



केन्द्रीय विद्यालय वायुसेना बोरझार
माउंटेन शेडो, पोस्ट ऑफिस - अजारा, गुवाहाटी 781017 -

KENDRIYA VIDYALAYA, AFS, BORJHAR

Mountain Shadow, P.O.-Azara, Guwahati - 781017

Phone- 0361-2840324, Fax- 0361- 2841728

Website: www.kvafsborjhar.edu.in Email: prikvb@yahoo.com

CBSE Affiliation No.- 200001, CBSE SCHOOL NO.- 05008, KV CODE- 1467, STATION CODE- 251

Ref.No.-F406/KVB/2017-18/

Date-26/12/2017

TENDER NOTICE

Sealed tenders are invited from reputed vendors, registered and enlisted in the indicative list of vendors with the AIM, NITI Ayog for execution of the following works at KV AFS Borjhar detailed as under:

<u>Name of Work-</u>	<u>P.E.</u>	<u>EMD</u>
1. Supply and installation of equipment for Atal Tinkering Lab and services thereafter at KV AFS Borjhar.	7.00 lacs	Rs. 30,000/-

Vendors having executed **at least two works** of similar nature need to apply. EMD as detailed above & cost of tender Rs. 500/- (non refundable) through Demand Draft (D/D) in favour of Principal, KV AFS Borjhar payable at SBI Airport Branch Guwahati is to be annexed. The tender needs to be submitted in sealed envelopes comprising of signed terms and conditions and bid. The envelop shall be kept in an envelope super scribing "**Tender for Supply and installation of equipment for Atal Tinkering Lab and services thereafter for ATL Lab and services thereafter**".

Tenders duly sealed may be dropped in the tender-box placed at Kendriya Vidyalaya AFS Borjhar or handed over to the office or sent by Speed/ Registered Post/ Courier **on or before 17.01.2018 upto 2.00 PM**. Tender shall be **opened on 18.01.2018 at 3.00 PM** at Kendriya Vidyalaya AFS Borjhar in presence of tenderers, who wish to be present. Incomplete, conditional & belated tenders shall be summarily rejected.

Principal

KV AFS Borjhar



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INSTRUCTIONS TO THE TENDERER

1. Incomplete and conditional tenders shall be summarily rejected.
2. Rates are to be quoted in words and figures without any cutting/overwriting/erasing. **Name of the Brand/ Company of the items that the vendor is going to supply, is to be mentioned in the attached list of items of packages provided by the AIM NITI AYOJ.**
3. Prescribed enclosures are to be attached with the Bid.
4. Price-Bid and all other tender documents should be signed by the same authorized signatory of the Vendor. **While finalizing the L1, Part-B of Price bid will also be taken in consideration.**
5. **The vendors should have arrangements in the locality of Guwahati for immediate support of AMC.**
6. **Last date of submission is 17-01-2018 upto 2-00 PM.** The Bids shall be **opened on 18.01.2018 at 3.00 p.m.** in the presence of the tenderers, who may like to be present.
7. Any additional information required by KV AFS Borjhar in respect of the work experience shall be submitted by the tenderers **within three days**, failing which the offer shall not be entertained.
8. The Tender received without EMD of Rs. 30,000/- & cost of tender form of Rs. 500/- in form of Demand Draft (D/D) shall be summarily rejected.

Principal

KV AFS Borjhar



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TERMS AND CONDITIONS

1. The work should be executed as per guidelines of the AIM NITI Ayog for ATL and the Advisory committee for the same.

- a. It is mandatory for all vendors to provide installation and equipment training to the Schools (Principal/ ATL-incharge/ faculty members) on handling and usage of equipment, after the delivery of the equipment, at no additional charge.
- b. It is mandatory for all vendors to provide 2 years of comprehensive warranty at no additional charge (including for 3D printers). If the school requires repairing of an ATL equipment, then the vendor should provide a replacement till the time the equipment is fully repaired).
- c. Vendors should clearly indicate the timeline for delivery of packages, installation and training. The delivery time should not be more than 2 months.
- d. The vendors should maintain a supply chain of consumables and other items for 5 years.
- e. The vendors should provide 3 year comprehensive AMC at no additional cost. The terms and conditions of the same which is prepared separately need to be agreed and signed by the vendors.
- f. The vendors should indicate both itemized prices and package wise pricing and provide detailed specification and brand name of all the equipment. (In separate sheets attached herewith)
- g. The vendor should provide all required documents for verification by the school at the time of purchase of equipment. Authorized signatory must sign the documents.
- h. The vendors should have a mechanism for proper disposal of e-waste.
- i. In case the vendors are third party vendors or channel partners, they should ensure timely availability of all equipment and associated services to the School, to avoid any delay or inconvenience to the schools.
- j. In case some schools are unhappy with the services of some selected vendors, they would not be permitted to provide services to other ATL schools.
- k. It is to be noted that, AIM, NITI Aayog reserves the right to audit the selected vendor and associated expenses/services at any point of time.

