

Purchase Order

PO. No.: EdCIL/EIS & EPS/MBRAPP/2024/1/ 2114

01.03.2024

To,

M/s STEM Learning Pvt. Ltd,
1205, Marathon Icon,
Marathon Nextgen Campus,
Opp. G. K. Marg, Parel (W)
Mumbai-400 013.

Subject: Setting-up of Integrated Science, Maths & Technology Lab & other educational labs in Govt Schools of District-Banswara, Rajasthan under CSR initiative of Mahi Banswara Rajasthan Atomic Power Project (MBRAPP), Nuclear Power Corporation of India Limited, Banswara, Rajasthan.

Ref:

1. NIT No: EdCIL/EIS & EPS/PROC/2022-23/04, Dated: 11.01.2023
2. MOU signed between EDCIL & M/s. STEM Learning Pvt Ltd. on 17.04.2023 for Integrated Science, Maths & technology Lab & other educational Lab.
3. MOU signed between EDCIL & NPCIL Banswara Plant on 09.02.2024

Dear Sir/Madam,

1. Your above-mentioned Rate Contract agreement was signed on 17.04.2023 between EDCIL & M/s. Stem learning Pvt Ltd. for undertaking Integrated Science, Maths & technology Lab & other educational Lab.
2. Subsequently, an agreement has been signed between EDCIL & NPCIL Banswara plant on 09.02.2024 to execute their CSR project. The projects proposed for execution under their CSR are as follows:

S. No.	Particular	Nos.	Unit Cost	GST (18%) on Unit cost	Total Per unit (Rs.)	Total (Rs.)
1	STEM (80 Models) Class 5-10	30	7,31,352	1,31,643	8,62,995	2,58,89,861
2	Tinkering Lab	2	7,00,000	1,26,000	8,26,000	16,52,000
3	Astronomy Lab	3	9,91,100	1,78,398	11,69,498	35,08,494
Sub Total						3,10,50,355

3. The Competent Authority in EdCIL has approved the **"Rate Contract Tender for Setting-up of Integrated Science, Maths & Technology Lab & other educational labs in Govt Schools of District-Banswara, Rajasthan under CSR initiative of Nuclear Power Corporation of India Limited, Mahi Banswara Atomic Power Project (MBRAPP), Rajasthan** at a total amount of **Rs. 3,10,50,355 inclusive of taxes** (Rupees Three Crore Ten lakh Fifty Thousand Three hundred & Fifty Five only) as detailed above.
4. The Scope of work and other terms & conditions for subject said work shall be governed as mentioned in the NIT No: EdCIL/EIS & EPS/PROC/2022-23/04, Dated: 11.01.2023
5. The aforesaid labs shall be executed in **phased manner (Part or whole)** as per fund availability from NPCIL Banswara for the financial year from time to time. **EDCIL shall make separate communication in this regard and time period for completion shall be reckoned accordingly.**
6. This letter shall form a part of Contract Agreement/ Rate Contract signed on 17.04.2023 between **EdCIL (India) Limited & M/s STEM Learning Pvt Ltd., Mumbai** along with tender document and all Corrigendum/Addendum, correspondence made for this tender.
7. As Per Clause No. 10 of Chapter-V 'Instruction to Bidders' (Delivery Schedule), **Setting-up of Integrated Science, Maths & Technology Lab & other educational labs** in Govt Schools of District-Banswara, Mahi Banswara Rajasthan Atomic Power Project (MBRAPP) under CSR activities should be completed **within 30 days (completion of delivery)** from the date of issuance of purchase order. The 'Milestones/Schedule' for the broad activities till completion of work shall be governed by Clause No. 11 of Chapter-V.

8. Service Period

The duration of the service period for this project shall be from the date of award of purchase order to till completion of Defect Liability period.

9. Payment Terms

- i) 80% payment shall be made against delivery of all the BOQ items or part thereof for each school/ number of schools delivered.
- ii) 10% on completion of Installation/Commissioning of supplied items as per stage (i) above.
- iii) 10% payment on completion of warranty period of 1 year from Installation/Commissioning of items as per stage (ii) above.



Payment will be processed after proper quality checks and signing of handing over certificates by concerned authorities.

Note:

- a) The ownership of supply shall be with CLIENT and as such EdCIL will process the Invoice of the Supplier and forward the bill to CLIENT with EdCIL's recommendation. Thereafter, the payment shall be released to the supplier by EDCIL on transfer of funds by CLIENT to EDCIL as per the recommendation of successful completion of supply, installation, commissioning and handing over.
- b) Valid GST invoice should be prepared as Bill to EDCIL India Limited quoting EDCIL's GST NUMBER and Ship to various Locations of Client.

