - 12 inch	200	Consumable	
Electronics Development	Battery clips with DC Jack	9-volt battery clips with DC Jack	40	Consumable	
Electronics Development	Hook-up Wires	Red & Black set 100 Meters each	4	Consumable	
Electronics Development	Jumper Cable	Male-Male	1000	Consumable	
		Male-Female	600		
		Female-Female	400		
Electronics Development	RGB LEDs	Regular 5mm 3-5 volt Range	400	Consumable	
Electronics Development	LEDs (Red)	Regular 5mm 3-5 volt Range	1000	Consumable	
Electronics Development	LEDs (Green)	Regular 5mm 3-5 volt Range	1000	Consumable	
Electronics Development	LEDs (Blue)	Regular 5mm 3-5 volt Range	1000	Consumable	
Electronics Development	LEDs (Yellow)	Regular 5mm 3-5 volt Range	1000	Consumable	
Electronics Development	LEDs (White)	Regular 5mm 3-5 volt Range	1000	Consumable	
Electronics Development	Timer IC - LM 555	LM 555 Timer IC.	30	Consumable	
		Voltage range - 4.5V to 16V			

Electronics Development	Atmega16u2	8 bit microcontroller Individual IC (DIP).	10	Consumable	
		Voltage range: 2.7V to 5.5V.			
		Operational Range: -40°C to +80°C			
Electronics Development	Diodes and Transistors Kit	One Kit Contains - 25 Assorted Basic Diodes of 4 different types each.	3	Consumable	
		Types: NPN Transistor - 2N3904, BC547 PNP Transistor - 2N3906, BC557 Silicon Diode - 1N4148, Power Diode - 1N4004/4001.			
		Equivalent or better.			
		Wattage: 1W, Current rating: 1A			
		Assorted kit packaged together and labelled.			
Electronics Development	Button Switch Set	One Kit Contains - 100 buttons of different types.	3	Consumable	
		Types: Push, toggle, rotary, selector and slide switch.			
		Assorted kit packaged together and labelled.			
Electronics Development	Capacitative touch Module	MPR 121 with I2C.	20	Consumable	
		Voltage Range:			
		2.5V to 3.6V DC.			
Electronics Development	Capacitative Touch Switch Module	Digital Capacitive touch switch module -TTP223B	10	Consumable	
		Voltage Range: 2V to 5V DC.			
Internet of Things & Sensors	IR Sensors, Obstacle avoider sensor module	LM393	20	Consumable	
		Detection distance:			
		2 - 30 cm			
		Detection angle: 30 - 40°			
Internet of Things & Sensors	Triple Axis Magnetometer	3-Axis Magneto resistive Sensors	10	Consumable	
		I2C Digital Interface			
		Integrated 12-bit ADC			

		Range of -8 to +8 Gauss			
		160 Hz Maximum o/p rate			
Internet of Things & Sensors	Humidity Sensor	Operating range:	10	Consumable	
		20 – 95 % RH			
		Temperature: 0 - 60 Celsius			
		Power supply:			
		1.5V AC (Max sine)			
		Operating frequency:			
		500Hz - 2kHz			
Internet of Things & Sensors	MQ Series	MQ - 2 Smoke Detection	3	Consumable	
		MQ-3 Alcohol - Ethanol Sensor	3		
		MQ-4 Methane Natural Gas Sensor	3		
		MQ-5 Methane Liquified Gas Sensor	3		
		MQ-6 Liquified Petroleum Gas Sensor	3		
		MQ-7 High Sensitivity CO Carbon Monoxide Sensor Detector	3		
		MQ-8 Hydrogen Gas Sensor	3		
		MQ-135 Air Quality Sensor	3		
Internet of Things & Sensors	IR transmitter/ receiver	TSOP 1738	10	Consumable	
		Switching rate: 38 KHz			
		Voltage Rating: 5V			
Internet of Things & Sensors	Ultrasonic Sensor Module HC-SR-04 or compatible	Working Voltage - DC 5V	40	Consumable	
		Working current - 15 mA			
		Working Frequency - 40 Hz			
		Range - 1 cm to 4 m			
		Effectual Angle - <15°			
		Measuring Angle - 30°			
		Resolution - 0.3 cm			
Internet of Things & Sensors	Triple Axis accelerometer-	3-axis sensing	10	Consumable	
		Small, low profile package			
		4 mm × 4 mm × 1.45 mm LFCSP			