2. The time of Completion of work would be 60 days.

3. The rate shall be firm and of inclusive all taxes and valid for a period of 180 days from the date of tender.

4. All the items/material must be the ISI/ ISO Certified and of the approved brand/ company.

5. The vendor shall not delay/stop the work without any valid reason.
6. In case of no/slow progress, inferior workmanship, the Board shall have the right to rescind the contract & get the work executed at the risk & cost of the defaulting agency.
7. In case of delay, a penalty of 1% per week would be deducted from the bill subject to a max of 5% of the tender value.
8. Computerized Bill should be submitted by the Contractor for process of payment.
9. All T & P shall be arranged by the Contractor.
10. **Bid Security (EMD)**
 - a. Bid Securities of the unsuccessful bidders shall be returned to them after expiry of final bid validity and latest on or before the 45th day after the award of the contract.
 - b. Bid Security of successful bidder shall be refunded on receipt of Performance Security.
11. Security Deposit: 10% of the bill shall be deducted as defect liability and shall be released after completion of the work.
12. **Agreement:** Agreement shall be executed by the vendor at its own cost. Separate agreement for the AMC shall be executed by the vendors. AMC for ATL is a mandatory part of this tender bid. Copy of agreement/ terms and conditions for AMC is attached herewith for ready reference.
13. The Contractor shall comply with all the provisions of the Minimum Wages Act – 1948 and other labour laws that may be in force.
14. No payment shall be made to the vendor for any damage due to any natural cause during the execution of works.
15. All material used shall be as per specification and ISI marked and standard wherever applicable.
16. Scaffolding wherever required shall be arranged by the vendor for which no extra payment shall be made.
17. The contractor will use approved brand of material as given in the tender.
18. A tenderer should quote the rate (s) of tender in figures as well as in words. The total amount shall be written both in figure and in words.
19. All rates shall be quoted on the tender form and shall include all material, labour, transportation, all taxes, duties, testing, commissioning, supervision, tools, plants, wastage, sundries, scaffoldings as required mobilization demobilization, transportation etc. and nothing extra shall be payable on this account.
20. GST or any other tax on materials in respect of this contract shall be payable by the vendor and the vidyalaya will not entertain any claim whatsoever in this respect.
21. **Tender cost & EMD.** Tenders without the earnest money and cost of tender if any will be summarily rejected.
22. **Sealed Envelope** shall contain Demand Draft for tender cost (Non-Refundable) & **draft for Earnest Money**, the **whole Tender documents signed in each page including Signed Information Sheet, Terms and Condition of the tender, Terms and Condition of AMC, Price Bid and all supportive documents for the tender.**
23. All the **sealed envelopes** should **super scribe** as Tender documents for **“Supply and installation of equipment for Atal Tinkering Lab and services thereafter for Atal Tinkering Lab and services thereafter”**.
24. **Conditional Tender** - Conditional tenders are liable to be rejected.
25. **SUBLETTING** - The vendor shall not, without the prior approval of the competent authority in writing sublet or assign to any other party or parties, the whole or any portion of the work under the contract. Where such approval is

granted, the vendor shall not be relieved of any obligation or duty or responsibility which he undertakes under the contract.

26. **RIGHT TO INCREASE OR DECREASE WORK** - The competent authority reserves the right to increase or decrease the works depending on the situation emanating at a particular time. The competent authority also reserves the right to increase or decrease any portion of the work during the currency of the contract and the contractor shall be bound to comply with the order of the competent authority without any claim for compensation.

27. ACCEPTANCE / REJECTION OF TENDER

- a. KV AFS Borjhar does not bind itself to accept the lowest tender.
- b. KV AFS Borjhar also reserves the right to accept or reject any tender in part or full without assigning any reason whatsoever.

28. **FIRM RATES:** The rates quoted by bidder shall remain firm till completion of all works even during the extended period, if any, on any account what so ever. It is provided that the vendor shall not increase any of the rates, quoted in the tender till the completion of work. No escalation in rates would be given.

29. Income Tax/WCT/VAT/GST:

- a. Income tax including surcharge if any, at the prevailing rate shall be deducted from the vendor's bills as per the provision of Income Tax Act.
- b. The vendor shall ascertain from the concerned commercial tax department regarding the applicability of Works Contract Tax / VAT/TIN/GST. Necessary deductions will be made from the contractor's bill as applicable.