10. Warranty and AMC (Annual Maintenance Contract)

- I. Comprehensive Warranty should be for a minimum period of one (01) year from date of successful commissioning & handing over of Goods / Completion of Work at the Location. The Supplier/agency should, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier should at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as shall be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests.
- II. The warranty should be comprehensive on site with responsibility of the agency to ensure attending the warranty queries/issues received from EdCIL. Supplier should give written information (about the Engineers/ technical representative name and cell numbers) before Completion of Work / handing over of the Goods to the Consignee and to the end client's nominated representative/s to attend the issues related to the warranty of the goods supplied under the contract.
- III. The Consignee should promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier should immediately within 07 days arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier should take over the replaced parts/goods at the time of their replacement. No claim whatsoever should lie on the Consignee for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 07 days. If the supplier having been notified fails to remedy the defects within 07 days, the consignee should proceed to take such remedial action as should be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the consignee should have against the supplier under the contract.

11. Performance Security

The successful bidder should be required to deposit Performance Bank Guarantee equivalent to **3% of contract value/Work Order issued time to time as per S. No. 05 above** to EdCIL within 15 (Fifteen) days from the date of receipt of Purchase Order.

The Performance Bank Guarantee should be issued by a **Nationalized Bank** in favour of "**EdCIL (India) Ltd. Noida**". This Performance Bank Guarantee should be retained throughout the currency of the contract and should be extended by the bidder from time to time, as required by EdCIL.

This guarantee shall be valid for a period of **90 days beyond the One year warranty period from the date of commissioning and successful handing over.**

12. Delivery Schedule

The supply should be completed within **30 days** of receipt of LOA (Letter of Acceptance). The bidder should submit an undertaking by indicating the list of items with quantities that all the Laboratory equipment/ items are off the shelf ready at their factory/ warehouse at the time of submission of bid.

13. Milestones/Schedule

In the event of failure of supply of the items/ goods within the stipulated delivery schedule/Milestones, the consignee has all the right to foreclose/terminate the contract by reserving right to encash the Performance Bank Guarantee. The milestone for the Delivery and installation is as follows:

Activity	Days
1. Completion of delivery of Material at Project Site;	D+ 30
2. Installation/Commissioning along with Capacity Building /teacher's training and Baseline Survey of the concerned School;	D+ 45
3. Endline Survey (if applicable)	6 Months after Baseline Survey
<p>➤ D- Denotes the date of issue of Purchase Order to the successful Bidder.</p> <p>➤ If the PDI is delayed due to any reason beyond the control of bidder, the revised timeline for Supply/Delivery completion may be considered in sole discretion of EdCIL's Client/EdCIL.</p>	

Note:

- The agency has to visit the site and update himself to site requirements & prepare layout diagram wherever required as per the requirement of the EdCIL/EdCIL's client. EdCIL reserves its right to modify the supply period according to the number of schools available, location plan or any other priority or plan of the client. There is a possibility that Baseline & Endline*



survey may not happen as per requirement by client. In that case the delivery milestones may be modified by EdCIL.

2. *The successful bidder has to depute their full-time supervisor during execution till handing over for successful completion of the work.*

14. Delayed Delivery

If the Delivery is not made within the due date for any reason under the control of the successful bidder, the EdCIL reserves the right to impose **Liquidated damages (LD) @ 0.5% plus GST per week effective from the 31st day from the date of issuance of PO time to time as per S. No. 05 above** and the maximum deduction of 10% of the contract value/ rate. The LD shall be applied only on the portion of items not delivered within the stipulated time period for reasons under the control of the supplier. Applicable GST on LD amount would also be charged additional. In case of any unforeseen delay or delay beyond control of the supplier, the supplier may request for extension of the time within stipulated time. EdCIL at its discretion may grant the extension to the supplier subject to approval of client.

Once the maximum is reached, EdCIL has the right to terminate the contract without any liability to cancellation charges and encash the submitted performance guarantee/s submitted by successful bidder.

The above clause is also applicable for Installation and Commissioning also. The same should be read in sync with the Delivery Milestones.

15. This letter is sent with a duplicate copy of this letter, you are advised to return duplicate copy duly signed & stamped from the authorized representative as a token of your acceptance for the said work order within 3 days' time. An advance copy is sent on official email id as mentioned in bid submitted.
16. You are advised to contact immediately to the DGM (EIS & EPS), EdCIL House, 18-A, Sec-16A, Noida (U.P.)- 201301 for further directions and submission of Time schedule, Contact Agreement & Performance Bank Guarantee and Duplicate Signed copy of this Purchase order.