		Low Power: 350 µA (typical)			
		Single-supply operation: 1.8 V to 3.6 V			
		Temperature stability			
Internet of Things & Sensors	PIR Motion Detector Module	High digital pulse when motion detected	20	Consumable	
		Low digital pulse when idle /no motion detected			
		Sensitivity range (up to 6 m)			
		Power supply: 5V – 12V			
Internet of Things & Sensors	Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Based (finger or earlobe) Working voltage 3-5V	4	Consumable	
Internet of Things & Sensors	Relay Module	5V 10A - 2 Channel Relay Module. Compatible with Arduino.	20	Consumable	
Internet of Things & Sensors	Relay Module	5V 10A - 1 Channel Relay Module. Compatible with Arduino.	20	Consumable	
Internet of Things & Sensors	Big Sound microphone module	Large Electret capsule sound module	10	Consumable	
Internet of Things & Sensors	Big Sound microphone module	Large Electret capsule sound module	10	Consumable	
Internet of Things & Sensors	Soil Moisture Sensor module	FC-28 with LM293 comparator	6	Consumable	
		Operating Voltage: 3.3V to 5V.			
Internet of Things & Sensors	Touch Sensor	Capacitive Touch Sensor Module. TTP22X series. Voltage Range: 2.4V to 5.5V	6	Consumable	
Internet of Things & Sensors	Metal Touch Sensor Module	KY-036 or equivalent metal touch sensor module	6	Consumable	
Internet of Things & Sensors	Rain Drop Sensor	Rain Sensitive, Rain Drop Detection Sensor Module. Voltage Range: 3.3V to 5.5V.	6	Consumable	
		Size: 5mm X 40mm or equivalent.			
Internet of Things & Sensors	Flex Sensor	Flex Sensor. Size - 2.2 Inches	6	Consumable	

Internet of Things & Sensors	Temperature Sensor	LM35 Full range temperature sensor. Voltage Range: 4V to 30V. Error: ±0.5°C	6	Consumable	
Internet of Things & Sensors	Temperature and humidity sensor module	DHT 11	40	Consumable	
		Voltage Range: 3V to 5V			
Internet of Things & Sensors	Force Pressure Sensor	Force sensitive resistor with a square, 1.75x1.5" sensing area	4	Consumable	
Internet of Things & Sensors	Colour Recognition Sensor	TCS3200 Colour Recognition Sensor	4	Consumable	
Internet of Things & Sensors	Water Flow Sensor	Arduino Compatible Water flow sensor. 5V DC Input.	4	Consumable	
Internet of Things & Sensors	Sound Sensor	Sound Sensor Module, Microphones module	10	Consumable	
Internet of Things & Sensors	IR Sensors Array module for Line Following	8 IR Sensors Array module for Line Following	10	Consumable	
		Operating Voltage: 5V			
Internet of Things & Sensors	Power Bank	10000 mAh 5-volt Power Bank	5	Consumable	
Internet of Things & Sensors	RFID Reader – Tags	Current :13-26mA / DC 3.3V	10	Consumable	
		Idle Current :10-13mA			
		Sleep Current<80uA			
		Peak Current<30mA			
		Operating Frequency: 13.56MHz<30mA			
		Read range between 20 cm to 1 m			
Internet of Things & Sensors	RF Modules Tx & Rx 315 MHz ASK	Frequency Range: 433.92/315 MHz	10	Consumable	
		Supply Voltage: 3 – 6 V			
		Output: 4 – 16 Dbm			
		Low power consumption			
		Easy application			

Robotics	Stepper motor with Driver board	28BYJ-48 ULN2003 5V Stepper Motor + ULN2003 Driver Board	10	Consumable	
Robotics	DC motor	12V DC Gear 150 RPM	20	Consumable	
Robotics	Servo motors	Position Servo Angle based Metal Gear	10	Consumable	
		Small Servo Metal Gear	10		
		Continuous Metal Gear Servo 360	10		
		Small Servo Plastic Gear	40		
Robotics	150 RPM BO Motor	150 RPM BO Motor	10	Consumable	
Robotics	L298P Motor Driver	L298P Motor Driver Shield or relative Driver Shield	10	Consumable	
Robotics	Servo Motor Tester	CCPM 3 channel Servo Tester	4	Consumable	
DIY Kit	Robotics DIY Kit	Robotics DIY kit with programmable intelligent brain/brick.	3	Equipment	
DIY Kit	Mechanical (Modular) Construction kit	Metal/plastic mechanical construction kit compatible with electronic equipment.	5	Equipment	
STEM Learning/Application Kit	Drone Kit	Educational Purpose	1	Equipment	
	Aerospace Kit		1		
	Automobile Kit		1		
	Bio-Medical Kit		1		
	Agri-Tech Kit		1		
	Water/ Sanitation Kit		1		
	Bio Tech Kit		1		
	Other Potential STEM Application Kit		1		