30. In case of any dispute, the Arbitrator shall be appointed by the Chairman, VMC, KV AFS Borjhar and his decision shall be binding on both the parties.

I hereby declare that I have read and understand the terms and conditions mentioned above and agree to abide by all those conditions.

(Signature of the Tenderer)
With complete address and seal
Add _____

Tel. No. _____ **Email-** _____
Mobile No. _____, _____



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**Cost of Tender Form: Rs.500/-
(Non Refundable)**

Name of Work: Supply and installation of equipment for Atal Tinkering Lab and services thereafter for ATAL TINKERING Lab and services thereafter.

INFORMATION SHEET

Last date of submission: 17.01.2018

Upto: 2.00 PM

(Note: Tenderer must read the instructions and terms & conditions before filling the particulars in this part.)

1. Credentials of the Tenderers:

- 1.1 Name of the Vendor :
- 1.2 Office Address and Tel. No. :
- 1.3 Local Office address & Tel. No. :
- 1.4 GSTN No. : (with documentary evidence)
- 1.5 P.F A/c No. : (with documentary evidence)
- 1.6 PAN No. : (with documentary evidence)
- 1.7 Service Tax Reg. Certificate : (supported with documentary evidence)

2. Experience (last two works of same nature) : (supported with documentary evidence)

Sr. No.	Year	Name of the Organization	Cost of the work (executed)	Name of Office/ Organ. with Tel. No.	Period of completion
01.					
02.					
03.					

2.2 Present assignment in hand complying tender parameters:

- (i)
- (ii)
- (iii)

3. Particulars of D.D. as earnest money:

Amount Rs. :

D.D/Nos. :

Issuing Bank with Date of Issue:

Declaration: All terms and conditions as mentioned in the tender are acceptable to me/us.

(Signature of the Tenderer)

With complete address and seal

Add _____

Tel. No. _____ **Email-** _____

Mobile No. _____, _____



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PRICE BID

Schedule of work

Name of work: - Supply and installation of equipment for Atal Tinkering Lab and services thereafter for Atal Tinkering Lab and services thereafter.

Part-A

S. No.	Name of Article/ Service	Brief Description	Rate (Exclusive all taxes) in Rupees	Rate (Inclusive all taxes) in Rupees
1	P1 (Package- 1) (List included separately)	Electronics Development, Robotics, Internet of Things, and Sensors		
2	P2 (Package- 2) (List included separately)	Rapid Prototyping Tools		
3	P3 (Package- 3) (List included separately)	Mechanical, Electrical, and Measurement tools		
4	P4 (Package- 4) (List included separately)	Power Supply, Accessories and Safety equipment		
5	AMC for 2 years (After first 3 years)	Combined Rate of AMC for 4 th and 5 th Year		
6	Additional Comprehensive Warranty of all equipment	Combined Rate for 3 rd 4 th & 5 th year additional warranty		
GRAND TOTAL (in Rupees)				=

Part-B

S. No.	Name of Article/ Service	Brief Description	
1	Installation and Logistic charges*	*Nil as per the AIM NITI Ayog Guidelines/ Web notification	
2	AMC (First 3 years) Charges*	*Nil as per the AIM NITI Ayog Guidelines/ Web notification	
3	Comprehensive Warranty of all equipment *	*Nil as per the AIM NITI Ayog Guidelines/ Web notification for First 2 years	
4	Training on handling and usage of equipment*	*Nil as per the AIM NITI Ayog Guidelines/ Web notification	
5	Number of Free Training sessions and necessary workshop.	Mention number of training per year	
6	Additional AMC (After first 3 years)	Number of AMC without cost (if any) after 3 rd year (Mention in years)	
7	Additional Comprehensive Warranty of all equipment	Warranty without cost (if any) after First 2 years (Mention in years)	

[Rupees in words-]

(Signature of the Tenderer)

Add _____

Tel. No. _____ Email- _____

Mobile No. _____, _____

Terms and Conditions of

Annual Maintenance Contract (AMC) for Atal Tinkering Lab (ATL) items.

