

TENDER NOTICE

Government Industrial Training Institute, Rasanpur, invites sealed bids from reputed and eligible suppliers/vendors for the **purchase, installation, and commissioning of equipment and infrastructure** for the establishment of an **Electric Vehicle (EV)** at the institute.

1. Scope of Work:

- Supply of advanced Electric Vehicle (EV) tools and equipment.
- Installation and commissioning of EV lab infrastructure.
- Training for faculty and students on equipment usage and EV technologies.

2. Eligibility Criteria:

- The bidder must be a registered company/organization with experience in setting up EV or related technical laboratories.
- Proven track record of similar projects in educational institutions.
- Compliance with applicable quality and safety standards.

- | | |
|--------------------------------------|------------|
| 1. Issue Date of RFP: | 10-01-2025 |
| 2. Last Date for Submission of Bids: | 27-01-2025 |
| 3. Bid Opening Date: | 28-01-2025 |

Interested vendors are requested to submit their proposals in a sealed envelope marked as "RFP for EV " to: **The Principal, Government Industrial Training Institute, At-Rasanpur, Po-Maneswar, Dist- Sambalpur, Odisha, PIN-768005.**

The RFP document, including detailed specifications, terms, and conditions, can be obtained from the office of the Principal during working hours or downloaded from the official website <http://www.govtitirasanpur.co.in>. A non-refundable fee of **Rs. 500/-** is to be paid for the RFP document. The Principal reserves the right to accept or reject any or all bids without assigning any reason.



Principal
Govt. ITI, Rasanpur
Principal
Govt. Industrial Training Institute
Rasanpur, Maneswar

**GOVERNMENT INDUSTRIAL TRAINING INSTITUTE,
RASANPUR, MANESWAR, DIST-SAMBALPUR, PIN-768005**
Email:

Tender for Setting up Electric Vehicle Lab

Tender Notice No.: 41

Date: 10.01.2025

Sealed tenders are invited from established and accredited Original Equipment Manufacturers (OEMs)/authorized dealers for setting up an Electric Vehicle Lab at the office of **The Principal, Government Industrial Training Institute, Rasanpur, Sambalpur, PIN: 768005, Odisha**. For details, please visit the website <http://www.govtitirasapur.co.in> (under the tender section) or contact the above office for the tender papers.

Important Dates

Sl. No.	Reason	Date	Time
1	Date of issue of tender paper	10-01-2025	11:00 AM
2	Last date of submission of tender	27-01-2025	5:00 PM
3	Date of opening of tender	28-01-2025	11:00 AM

The Principal, Government Industrial Training Institute, PIN: 768005, Odisha reserves the right to accept/reject/modify & cancel the full tender or part thereof at any time without assigning any reason thereof

**Sd/-
The Principal
Govt. ITI, Rasanpur
PIN: 768005, Odisha**

Tender for Setting up Electric Vehicle Lab

Tender Notice No.: 41

Date: 10.01.2025

Sealed tenders are invited from established and accredited Original Equipment Manufacturers (OEM)/authorized dealers having an annual turnover of more than **Rupees 50 Lakhs** for the supply, installation, and commissioning of the under-mentioned items of the following specifications and quantities at the office of the **Principal, Government Industrial Training Institute, PIN: 768005, Odisha.**

Sr. No.	Name of the Items	Technical Specification	Quantity
1	Electric Scooty Training Model with battery & Charger	BLDC Out-Runner Motor(Hub Motor) 1KW 48V Smart Controller 48V/60V Wire Harness 6mm Dc/DC Converter 48V / 60V to 12V Instrument Cluster Digital with Problem Detection Front Light 12V LED Back Light 12V LED Indicators LED Anti-Theft System 12V with Keyless System Flashers 12V Switches Breaking System Drum Suspension Front: Telescopic Fork Rare- Coil Accelerator With forward/reverse and 3 Speed RFID start, key less start, Bluetooth connections and other latest features to be present for students training The vehicle should be new one.	1
2	4-Wheeler Model EV training system with Test rig with Advanced controller feature & IOT & Embedded System with battery and charger	BLDC In-runner Motor 1kw 48v controller 48v Wire harness with extended secondary harness to accommodate proper wiring and facilitate training provision Dc/dc converter 48v to 12v instrument cluster Digital Front light 12v led Back light 12v led Indicators Led High break system Anti-theft System 12v with keyless system Flashers 12v Switches Accelerator Handle bar Reverse camera 3-speed system differential 35inch	1