Package 2: Rapid Prototyping Tools

Category	Name	Specification	Quantity	Type	Tentetive Rate
Rapid Prototyping Tools	3D Printer Kit and tools	Printer Type: FDM (Fused Deposition Modelling), Minimum Dimensions: 160mm *160mm *160mm Build Size or 4 litre Build Volume., Nozzle: 0.3mm to 0.4mm nozzle diameter, slicing software should be free or Open source, LCD Screen UI that display print metrics, Good Heated Print bed. Material Compatibility - PLA, ABS, and derivatives of PLA, Ninjaflex Quality Anti-bacterial/fungal Cover. Repair Kit - with spare springs, screws, keys, tweezers, etc.	1	Equipment	
Rapid Prototyping Tools	Dedicated UPS/Power back up	Dedicated UPS/Power Back up with 2-hour battery backup	1	Equipment	
Rapid Prototyping Tools	Filament for 3D printer	Compatible 1000 Grams Filament in 5 different colours	5	Consumable	
Rapid Prototyping Tools	Filament Storage Box	Compatible Filament storage box	5	Consumable	
Rapid Prototyping Tools	Set of Arts & Crafts Accessories – e.g.- stationary items and basic prototyping material	Cardboard	5	Consumable	
		Foam core boards	5		
		20m spool of thick strings various colour	5		
		Rubber band	100		
		Popsicle sticks	100		
		Wood glue – 500 ml	2		

Package 3: Mechanical, Electrical and Measurement tools

Category	Name	Specification	Quantity	Type	Tentative Rate
Mechanical Tools	Hacksaw Frame	Size: 12 inches	1	Equipment	
Mechanical Tools	Hacksaw blades	Size: 12 inches	10	Consumable	

Mechanical Tools	Mini Hacksaw Frame	Size: 6 inches	1	Equipment	
Mechanical Tools	Mini Hacksaw blades	Size: 6 inches	10	Consumable	
Mechanical Tools	Pliers: 4.5-inch size	External Straight	1	Equipment	
		Nose Circlip Plier	1		
		Long Nose Plier	1		
		Combination Mini Plier	1		
		Wire stripping pliers	1		
		Bent nose plier	1		
		Needle nose pliers	1		
Mechanical Tools	Tweezer Set	6 Pc Non-Magnetic Tweezer Set Size - 6 inches	2	Equipment	
Mechanical Tools	Ball Pein Hammer	Ball Pein Hammer Weight - 0.75kg	1	Equipment	
Mechanical Tools	Steel Shaft Claw Hammer	Claw Hammer Steel Shaft Weight - 0.75kg	1	Equipment	
Mechanical Tools	C-Clamp	Metal Clamp: 3-inch size	4	Equipment	
Mechanical Tools	Allen Key Set	10 Piece Ring Imperial Allen Hex key	1	Equipment	
Mechanical Tools	Drill Machine Set	Drill Machine with accessories Hammer/Screw and clockwise/anticlockwise modes. Power: 500W Chuck capacity - 1 to 10 mm Drill Bits - Masonry, Metal, Wood	1	Equipment	
Mechanical Tools	Drilling Workstation	Drill Press, Drill Holder and Rotary Tool, Compatible with Drilling machine provided	1	Equipment	
Mechanical Tools	Spanner Set	12-piece combination Spanner Set Range - 4 mm to 30 mm	1	Equipment	
Mechanical Tools	Vice Normal	Table top vice	1	Equipment	
Mechanical Tools	Precision Screw Driver Set	6 Piece Precision Screw Driver Set Types: PH0, PH1, Flat head - 1.4mm, 2mm, 2.4mm, 3mm	2	Equipment	