- 1)** This Annual Maintenance Contract (hereinafter referred to as AMC) is a part of “**Tender for Supply and installation of equipment for Atal Tinkering Lab and services thereafter for ATL Lab and services thereafter**”. The AMC is signed between the Principal, KV AFS Borjhar (hereinafter referred to as KVB) and Service Provider (here in after referred to as SP). It shall be an all inclusive Comprehensive Annual maintenance contract of all the items supplied by the SP for establishing the Atal Tinkering Lab at KV AFS Borjhar. It shall ensure complete service for smooth functioning of the ATL lab for 24 hours x 365 days without any interruption.
- 2)** The AMC shall be valid for a period of Five years (Three years + Two Years) from the date of signing the contract by both the Parties.
- 3)** The Maintenance will be of hardware and software both, for installation- removal of any software / hardware purchased by the office from time to time thorough out the year. More over the firm will have to provide the services as follows:-
 - i) Upkeep and maintenance of the hardware and software installed.
 - ii) To provide and maintain the required drivers, CDs and DVDs for maintaining the equipment.
 - iii) Repairs to be carried out at the location of equipment.
 - iv) If computers and any other items needed to be taken to work shop for repair etc. for more than one (1) day, standby arrangements are to be made immediately.
 - v) The firm should make its own arrangement to shift the equipment including picking up and dropping of equipment.
 - vi) Any other maintenance work to be undertaken related to computers, Printers, UPSs and other hardware and software mentioned in list of the 4 packages.
- 4)** SP will make stand by arrangements immediately if computers, Printers, UPSs and any other items covered in the 4 packages list are needed to be taken to workshop. If the firm fails to make any standby arrangement within 24 hours, a penalty @ Rs 1000/- per day will be imposed and will be deducted from AMC charges.
- 5)** Replacement of Unserviceable parts i.e SMPS, Motherboards, Hard disks, CD Roms, Writers, RAM, CPU, Monitors etc. should be replaced only with new, original & compatible parts.
- 6)** In case these are not available, the higher specification will have to be installed. The same should be essentially equivalent in performance to the replaced ones.
- 7)** The SP will be required to maintain the current software configuration of all the items and update it whenever required to update and make it more efficient.
- 8)** During the currency of AMC, KVB can add more nodes. However, KVB may remove any machine from the list of machines (nodes) without assigning any reason at any stage.

9) As regard AMC of computers and its accessories, it will cover all components/ equipment of ATL Lab including Computer, monitor, Printer, Switches, UPS and other related equipment along with the following components:-

- i) CPU/ Motherboard/ HDD including media of Hard Disk/CD ROM,DVD ROM/FDD/RAM, Cabinet/Adapter and Batteries of Laptops.
- ii) Picture tube of Monitor/ VDU and all components of Monitor.
- iii) Connecting data cables and Power cables.
- iv) All parts of printers i.e. cables, fuser, assembly, Teflon pressure roller, printing Heads and all other plastic parts.
- v) All plastic parts of computers, printer and UPSs are covered in this AMC.
- vi) All parts of existing LAN which includes CAT-6 Cable, IOs, Gang Boxes, patch cords, conducting materials etc. Computer key boards and mouse will be the part of this AMC. Batteries of UPSs and Lamp of Projector will also not be the part of AMC.

10) The SP shall employ well qualified technical and professional personnel to handle the system for maintenance and rectifications. They should be fully equipped with necessary tools for the job. Failure to employ well qualified and competent personnel shall be enough ground to cancel the AMC.

11) The firm will have to deploy at least one qualified IT Engineer on location from 6:00 am to 10:00 pm and provide on call corrective and remedial maintenance from 10 Pm to 6 Am. The machines are presently in their proper designated places. However, in the interest of work or in emergency situation, they may be shifted to some other location within the Office of KVB. SP will provide all technical and manual support for this task. The Engineer(s) should be equipped with mobiles to ensure their availability. Amount will be deducted if any service Engineer remains absent/ on leave without providing a suitable substitute.

12) Scheduled preventive maintenance shall be undertaken once in a week on every Monday.

13) A service register shall be maintained by SP giving details of action taken for preventive and corrective maintenance indicating the time of call, the time of corrective action taken, details of action etc. The maintenance Engineer shall take signature of an Officer designated by KVB. The SP shall attend the maintenance work within 24 Hrs of receipt of the complaint. For every one hour delay after 02 Hrs proportionate annual maintenance charges for one day may be recovered or deducted by the KVB as the case may be. The SP shall guarantee a minimum uptime of 98% for each machine. For every fall of 1% of Uptime, charges calculated for twice that Period may be recovered/ adjusted from the next payment of AMC. For this purpose, total time taken after receiving the breakdown message (over telephone or otherwise) and making the system functional after repair etc. or by providing a standby machine will be treated as down time.

14) If the firm does not attend the complaint, the work will be got done from some other firm at the expenses of the contractor/ SP and the expenditure incurred on such repairs shall be recoverable from the contractor/ SP.