17. Kindly acknowledge the receipt of Purchase Order

Thanking You,



Yours Faithfully

(Nandeesh Babu MG)
DGM (EIS & EPS)

Enclosure:

1. BOQ on Accepted Rates (Annexure-I).
2. Signed Copy of Contract Agreement form.
3. Performance Bank Guarantee Format.

Bill of Quantities

Annexure-I

A. STEM Lab 5-10 (80 Models)/ Integrated Science, Maths Lab

S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Tax s. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
1.	Constellation Viewer	Identification and study of Indian constellations About Constellations Stars Pattern	1	No.	8,100	8,100	18	1,458	9,558
2.	Newton's Disc	White light is made up of 7 colours (VIBGYOR). Splitting of white light.	1	No.	4,800	4,800	18	864	5,664
3.	Colour Shadow	Combinations of colour lights. Additive mixture of colour. Primary colours.	1	No.	8,430	8,430	18	1,517	9,947
4.	Periscope	Application of laws of reflection. Angle of incidence and angle of reflection	1	No.	8,910	8,910	18	1,604	10,514
5.	Kaleidoscope	Multiple reflection. Symmetric images. Patterns due to reflection	1	No.	4,780	4,780	18	860	5,640
6.	Laws of Reflection	Laws of reflection for plane mirror. Angle of incidence = angle of reflection.	1	No.	4,780	4,780	18	860	5,640



S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
7.	Corner Mirror	Multiple reflection. Image formula ($N=360/A - 1$) Angled mirrors.	1	No.	7,730	7,730	18	1,391	9,121
8.	Infinity Well	Multiple reflections. Image formation in parallel mirrors.	1	No.	8,320	8,320	18	1,498	9,818
9.	Magic Water Tap	Optical Illusion. Refractive index of medium, refraction	1	No.	8,680	8,680	18	1,562	10,242
10.	Total Internal Reflection.	Total internal reflection, bending of light ray. Optical fibre	1	No.	8,320	8,320	18	1,498	9,818
11.	Fun with Magnets	Types of magnets Magnetic field and properties of field lines.	1	No.	4,780	4,780	18	860	5,640
12.	Law of Inertia	Newton's first law. Inertia is opposing change in state of rest.	1	No.	8,910	8,910	18	1,604	10,514
13.	Circle and Ball	Newton's first law. Inertia is opposing change in motion. Centripetal force.	1	No.	8,900	8,900	18	1,602	10,502
14.	Action and Reaction	Newton's 3rd law of motion. For every action there is equal opposite and reaction	1	No.	7,730	7,730	18	1,391	9,121
15.	Parrot in the Cage	Persistence of vision. Frames per second. The basic concept of animation.	1	No.	6,550	6,550	18	1,179	7,729

S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
16.	Zoetrope	Persistence of vision. Frames per second. The basic concept of motion picture.	1	No.	8,320	8,320	18	1,498	9,818
17.	Pin screen	Pressure Inverse relation of Pressure Area Representation of pixels	1	No.	8,800	8,800	18	1,584	10,384
18.	Floating Ball	Bernoulli's principle. Pressure difference and lift.	1	No.	7,730	7,730	18	1,391	9,121
19.	Floating Fan	Bernoulli's principle. Air pressuredifference	1	No.	8,670	8,670	18	1,561	10,231
20.	Tornado	Atmospheric disturbances, currents, storms. Vortex of wind.	1	No.	7,230	7,230	18	1,301	8,531
21.	Hand Pump	Application of pressure to pump water. Pressure-volume relation.	1	No.	8,200	8,200	18	1,476	9,676
22.	Anamorph	Perspective, Viewpoints Illusion and Graphical projection	1	No.	7,800	7,800	18	1,404	9,204
23.	Floating Magnets	Properties of magnet. Attraction in opposite poles and repulsion in like poles	1	No.	7,600	7,600	18	1,368	8,968
24.	Magnetic Field Tube & Immiscible Fluid	Magnetic field and properties of magnets. Density of liquid	1	No.	7,300	7,300	18	1,314	8,614
25.	Moment of inertia	Moment of inertia Rotational inertia. Distribution of mass.	1	No.	8,410	8,410	18	1,514	9,924



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S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Tax s. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
26.	Lazy Tube	Magnetic Field and Forces, Eddy current, Lenz Law.	1	No.	6,050	6,050	18	1,089	7,139
27.	Hyperbola	Conic sections. Shape of hyperbola.	1	No.	7,230	7,230	18	1,301	8,531
28.	Magnetic effect of electric current	Magnetism of electric current. Compass deflection. Oesterd's experiment	1	No.	7,820	7,820	18	1,408	9,228
29.	Pythagoras Model & Moire Pattern	Pythagoras theorem and Interference of Light	1	No.	7,820	7,820	18	1,408	9,228
30.	Elliptical Carrom Board	Conic sections. Properties of ellipse.	1	No.	6,050	6,050	18	1,089	7,139
31.	Two Congruent Right Triangles	Comparison of area of different geometric shapes. Congruent shapes.	1	No.	4,280	4,280	18	770	5,050
32.	Area of a Circle	Simple illustration of derivation of area of circle	1	No.	6,050	6,050	18	1,089	7,139
33.	$(a+b)^2 = a^2+2ab+b^2$	Geometric illustration of basic algebraic identity.	1	No.	6,050	6,050	18	1,089	7,139
34.	$(a+b+c)^2 = a^2+b^2+c^2+2ab+2bc+2ca$	Geometric illustration of basic algebraic identity.	1	No.	6,050	6,050	18	1,089	7,139
35.	$a^2-b^2=(a+b)(a-b)$	Geometric illustration of basic algebraic identity.	1	No.	7,820	7,820	18	1,408	9,228
36.	Sum of the angles of a triangle	Elementary theorem of math. "Sum of all three angles of any triangle=180 ° Linear pair.	1	No.	6,050	6,050	18	1,089	7,139