Mechanical Tools	Wrench	Adjustable Universal Wrench	2	Equipment	
Mechanical Tools	Wire Strippers	Wire Stripper Cutter Plier With Spring -26x6x20 cm (LxWxH)	5	Equipment	
Mechanical Tools	Screwdriver	40 pc Multi-purpose screwdriver set	3	Equipment	
Mechanical Tools	Cordless Rotary Multitool Set	Cordless Rotary multitool with all cutting, grinding, polishing, engraving and drill bits. Speed: Adjustable up to 30000 RPM Battery Type: Li-ion Voltage/current range : 8-10V, 0-2 A	1	Equipment	
Mechanical Tools	Air Blower	500 W or more. Variable speed blower	1	Equipment	
Mechanical Tools	Drill Bit Set	High Quality 13 Pcs HSS Drill Bits Set for Wood, Iron, Aluminium, Plastic etc.	1	Equipment	
Mechanical Tools	File set	6 pc file set Working length - 6 inch	1	Equipment	
	Mini File set	6 pc mini file set Working length - 3 inch	1	Equipment	
Mechanical Tools	Flexible Cutting Mat	A3 Size with Marked Pattern and Grids (18" X 12")	1	Equipment	
Mechanical Tools	Plastic Storage Drawer/Organiser	Number of Drawers: 60 or equivalent Drawer size (l*w*d) (inch) : 2*2*5	2	Equipment	
Mechanical Tools	Pegboard	Peg board System to mount tools on wall with attachments. Size: 3ft*2ft	2	Equipment	
Electric Tools	Hot glue gun	Works with standard 0.5- inch glue sticks. Temperature - 230 to 280 degree Celsius.	4	Equipment	
Electric Tools	Digital Oscilloscope	Minimum Bandwidth: 50 Mhz. Minimum number of channels: 2 channels. Sample Rate: 1Gsa/s With inbuilt waveform function generator.	1	Equipment	
Electric Tools	Soldering Kit	Variable Wattage of Soldering Iron: 15-30 watts/230 volts	4	Equipment	

		Soldering Iron Temperature Range: 280°C to 450°C			
		De-Soldering Pump, Soldering Flux (Paste) 100 grams, DE-soldering Copper Braid (Solder Wick) - 1.5m*2mm			
		Compatible Soldering Tip - Bevel, Chisel, Conical - 5 each per kit.			
		Soldering Wire: 20/22 AWG soldering Wire with rosin core flux (100 Grams)			
Electric Tools	Adapters	DC power Adapter with 5V, 2A	10	Consumable	
Electric Tools	Adapters	DC power Adapter with 12V, 2A	10	Consumable	
Electric Tools	Electric Screw Driver Set	Multipurpose Electric screwdriver set. Accessories - Compatible bits Mode - Wireless Battery - Li-ion 3.6V or equivalent with charging dock	1	Equipment	
Electric Tools	Dual Temperature Heat Gun	1800 W Dual Temperature Heat Gun	1	Equipment	
Electric Tools	Soldering Helping hand	Specifications: Adjustable crocodile holding clamps/clip. Soldering iron holder. LED light. Magnifying lens.	4	Equipment	
Measurement Tools	Return measuring tape	Return measuring tape 5Mx19mm	2	Equipment	
Measurement Tools	Stainless Steel Rule	Stainless Steel 12" / 150 mm Rule	5	Equipment	
Measurement Tools	Digital Vernier Calliper	150 mm / 6" Digital Vernier Calliper	2	Equipment	
Measurement Tools	Spirit Level	12" Spirit Level	1	Equipment	
Measurement Tools	Digital Pen electric Tester	Voltage tester	1	Equipment	

Category	Name	Description	Quantity	Type	Tentative Rate
Measurement Tools	Digital Multi Meter	Digital Multi Meter Voltage Current Resistance-7 functions + 19 ranges to cover DC voltage 200mV to 1kV, AC voltage 200 V - 750 V, DC current 200 μA - 10 A Resistance 200 -2 M Ohm and Transistor & diode test.	5	Equipment	
Biology Kit	DIY Paper Microscope	DIY Paper microscope. Magnification range - 100x to 2000x	5	Consumable	
Astronomy Equipment	Telescope	All glass optical components Altazimuth mount suitable for terrestrial and astronomical use minimum 700 mm focal length	1	Equipment	
Textile Equipment	Sewing Kit	Semi-Automatic Sewing machine Straight stitch Consumables - 2 set of assorted needles and 10-colour spool set.	1	Equipment	