15) If SP or their employees damage or destroy any equipment or its parts, or any of its accessories, cable etc., they shall be liable to replace the same with new and original parts failing which amount spent on it will be recovered from their AMC. Besides it, SP will also be responsible for all type of accidents and shall be liable for paying compensation to its workers as well as to the department. However, neither party shall be liable or deemed to be in default for any delay or failure in performance under this agreement resulting directly or indirectly from causes beyond the reasonable control of such party such as acts of God, riots civil disturbances, accidents, fire explosions, earthquakes flood strikes, lockouts, bombasts embargoes etc. In such cases, either party shall notify the other party of the occurrence of such cause and should as a consequence the performance under this agreement be prevented for a period of longer than six months then both parties shall discuss the course of action to be taken afterwards. In the event if this period exceed twelve months then either party shall have to cancel the agreement.

16) No equipment shall be taken away by the SP engineer/ firm without prior intimation and permission from competent authority in KVB.

17) After the expiry period of the AMC, the SP shall hand over the possession of all the equipment, its parts, accessories etc. along with all the sub parts to KVB in perfect working condition.

18) The prices quoted by SP shall be inclusive of all taxes i.e local taxes, sale Tax and service tax etc.

19) PAYMENT TERMS:

i) The total maintenance charges for first Three Years would be without any charges as per the notification of AIM, NITI Ayog. However the 4th and 5th years' total maintenance charges are Rupees The comprehensive maintenance charges (for 4th and 5th year, if applicable) shall payable to the second party in arrears on **quarterly basis**. For this purpose, the Second party will have to submit bill in the name of First party and payment shall be made to them within 30 days from the receipt of the bill.

ii) Enhancement or decrease of taxes, duties or prices of components etc. will not affect the AMC rates during the entire period of AMC, no difference shall be paid or claimed as a result of the above.

iii) In the event of non-satisfactory performance of maintenance services by the second party, first party shall have the right and discretion to terminate this agreement by giving one month notice and to forfeit the proportionate amount from the security deposited by the second party.

Package 1: Electronics Development, Robotics, Internet of Things and Sensors

Category	Name	Description	Quantity (in units)	Type	Remarks (Brand/ Company Name etc.)
Electronics Development	Arduino UNO or compatible Microprocessor and microcontroller	Hardware development board with Memory and IO ports	30	Consumable	
Electronics Development	Arduino Nano		5	Consumable	
Electronics Development	RASPBerry PI 3	RASPBerry PI 3 MODEL B	5	Consumable	
Electronics Development	Breadboards & Mini Breadboard	Solderless 400 pin breadboard	20	Consumable	
		Solderless 800 pin breadboard	10		
		Self Adhesive Proto Shield	10		
Electronics Development	General Purpose solderable Board	FR2 A Grade Material (140 x 90 mm)	20	Consumable	
		FR2 A Grade Material (80 x 55 mm)	20	Consumable	
		Female Berg Strip 40 pins	20	Consumable	
		Male Berg Strip 40 pins	20	Consumable	
Electronics Development	16x2 LCD display With I2C	Dot matrix LDC display with 16 characters x 2 lines	30	Consumable	
Electronics Development	USB Cables	USB Cable Set (A to B)	30	Consumable	
Electronics Development	9 Volt battery, multiple resistors and capacitors for electronic projects (various sizes)	Amperage, Range of Resistance, Capacity of Capacitor	30 kits	Consumable	
Electronics Development	Linear Voltage Regulator	7805, 7812, 7809	30	Consumable	
Electronics Development	Water Pump module	DC12V 3W Submersible Water Pump	1	Consumable	
Electronics Development	Piezoelectric Plate	Normal Copper based 4 cm Diameter approx	20	Consumable	
Electronics Development	8*8 LED Matrix Module	Max7219 Dot LED Matrix Module Mcu Control LED Display Module	5	Consumable	
Electronics Development	Bluetooth	HC 05 Working voltage 5 Volt	10	Consumable	