S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Tax s. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
37.	Tangram	Interesting tiling puzzle. Basic geometric shapes.	1	No.	4,190	4,190	18	754	4,944
38.	Parking Puzzle	Mathematical logic Algorithm Brain Teaser	1	No.	8,600	8,600	18	1,548	10,148
39.	Organ pipes	Sound of different frequencies and wavelengths. Musical notes.	1	No.	6,050	6,050	18	1,089	7,139
40.	Area of rhombus	Simple illustration of derivation of area of rhombus	1	No.	9,700	9,700	18	1,746	11,446
41.	Transverse wave pendulum	Mechanical wave. Basic concepts of transverse wave. Actual Representation of vibrating particles and propagating wave	1	No.	7,820	7,820	18	1,408	9,228
42.	Area of triangle	Simple illustration of derivation of Area of Triangle	1	No.	6,050	6,050	18	1,089	7,139
43.	Area of parallelogram	Simple illustration of derivation of area of parallelogram	1	No.	7,800	7,800	18	1,404	9,204
44.	Coupled Pendulum	Resonant frequency. The resonant frequency depends on the pendulum's length. Longer pendulums have lower frequencies.	1	No.	8,100	8,100	18	1,458	9,558

S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
45.	Solar Light	Conversion of solar energy into electricity. Application of renewable energy sources. Solar panel, semiconductor s.	1	No.	9,800	9,800	18	1,764	11,564
46.	Wind Mill	Working of wind mill. Conversion of wind energy into electricity.	1	No.	7,900	7,900	18	1,422	9,322
47.	Shape of earth due to rotation	Shape of earth Rotational force Centrifugal force	1	No.	8,300	8,300	18	1,494	9,794
48.	KE PE Track	Conversion of energy. Potential and Kinetic energy.	1	No.	9,300	9,300	18	1,674	10,974
49.	Loop The Loop	Conservation of energy. The minimum speed necessary to complete the loop without falling.	1	No.	4,190	4,190	18	754	4,944
50.	Rope Puzzle	Logic and Mathematical shapes study of surfaces	1	No.	8,900	8,900	18	1,602	10,502
51.	Refraction Cylinder	Refraction of light Alphabet symmetry	1	No.	8,300	8,300	18	1,494	9,794
52.	Newton's Cradle	Conservation of energy, conservation of momentum and friction.	1	No.	9,300	9,300	18	1,674	10,974
53.	Reflection Transmission	Application of laws of reflection. Reflection and Transmission of light.	1	No.	7,300	7,300	18	1,314	8,614
54.	Hand Battery	Electric potential difference. Electric battery.	1	No.	8,000	8,000	18	1,440	9,440



S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Tax s. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
		Chemical effect of electric current							
55.	Day and Night	Cycle of day and night on earth. Shadows. Seasons, angle of tilt.	1	No.	7,650	7,650	18	1,377	9,027
56.	Cone Run Uphill	Centre of mass. Gravity pulls on the centre of mass of objects.	1	No.	9,600	9,600	18	1,728	11,328
57.	Tower Of Pisa	Center of mass. Centre of gravity. Gravitation. Stability of structure.	1	No.	6,100	6,100	18	1,098	7,198
58.	Lever	Simple Machines Lever. Type of lever.	1	No.	9,300	9,300	18	1,674	10,974
59.	Pulley Block	Pulley- simple machine. Combination of pulley. Mechanical Advantage.	1	No.	8,100	8,100	18	1,458	9,558
60.	Wheel and Axle	How it is easy to rotate wheel when force is applied at a point distant from center.	1	No.	7,600	7,600	18	1,368	8,968
61.	Heat Absorption	Black Body, Heat Absorption and Reflection, Colour Temperature	1	No.	9,300	9,300	18	1,674	10,974
62.	Conductors and Insulators	Electrical conductivity Types of conductor and insulator	1	No.	9,500	9,500	18	1,710	11,210
63.	Viscosity Tube	Buoyancy. Viscosity. Density	1	No.	9,700	9,700	18	1,746	11,446
64.	Rock and Minerals	Different types of rock and mineral	1	No.	5,280	5,280	18	950	6,230