Package 4: Power Supply & Accessories and Safety Equipment					
Category	**Name**	**Description**	**Quantity**	**Type**	**Tentative Rate**
Power Supply & accessories	Glue Sticks	11 mm x 200mm Hot Melt Glue Stick	100	Consumable	
Power Supply & accessories	Nuts and Bolts and screw	Specs - M4X12MM M4X20MM M5X16MM M5X25MM M6X20MM	40	Consumable	
Power Supply & accessories	Cable Tie	Small Cable Tie Pack - Pack of 100	10	Consumable	
		Medium Cable Tie Pack - Pack of 100	10	Consumable	
		Big Cable Tie Pack - Pack of 100	10	Consumable	
Power Supply & accessories	Sand Paper	Grit Values - 80, 100, 120, 200, 300. 5 Nos of each	10	Consumable	

Power Supply & accessories	Power Strip Adaptors	Standard Quality Extension with 5Amp safety fuse. 5 or more sockets in each extension. 5-meter length of each extension.	5	Consumable	
Power Supply & accessories	Bulb Holders	Regular Hanging Bulb holder	10	Consumable	
Power Supply & accessories	Electric Wires	Twisted Red black pair	20 meters	Consumable	
Power Supply & accessories	USB TO DC jack cable	USB to DC jack cable for Battery bank	10	Consumable	
Safety equipment	First-Aid Kit	Standard Medical First Aid kit in portable container.	2	Consumable	
Safety equipment	Fire extinguisher (handy units)	Powder Type Fire Extinguisher 2KG	2	Consumable	
Safety equipment	Safety goggles (with/ without LED torch)	Polycarbonate Safety goggles Clear lens with no tint	30	Consumable	
Safety equipment	Safety Gloves Pairs	Latex Coating Gloves (Medium Size)	10	Consumable	
Safety equipment	Safety Mask	Filtering efficiency ranging 80 percent when tested against 0.3-micron sodium chloride particle	20	Consumable	

The concerned committee of the Council will review the proposal submitted by manufacturer/OEMs in consonance with the requirements set forth in the EoI document as well as other requirements of the Council. Shortlisted or selected manufacturer/OEMs would be further invited for a detailed technical presentation-cum-demonstration of sample along with proposed solutions. Sample to be submitted by shortlisted or selected manufacturer/OEMs.

5.2   Availability of EoI

EoI document can be downloaded from the website www.eproc2.bihar.gov.in. EoI is also available on BEPC website **https://bepcssa.in**

5.3   Submission of proposals

Proposals, in its complete form in all respects as specified in the EoI, must be submitted to the BEPC through www.eproc2.bihar.gov.in only as specified in clause 3: Schedule of EoI process.

The Proposal should be submitted with all documentary evidence in support of eligibility/qualification criteria as well as detailed presentation, products details and technical specifications, cost breakup etc. as specified in this EoI. The proposal and all correspondence and documents shall be written in English.

The BEPC may, in exceptional circumstances and at its discretion, extend the deadline for submission of proposals by issuing an addendum to be made available on the BEPC's website, in which case all rights and obligations of the BEPC and the manufacturers/OEMs previously subject to the original deadline will thereafter be subject to the deadline as extended.

5.4 Eligibility/Qualification Criteria

S No	Eligibility/Qualification Criteria	Documents Required to be Submitted
1	The manufacturers/OEMs should be an Indian Registered Company under Indian Companies Act 1956/2013/OEM/Proprietorship/Partnership Firms and must be at least five years old entity. **(Consortium in any form is not allowed.)**	Certificate of Incorporation / Proprietorship Certificate/ Partnership Certificate
2	The manufacturers/OEMs should be registered with the GST department and carry a valid PAN/TAN Number.	Copy of GST Registration certificate, PAN/ TAN Number
3	The manufacturers/OEMs in its name/firm name must have average annual turnover of INR 5 (Five) Crores in any three financial years ended on 31/03/2023 during 2018-19 to 2022-23.	CA Certificate confirming the same with valid UDIN number.
4	The manufacturers/OEMs must have past experience with similar requirement and established Tinkering Lab at any State Government Schools/ Private Schools affiliated with CBSE/ICSE Board in at-least 25 secondary/ senior secondary schools.	The manufacturers/OEMs must submit the copy of Work Orders along with Work Completion Certificates.

5.5 Others

- The Department may terminate the EoI process at any time and without assigning any reason. The Department makes no commitments, express or implied, that this process will result in a business transaction with anyone.

- This EoI does not constitute an offer by the Department and is not a financial bid.

- The proposals submitted by the manufacturers/OEMs should be valid for minimum period of 180 days from the date of submission of EoI.

- No general order suppliers need to be submitted the proposal.

- One proposals of approved acceptable samples shall be examined.