Electronics Development	7 Segment Led Display	LED 4-Digit Display Module w/ Clock Point / 4-Pin Dupont Line for Arduino (20cm)	4	Consumable	
Electronics Development	GSM	Sim800L Gprs Transfer Board Micro Sim Gsm Core Ttl Port Module for Arduino	3	Consumable	
Electronics Development	GPS	GY-NEO6MV2 new GPS module	3	Consumable	
Electronics Development	Laser Diode	650Nm 6Mm 5V Dc 5Mw Mini Laser Dot Diode Module	10	Consumable	
Electronics Development	LDR Module	Photosensitive Ldr Light Sensor Module	30	Consumable	
Electronics Development	Keypad	Universal 16 Key Switch Keypad	5	Consumable	
Electronics Development	Joy Stick	Joystick Module for Arduino	4	Consumable	
Electronics Development	Active Buzzer	small 5 volt	50	Consumable	
		big 5 volt	30	Consumable	
Electronics Development	Motor driver	L293d	5	Consumable	
Electronics Development	Sound Playback Module	Voice Board Recording Recorder Playback Module on Board Microphone with Mic Sound Audio Loudspeaker	5	Consumable	
Electronics Development	BO Motors With Wheel	Side Shaft BO Motor	12	Consumable	
Electronics Development	Node MCU / Wemos D1	WIFI Internet Development Board Module Node MCU	5	Consumable	
Electronics Development	Vibrating Motor	Vibrating Motor	30	Consumable	
Electronics Development	Alligator Connectors	Multi Colour Alligator Connectors	100	Consumable	
Electronics Development	Battery clips with DC Jack	9 volt battery clips with DC Jack	20	Consumable	
Electronics Development	Hookup Wires	Red & Black set 100 Meters each	2	Consumable	
Electronics Development	Jumper Cable	Male-Male	600	Consumable	
		Male-Female	300		
		Female-Female	150		
Electronics Development	RGB LEDs	Regular 5mm 3-5 volt Range	100	Consumable	
Electronics Development	LEDs (Red)	Regular 5mm 3-5 volt Range	500	Consumable	

Electronics Development	LEDs (Green)	Regular 5mm 3-5 volt Range	500	Consumable	
Electronics Development	LEDs (Blue)	Regular 5mm 3-5 volt Range	500	Consumable	
Electronics Development	Diode	Different Basic Diodes kit	2	Consumable	
Electronics Development	Push Button Switch	Tactile Switch Micro - Push to On Button	100	Consumable	
Electronics Development	555 timer ic	555 timer ic	50	Consumable	
Electronics Development	Atmega16u2	Individual IC (DIP)	5	Consumable	
Electronics Development	MPR121	Capacitave touch module	10	Consumable	
Electronics Development	Capacitave Touch Switch	Capacitave Touch Switch	5	Consumable	
Internet of Things & Sensors	IR Sensors, Obstacle avoider sensor	Detection range, detection angle	10	Consumable	
Internet of Things & Sensors	Triple Axis Magnetometer	3-Axis Magneto-resistive Sensors	5	Consumable	
		I2C Digital Interface			
		Integrated 12-bit ADC			
		Range of -8 to +8 Gauss			
		160 Hz Maximum Output Rate			
Internet of Things & Sensors	Humidity Sensor	Operating range: 20 - 95 % RH	5	Consumable	
		Temperature: 0 - 60 Celsius			
		Power supply: 1.5V AC(Max sine)			
		Operating frequency: 500Hz - 2kHz			
Internet of Things & Sensors	MQ Series	MQ-4 Methane Natural Gas Sensor	2	Consumable	
		MQ-3 Alcohol - Ethanol Sensor	2		
		MQ-7 High Sensitivity CO Carbon Monoxide Sensor Detector	2		
		MQ - 2 Smoke Detection	2		
		MQ-135 Air Quality Sensor	2		
Internet of Things & Sensors	IR (transmitter) receiver - TSOP 1738	Switching rate – 38 KHz	5	Consumable	
Internet of Things & Sensors	Ultrasonic Sensor Module HC-SR-04 or compatible	Power supply	30	Consumable	
		Quiescent current			
		Working current			

		Effectual angle			
		Ranging distance			
		Resolution			
		Working angle & dimension			
Internet of Things & Sensors	Triple Axis accelerometer-	3-axis sensing	5	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	10		
		Low digital pulse when idle /no motion detected			
		Sensitivity range (upto 6 m)			
		Power supply: 5V – 12V			
Internet of Things & Sensors	Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Basedwore on the finger or earlobe Working voltage 3-5V	2	Consumable	
Internet of Things & Sensors	Relay Module	5V 10A 2 Channel Relay Module	10	Consumable	
Internet of Things & Sensors	Soil Moisture Sensor	Soil Moisture Detection Humidity Sensor Module	3	Consumable	
Internet of Things & Sensors	Touch Sensor	Capacitive Touch Sensor Module	3	Consumable	
Internet of Things & Sensors	Metal touch sensor module		3	Consumable	
Internet of Things & Sensors	Rain Drop Sensor	Rain Sensitive , Rain Drop Detection Sensor Module	3	Consumable	
Internet of Things & Sensors	Flex Sensor	Flex Sensor 2.2 Inches	5	Consumable	