S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Tax s. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
		samples. Difference between them.							
65.	DNA	Double helix structure of DNA. A-Tand G-C pairs.	1	No.	8,300	8,300	18	1,494	9,794
66.	Lateral Shift	Refraction of light, deviation in path.	1	No.	7,300	7,300	18	1,314	8,614
67.	Force & types of friction	Friction, speed due to surface texture. Rolling Friction.	1	No.	4,280	4,280	18	770	5,050
68.	Funny mirrors	Distorted mirror. Convex and concave mirrors	1	No.	4,380	4,380	18	788	5,168
69.	Marble Slide	Conservation of momentum.	1	No.	6,050	6,050	18	1,089	7,139
70.	Resonance	Frequency and length of object, resonating frequency.	1	No.	6,050	6,050	18	1,089	7,139
71.	Centrifuge Puzzle	Centripetal and Centrifugal force.	1	No.	6,050	6,050	18	1,089	7,139
72.	Area of Trapezium	Area of trapezium using parallelogram	1	No.	4,280	4,280	18	770	5,050
73.	Sum of angles of Quadrilateral	Sum of angles of Quadrilateral Complete angle	1	No.	6,050	6,050	18	1,089	7,139
74.	$(A+B)^2 - (A-B)^2 = 4AB$	Geometric illustration of basic algebraic identity.	1	No.	7,300	7,300	18	1,314	8,614
75.	Electric bell	Electric Circuit, Electromagnet and magnetic effects of current	1	No.	6,050	6,050	18	1,089	7,139
76.	Human Torso	Human Body Anatomy Organs Functions of Body parts	1	No.	6,100	6,100	18	1,098	7,198

S. No	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Tax s. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
77.	Ear & Eye	Sense organs Functions of body parts Vision Hearing	1	No.	9,650	9,650	18	1,737	11,387
78.	Human Joints	Types of joint In human body Bones and ligaments	1	No.	10,100	10,100	18	1,818	11,918
79.	Plant Cell	Eukaryotic cells Difference between cells Parts of cell	1	No.	11,750	11,750	18	2,115	13,865
80.	Animal Cell	Difference between cells, Parts of cell	1	No.	8,700	8,700	18	1,566	10,266
81.	TRAINING OF TEACHERS		2	No.	17,500	35,000	18	6,300	41,300
82.	INFRASTRUCTURE		1	No.	66,182	66,182	18	11,913	78,095
83.	Base line & Endline Survey		1	No.	35,000	35,000	18	6,300	41,300
Total (A)						7,31,352		1,31,643	8,62,995

B. Tinkering Lab

Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
1	A) 5 Android Mobile	Android Operating System 2.3 ("Gingerbread") or higher and 2 GB RAM (Whichever model you have, your phone must have an SD card (physical or virtual) installed.)	1	No.	50,500	50,500	18	9,090	59,590
2	B) 10 Arduino Program kit (Include Arduino UNO)		1	No.	40,000	40,000	18	7,200	47,200

Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
	Arduino UNO R3 + USB Cable A/B	based on Microcontroller : ATmega328 SMD.							
	Breadboard	Standard Breadboard with negative-positive rails on both side							
	RGB LEDs	5mm LED in RGB color							
	Red LEDs	5mm LED in red color							
	Green LEDs	5mm LED in green color							
	Jumper Wires (M-M) (Pack of 40)	cable length about 20cm or 8-inch							
	Jumper Wires (F-F) (Pack of 40)	cable length about 20cm or 8-inch							
	Jumper Wires (F-M) (Pack of 40)	cable length about 20cm or 8-inch							
	Sound Buzzer	Buzzers Indicator, Internally Driven Magnetic 5 V 30mA 2.4kHz 85dB @ 5V, 10cm Through Hole PC Pins							
	Touch Sensor	touch-sensing IC (TTP223)							
	Sound Detection Sensor Module								
	Water Sensor								
	Tilt sensor	SW-520D Tilt Sensor							
	Vibration Sensor	SW-420							
	Potenitiometer	10k Ohm Variable Resistor (3386 Package) - Trimpot Trimmer Potentiometer							
	LDR Sensor	Light							

Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
		Dependent Resistor							
	I2C Sesor	LCD 1602 Parallel LCD							
	IR Sensor	Infrared sensor							
	Fire / Flame Sensor	Comparator chip LM393							
	Air Quality Sensor	MQ135 Sensor							
	Ultrasonic sensor	HC-SR04-Ultrasonic Range Finder							
	Weather monitoring sensor	DHT11 Sensor							
	Joystick module pinout	Internal Potentiometer value: 10k 2.54mm pin interface leads							
	4*4 Keypad	4x4 Matrix Keypad Membrane Switch							
3	C) 10 Basic Robotics Kit		1	No.	42,000	42,000	18	7,560	49,560
	Breadboard Powersupply	MB102 Breadboard Power Supply module							
	Breadboard	Standard Breadboard with negative-positive rails on both side							
	Resister Kits Values:	Assorted Box							
	Variable Resistors	100Ω, 1K, 2K							
	LEDs Kit	RGB LEDs (4 Pin Tri Color Diffused Light Lamp LED Diode Rgb)							
		Red LEDs 5mm							
		White LEDs 5mm							
		Blue LEDs 5mm							
		Green LEDs 5mm							



Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
	Push Buttons	Push Button Switch 4 Pin - 5mm							
	Potentiometers	1K ohm Variable Resistor - Trimpot (RM065 Package)							
	Sound Buzzer	Buzzers Indicator, Internally Driven Magnetic 5 V 30mA 2.4kHz 85dB @ 5V, 10cm Through Hole PC Pins							
	Multimeter	1M Ohm Impedance							
	Capacitor	1000uf/25V							
	9v Battery								
	9v Battery Clips								
	Jumper Wires (Male - Male)								
	9v - 12v adapter plug								
4	D) Set Of Basic Components	(Include Resistors, Capacitors, LEDs, etc.)	1	No.	35,000	35,000	18	6,300	41,300
5	E) Gener al Purpose Sensors (LCD, LDR, Ultrasonic Sensors, etc.)	Rain Drop Sensor	1	No.	30,000	30,000	18	5,400	35,400
		LM393 Sound Sensor							
		Soil Moisture Sensor							
		MQ 3							
		Hall Effect Sensor							
		Metal Detector Sensor							
		Force Sensitive Sensor							
		MPU6050(6 DOF,3 axis Gyro &Acceleromet er)							
		PIR Sensor							



Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
		BMP 280 pressure sensor							
6	F) Wireless Sensors (Bluetooth)	Bluetooth Module (HC-05)	1	No.	13,350	13,350	18	2,403	15,753
7	G) Advance DIY Robotic Kit (Robotic Arm, Walking Robot)		1	No.	26,500	26,500	18	4,770	31,270
	Pluto 1.2	Drone kit							
	Otto Robot	Human robot (OTTO Interactive DIY Robot for Kids)							
8	H) Programming Drone								
9	I) Soldering & Prototyping Kits	Soldering Gun	1	No.	19,000	19,000	18	3,420	22,420
		Soldering Paste							
		Soldering Wire - 500gm							
		Heat Shrink Tube (100 Meters)							
		Wire Stripper							
		Mini Handsaw							
		Power Strip							
		Glue Gun With Sticks							
		Flexible Cutting Mat (18" x 12")							
		Small Fire Extinguisher							
		First aid Kit							
		Latex Coating gloves							
		Safety Glasses							
10	J) 1 DIY Robotics kit		1	No.	21,250	21,250	18	3,825	25,075
	Robot Structure - 2 Wheels Chassis								
	Robot Structure - BO Motors	The 200 RPM Dual Shaft BO Motor							
	Robot Structure - BO Wheels	7cm Dia. x 1cm Width							



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Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
	Robot Structure - Castrol Wheel	Goli Castor Wheel (Pack of 4)							
	Arduino Uno + USB	based on Microcontroller : ATmega328 SMD.							
	L298n Motor Driver	L298n Motor Driver							
	Mini Breadboard	400 Points Half Size Solderless Breadboard							
	Jumper Wires (M-M) (Pack of 40)								
	Jumper Wires (F-F) (Pack of 40)								
	Jumper Wires (F-M) (Pack of 40)								
	Hook-up Wires (92 Meters)								
	IR Proximity Sensor								
	Bluetooth Module (HC-05)	(HC-05)							
	Ultrasonic Sensor								
	Servo Motor	Tower Pro SG90 Servo - 9 gms Mini/Micro Servo Motor							
	Rechargeable 12v Batteries (cells)								
	Battery cover								
	Battery Charger Adapter 12v								
	Screw Driver Kit								
	Double Sided Tape								
	Black Insulation Tape								
11	K) Set of Hardware		1	No.	14,000	14,000	18	2,520	16,520



Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
	Tools								
12	L) Safety Equipments	Soldering Gun	1	No.	14,800	14,800	18	2,664	17,464
		Soldering Paste							
		Soldering Wire - 500gm							
		Heat Shrink Tube (100 Meters)							
		Wire Stripper							
		Mini Handsaw							
		Power Strip							
		Glue Gun With Sticks							
		Flexible Cutting Mat (18" x 12")							
		Small Fire Extinguisher							
		First aid Kit							
		Latex Coating gloves							
		Safety Glasses							
13	M) Back Drops& lab setup		1	No.	18,600	18,600	18	3,348	21,948
14	N) Study Book for Tinker lab		1	No.	20,000	20,000	18	3,600	23,600
15	Learning Tools	(video lessons plan training Manual and Software Installation)	1	No.	80,000	80,000	18	14,400	94,400
16	1 - 3D Printer	(including Consumable)	1	No.	75,000	75,000	18	13,500	88,500
17	Training	(15 Training in each schools with reporting and documentation)	1	No.	2,00,000	2,00,000	18	36,000	2,36,000
	Total Tinkering Lab (B)					7,00,000		1,26,000	8,26,000
c. Astronomy Lab									
a	Lab Models								

Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
1	Astronaut fibre model of 5' height	Fibre and wooden base	1	No.	61,710	61,710	18	11,108	72,818
2	Interior of the Sun model	Fibre and wooden base	1	No.	11,688	11,688	18	2,104	13,791
3	Illuminated Earth model	Fibre and wooden base	1	No.	11,688	11,688	18	2,104	13,791
4	Glowing Moon model	Fibre, print, light and wooden base	1	No.	12,155	12,155	18	2,188	14,343
5	Mars 3 D globe	Globe, print and acrylic structure-base	1	No.	11,220	11,220	18	2,020	13,240
6	How eclipses occur ? Model	Balls, print, motor, on-off button, acrylic/wooden base	1	No.	7,480	7,480	18	1,346	8,826
7	Annular and Total Solar Eclipse model	Acrylic structure, motor, base, on-off button	1	No.	8,883	8,883	18	1,599	10,481
8	Celestial globe model	Globe, acrylic base Print	1	No.	8,415	8,415	18	1,515	9,930
9	illuminated Sky globe model	Globe, light, print, acrylic base	1	No.	8,883	8,883	18	1,599	10,481
10	Celestial coordinates model	Fibre, acrylic base and print	1	No.	7,480	7,480	18	1,346	8,826
11	Wall mounted Tarangan (Planisphere) model	Fibre, acrylic base and print	1	No.	10,753	10,753	18	1,935	12,688
12	Sun's path model	Acrylic structure, base and print	1	No.	12,155	12,155	18	2,188	14,343
13	Ray diagram of Newtonian telescope model	Acrylic structure, base and print	1	No.	12,623	12,623	18	2,272	14,895
14	Parallax mehtod of star distance model	Acrylic structure, base and print	1	No.	8,883	8,883	18	1,599	10,481
15	Dispersion of light model	Acrylic, glass and laser	1	No.	10,753	10,753	18	1,935	12,688
16	Newton's disk model	Color disk, acrylic structure, dvd motor, adapter, regulator with nob & on-off	1	No.	4,208	4,208	18	757	4,965

Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
		button							
17	Geostationary satellite model	Acrylic body, acrylic base, motor, on-off button	1	No.	11,688	11,688	18	2,104	13,791
18	Polar satellite model	Acrylic body, acrylic base, motor, on-off button	1	No.	6,545	6,545	18	1,178	7,723
19	Indian satellite - Kalpana 1 model, Aryabhata and Mars Orbiter	Fibre, motor and wooden base	1	No.	49,555	49,555	18	8,920	58,475
20	ISRO scale models of GSLV Mk II, PSLV and satellite launch station model	Fibre, motor and wooden base	1	No.	70,125	70,125	18	12,623	82,748
21	GMRT dish antenna model	Fibre, print and base wooden	1	No.	9,350	9,350	18	1,683	11,033
22	Motorized 3D solar system model	Globe, motor, on-off button, print, acrylic structure	1	No.	8,415	8,415	18	1,515	9,930
23	Weight on different planets	Metalic strucutre, sunboard sheet, different weight	1	No.	11,688	11,688	18	2,104	13,791
24	Space 4 D flash cards	Flash card and print	1	No.	7,013	7,013	18	1,262	8,275
25	Automatic 4" telescope with software based alignment and locating the stars	Telescope	1	No.	11,688	11,688	18	2,104	13,791
26	10 x 50 Binocular for Astronomy	Binocular	1	No.	4,675	4,675	18	842	5,517
27	Dobsonian 150 mm telescope	Dobsonian telescope	1	No.	21,038	21,038	18	3,787	24,824
b	Activity kits, tab, books etc.								

Sr. No.	Model Name/ Principle	Specification	Qty.	Unit	Rate/unit (in Rs.)	Amount (Exclusive of Tax) (Rs.)	Taxes. (%)	Taxes in (Rs.)	Amount (Inclusive of Tax) (Rs.)
28	Tarangan dial 20 numbers @ Rs 30		20	No.	257	5,143	18	926	6,068
29	Spectroscope kit 20 number @ 50		20	No.	655	13,090	18	2,356	15,446
30	Telescope making kit 20 number @ 200		20	No.	374	7,480	18	1,346	8,826
31	Star projection 5 number @ 300		5	No.	1,029	5,143	18	926	6,068
32	Astrolabe 20 number @ 240		20	No.	1,403	28,050	18	5,049	33,099
33	Star chart Northern and Southern hemisphere 10 number @ Rs 100		10	No.	935	9,350	18	1,683	11,033
34	Books on Astronomy		2	No.	935	1,870	18	337	2,207
35	Tab		1	No.	4,675	4,675	18	842	5,517
c	Transportation & Installation	Transportation of goods, conveyance of staff & installation of lab	1	No.	51,425	51,425	18	9,257	60,682
d	Backgrounds	Wall and Roof wallpapers and other wall finishing work (depends on size of hall)	1	No.	1,40,250	1,40,250	18	25,245	1,65,495
e	Training	Orientation of the project to the teachers	1	No.	70,125	70,125	18	12,623	82,748
f	Infrastructure	Table Platform, electrical points & wiring	1	No.	1,87,000	1,87,000	18	33,660	2,20,660
g	Base line & Endline Survey		1	No.	46,750	46,750	18	8,415	55,165
Total Astronomy Lab (C)						9,91,100		1,78,398	11,69,498