Internet of Things & Sensors	Temperature Sensor	Temperature Sensor Lm35	20	Consumable	
Internet of Things & Sensors	Force Pressure Sensor	force sensitive resistor with a square, 1.75x1.5", sensing area	2	Consumable	
Internet of Things & Sensors	Color Recognition Sensor	TCS3200 Color Recognition Sensor	2	Consumable	
Internet of Things & Sensors	Water Flow Sensor	Arduino Compatible	1	Consumable	
Internet of Things & Sensors	Sound Sensor	Sound Sensor Module, Microphones module	5	Consumable	
Internet of Things & Sensors	IR Sensors Array for Line Follwing	IR Sensors Array for Line Follwing	5	Consumable	
Internet of Things & Sensors	10000 Mh 5 volt Power Bank	10000 Mh 5 volt Power Bank	5	Consumable	
Internet of Things & Sensors	RFID Reader – Tags	Current :13-26mA / DC 3.3V	3	Consumable	
		Idle Current :10-13mA / DC 3.3V			
		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	5	Consumable	
		Supply Voltage: 3 – 6 V			
		Output Power : 4 – 16 Dbm			
		Low power consumption			
		Easy application			
Robotics	Stepper motor with Driver board	28BYJ-48 ULN2003 5V Stepper Motor + ULN2003 Driver Board	5	Consumable	
Robotics	DC motor	12V DC Gear 150 RPM	12	Consumable	
Robotics	Servo motors	Position Servo Angle based Metal Gear	4	Consumable	

		Small Servo Metal Gear	4		
		Continuous Metal Gear Servo 360	4		
		Small Servo Plastic Gear	30		
Robotics	150 RPM BO Motor	150 RPM BO Motor	10	Consumable	
Robotics	L298P Motor Driver	L298P Motor Driver Shield or relative Driver Shield	5	Consumable	
Robotics	Servo Motor Testor	CCPM 3 channel Servo Tester	2	Consumable	
DIY Kit	Robotics DIY Kit	4 wheel robotic kit	4	Equipment	
DIY Kit	Mechanical (Modular) Construction kit	Should be compatible with electronics	4	Equipment	
DIY Kit	STEM learning/application Kit	Drone Kit	1	Equipment	
		Aerospace Kit	1	Equipment	
		Automobile Kit	1	Equipment	
		Bio-medical Kit	1	Equipment	
		Agritech Kit	1	Equipment	
		Bio-tech Kit	1	Equipment	
		Water/Sanitation Kit	1	Equipment	
		Other potential STEM application Kit	1	Equipment	

Total Cost (In Rupees) Rs..... (In Words- Only

Package 2: Rapid Prototyping Tools

Category	Name	Description	Quantity (in unit)	Type	Remarks (Brand/ Company Name etc.)
Rapid Prototyping Tools	3D Printer Kit and tools	MANDATORY REQUIREMENTS: Printer Type : FDM (Fused Deposition Modeling) Minimum Dimensions: 160mm*160mm*160mm Build Size or 4 litre build volume. Nozzel : 0.3mm to 0.4mm nozzle diameter Slicing Softwares should be Free or Open Source LCD Screen UI that displays print metrics Good quality anti-bacterial fungal cover	1	Equipment	
Rapid Prototyping Tools	Dedicated UPS/Power back up with a 2 hour battery back up at least		1	Equipment	
Rapid Prototyping Tools	Filament for 3D printer	Compitable 700/1000 Grams Filament	5	Consumable	
Rapid Prototyping Tools	Filament Storage Box		5	Consumable	
Rapid Prototyping Tools	Set of Arts & Crafts Accessories – eg- stationary items and basic prototyping material	Cardboard	5	Consumable	
		foam core boards	5		
		string	50m		
		rubberband	100		
		popscicle sticks	100		
		wood glue	1 btl		

Total Cost (In Rupees) Rs..... (In Words- Only

Package 3: Mechanical, Electrical and Measurement tools

Category	Name	Description	Quantity (in unit)	Type	Remarks (Brand/ Company Name etc.)
Mechanical Tools	Hacksaw	150mm Junior Hacksaw	1	Equipment	
Mechanical Tools	Extra hacksaw blades		10	Consumable	
Mechanical Tools	Pliers	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	Mini Hack Saw	Mini 254mm Hacksaw	1	Equipment	
Mechanical Tools	Hacksaw blades Mini		10	Consumable	
Mechanical Tools	Ball Pein Hammer	Ball Pein Hammer	1	Equipment	
Mechanical Tools	Steel Shaft Claw Hammer	Claw Hammer Steel Shaft	1	Equipment	
Mechanical Tools	C-Clamp	Metal Clamp 3 " Inch szie	4	Equipment	
Mechanical Tools	Allen Key Set	10 Piece Ring Imperial Allen Hex key	1	Equipment	
Mechanical Tools	Workstation for drilling		1	Equipment	
Mechanical Tools	Spanner Set	12 piece combination Spanner Set	1	Equipment	
Mechanical Tools	Ratcheting Screwdriver Set	30 Piece Ratcheting Screwdriver Set	1	Equipment	
Mechanical Tools	Vice Normal	Table top vice fitted to the table	1	Equipment	
Mechanical Tools	Screw Driver Set	6 Piece Precision Screw Driver Set	3	Equipment	
Mechanical Tools	Adjustable Universal Multi Wrench Spanner		2	Equipment	
Mechanical Tools	Wire Strippers	Wire Stripper Cutter Plier With Spring -26x6x20 Cms (LxWxH)	5	Equipment	
Mechanical Tools	Screwdriver	Multi-purpose	5	Equipment	
Mechanical Tools	Tool Set	Multi-purpose	3	Equipment	
Mechanical Tools	Cordless Drill	Cordless Drill with 2 Battery Pack	1	Equipment	

Mechanical Tools	Rubber Air Pump Cleaner Dust Blower	Rubber Air Pump Cleaner Dust Blower	2	Equipment	
Mechanical Tools	Drill Bit Set	High Quality 13 Pcs HSS Drill Bits Set For for Wood, Iron, Aluminium, Plastic etc	1	Equipment	
Mechanical Tools	File set	6 Inches	1	Equipment	
Mechanical Tools	Flexible Cutting Mat	A/3 Size With Marked Pattern And Grids (18" X 12")	2	Equipment	
Mechanical Tools	Plastic Tool Box with Organizer	For Keeping tools	2	Equipment	
Mechanical Tools	PegBoard	Peg board System to mount tools on wall.	1	Equipment	
Electric Tools	Hot glue gun	Range in open space (Standard Conditions)	2	Equipment	
Electric Tools	Soldering Kit	Variable Wattage of Soldering Iron: 15-30 watts/230 volts	2	Equipment	
		Soldering Iron Temperature Range: 280°C to 450°C	2		
		De-Soldering Pump, Soldering Flux (Paste) ,DE-soldering Copper Braid	2		
		(Solder Wick)	2		
		Soldering Wire: 20/22 AWG soldering Wire with rosin core flux (100 Grams)	2		
Electric Tools	Adapters	DC power Adapter with 5V, 12V	10	Consumable	
Electric Tools	Electric Screw Driver Set		1	Equipment	
Electric Tools	Dual Temperature Heat Gun	1800 W Dual Temperature Heat Gun	1	Equipment	
Electric Tools	Soldering Helping hand		2	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 Caliper	150 mm / 6" Digital Vernier Caliper	2	Equipment	
Measurement Tools	Spirit Level	12" Spirit Level	1	Equipment	
Measurement Tools	Digital Pen electric Tester	Voltage tester	1	Equipment	
Measurement Tools	Digital Multi Meter	Digital Multi Meter Voltage Current Resistance-7 functions + 19 ranges to cover DC voltage 200mV to 1kV,	5	Equipment	
		AC voltage 200 V - 750 V,			
		DC current 200 µA - 10 A			
		Resistance 200 -2 M Ohm and Transistor & diode test.			

**Total Cost (In Rupees) Rs..... (In Words-
Only**

Package 4:Power Supply & Accessories and Safety Equipment

Category	Name	Description	Quantity (in unit)	Type	Remarks (Brand/ Company Name etc.)
Power Supply & accessories	Glue Sticks	11 mm x 200mm Hot Melt Glue Stick	50	Consumable	
Power Supply & accessories	Nuts and Bolts and screw	Various Size 20 each	20	Consumable	
Power Supply & accessories	Cable Tie	Small , Medium, Big in pack of 100 each	3	Consumable	
Power Supply & accessories	Sand Paper	Various Grit-80 4pcs 100 4pcs 120 4pcs	12	Consumable	
Power Supply & accessories	Power Strip Adaptors	5 Plug with Safety Fuse Standard Quality Extension, 3m wire	10	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	Standard first aid kit		1	Consumable	
Safety equipment	Fire extinguisher (handy units)	Powder Type Fire Extinguisher 2KG	1	Consumable	
Safety equipment	Safety goggles (with/ without LED torch)	Safety Goggles for Chemical Splash and Smoke from Soldering	10	Consumable	
Safety equipment	Safety Gloves Pairs	Latex Coating Gloves (Medium Size)	3	Consumable	
Safety equipment	Safety Mask	Filtering efficiency ranging 80 percent when tested against 0.3-micron sodium chloride particle	10	Consumable	

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