Name of the Bank: _____
To
EdCIL (India) Limited, Noida

PERFORMANCE BANK GUARANTEE FORMAT

In consideration of the Chairman and Managing Director, EdCIL acting through _____ (Designation & address of Contract Signing Authority), (hereinafter called "**EdCIL (India) Limited**") having agreed under the terms and conditions of agreement/ Contract Acceptance letter No. _____ dt _____ Made between _____ (Designation & address of contract signing Authority) and _____ (here in after called "the said Agency" for the work _____ (here in after called "the said agreement") having agreed for submission of a irrevocable Bank Guarantee Bond for ₹ _____ (₹ _____ only) as a performance security Guarantee from the Agency for compliance of his obligations in accordance with the terms & conditions in the said agreement.

1. We _____ (Indicate the name of the Bank) hereinafter referred to as the Bank, undertake to pay to the EdCIL (India) Limited an amount not exceeding ₹ _____ (₹ _____ only) on demand by the EdCIL (India) Limited.
2. We _____ (Indicate the name of the bank, further agree that (and promise) to pay the amounts due and payable under this guarantee without any demur merely on a demand from the EdCIL (India) Limited through the CGM, EdCIL (India) Limited or _____ (Designation & Address of contract signing authority), stating that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the EdCIL (India) Limited by reason of any breach by the said Agency of any of the terms of conditions contained in the said agreement or by reason of the Agency failure to perform the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding ₹ _____ (₹ _____ Only).
3. (A) We _____ (indicate the name of Bank) further undertake to pay to the EdCIL (India) Limited any money so demanded notwithstanding any dispute or dispute raised by the Agency in any suite or proceeding pending before any court or Tribunal relating to liability under this present being absolute and unequivocal.
- a. The payment so made by us under this Performance Guarantee shall be a valid discharge of our liability for payment there under and the Agency shall



have no claim against us for making such payment.

4. We _____ (Indicate the name of bank) to further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the EdCIL (India) Limited under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged by _____

(Designation & Address of contract signing authority) on behalf of the EdCIL (India) Limited certify that the terms and conditions of the said agreement have been fully and properly carried out by the said Agency and accordingly discharges this guarantee.

- 5 (a) Notwithstanding anything to the contrary contained herein the liability of the bank under this guarantee will remain in force and effect until such time as this guarantee is discharged in writing by the EdCIL (India) Limited or until (date of validity/ extended validity) whichever is earlier and no claim shall be valid under this guarantee unless notice in writing thereof is given by the EdCIL (India) Limited within validity/ extended period of validity of guarantee from the date aforesaid.

- (b) Provided always that we _____ (indicate the name of the Bank) unconditionally undertakes to renew this guarantee or to extend the period of guarantee form year to year before the expiry of the period or the extended period of the guarantee, as the case shall be on being called upon to do so by the EdCIL (India) Limited If the guarantee is not renewed or the period extended on demand, we _____ (indicate the name of the Bank) shall pay the EdCIL (India) Limited the full amount of guarantee on demand and without demur.

6. We _____ (indicate the name of Bank) further agree with the EdCIL (India) Limited that the EdCIL (India) Limited shall have the fullest liberty without our consent and without effecting in any manner out of obligations hereunder to vary any of the terms and conditions of the said contract from time to time or to postpone for any time or from time to time any to the powers exercisable by the EdCIL against the said Agency and to forbear or enforce any of the terms and conditions of the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Agency for any bearance act or omission on the part of the EdCIL (India) Limited or any indulgence by the EdCIL (India) Limited to the said Agency for by any such matter or thing whatsoever under the law relating to sureties for the said reservation would relive us from the liability.

7. This guarantee will not be discharged by any change in the constitution of the Bank or the Agency.

8. We, _____ (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the EdCIL (India) Limited in



writing.

9. This guarantee shall be valid up to (Date of Completion plus Handholding Period). Unless extended on demand by EdCIL (India) Limited Notwithstanding anything to the contrary contained hereinbefore, our liability under this guarantee is restricted to Rs..... (Rs.....only) unless a demand under this guarantee is made on us in writing on or before..... we shall be discharged from our liabilities under this guarantee thereafter.

Dated: the Day of For

(indicate the name of bank)

Signature of Banks Authorized official

Witness

(Name)_____

Designation with Code No. -----

1

Full Address-----

2.