		<p>Advance feature WIFI enabled Table size 4ft*2.5ft*6ft IOT Enabled system with remote locking, Mobile (Cell phone) operated features with Bluetooth & WIFI & Complete facility for IoT training in the rig 48 volt 15 ah LFP battery with SMPS charger</p>	
3	<p>2-wheeler simulator with Basic Dyno fitted on roller to test variable load with complete working model and data extraction with battery and charger</p>	<ul style="list-style-type: none"> • Complete drivetrain model with bare body chassis of 2wheeler • Basic Dyno with roller with load cells to get variable load data • Complete wiring and fitment training data display of 3 phase outrunner motor individual phase data display rpm measurement secondary component voltage measuring facility. • Smart speedometer with troubleshooting feature. • 48 volt 15 ah LFP battery with SMPS charger 	1
4	<p>3-Wheeler simulator with complete working model and data extraction with battery and charger</p>	<ul style="list-style-type: none"> • Complete drivetrain model with bear body chassis of 3wheeler • Complete wiring and fitment training data extraction of 3 phase in runner motor individual phase data extraction rpm measurement secondary component voltage measuring facility. • Smart indicator with troubleshooting feature. • 48 volt 15 ah LFP battery with SMPS charger 	1
5	<p>4-Wheeler electric Buggy simulator with complete working & EV training facility with display board with battery and charger</p>	<p>Open model of a 4-wheeler chassis with tires & all mechanical & electrical fitted arrangement. Integrated steering system, Suspension system, braking system for training & Demonstration BLDC In-runner Motor 1kw 48v Controller 48v Wire harness 10mm Dc/dc converter 48v to 12v instrument cluster Digital Front light 12v led Back light 12v led Indicators Led High break system Anti-theft System 12v with keyless system Flashers 12v Switches Accelerator Steering System Rack and pinion Breaking System Drum Break suspension Leap spring 3-speed system differential 35inch Chassis dimension 300cm*100cm, Display board fitted</p>	1

		for electrical & Electronics connection & Troubleshooting training Data display board for current, voltage, 4 phases	
6	3- wheeler loader with open cargo with battery and charger	<ul style="list-style-type: none"> • A complete 3-Wheeler loader having an open cargo carrier. • Complete assembly disassembly training of motor, wiring harness and other electrical components. Know more about front assembly and telescopic suspension. • 1000 KW BLDC motor with 100 Ah lead acid battery. Suitable charger to charge the battery 	1
7	Li-ion Battery Characteristics Training System	<ul style="list-style-type: none"> • User friendly software. • Facilitates the interfacing of real-world signals with PC through USB bus. • Real time and interactive training setup. • Includes DC Power source for Battery charging. • Built in Charge controller. • Provided Li-ion Battery. • Battery charge and discharge management techniques. • Provided with high quality Meters. • Battery Level Indicator to analyse battery capacity. • Provided load for discharging characteristics 	1
8	Battery Manufacturing Raw material (2 set of cells, packing material)	<p>Battery DIY kit for Manufacturing of Li-Ion Phosphate battery pack</p> <ol style="list-style-type: none"> 1. One set for compete assembly & testing of Battery pack 2. Practice set for assembly testing and dismantling 3. Packing materials, tools, soldering iron & rod, Hot gun, Glues, Cell holders, Wires and other tools 4. Smart BMS to connect with the Battery pack (2 Sets-One for Assembly and other for Practice) 	1
9	Telescopic rocker arm high-power spot-welding machine 7	<ol style="list-style-type: none"> 1. Power consumption 3.6kW Weldable material (Thickness range), Power input up to 10 KVA, 2. Stainless steel/Iron/Nickel /Titanium (0.05-0.35mm) pulse Battery arrangement Single row & double rows Multiple rows 3. Easy to weld 0.2mm pure nickel. 4. Adjustable telescopic arm easily. Convenient magnetic arm. 5. Handle Push Welding Arm Microcomputer Controlled Spot Welding Machine 	1
10	Battery Pack testing Machine with charging &Discharging System	<p>Power Supply: AC 220V±10% 50/60HZ Rated Voltage: 12V-84V CHARGE Charge Methods: CV & CC Charge Current: 0.5-10A adjustable, 0.1A stepping Charge Cut-Off Current: 0.1-5A adjustable, 0.1A step Charge Voltage Range: 9V-99V, 0.1V stepping Charge</p>	1

		<p>Current Accuracy: $\pm 0.03A$ Charge Voltage Accuracy: $\pm 0.1V$ Discharge Methods: CC Discharge Current: 9V-21V: 0.5-10A adjustable 21V-99V: 0.5-20A adjustable Discharge Cut-Off Voltage 9V-99V, 0.1V stepping Discharge Current Accuracy: $\pm 0.03A$ Discharge Voltage Accuracy: $\pm 0.1V$</p>	
11	Charging Station Instruction and Training Kit	<p>3.3Kw AC Charger with BIE technology (1 Open Unit and 1 Working Model Connectivity: BLE 5.0 Smart LED Indicator Light MCB Auto Power Cut Off After Charging Session Auto Power Cut Off On No Load Data Management System APP Connectivity – Android And iOS Inbuilt Energy Meter</p>	1
12	Tool Panel trolley with Basic Maintenance & Servicing	<p>Tools Movable tool panel with wheels for hanging tools, can be used for assembly and, maintenance of vehicle to easy access of tools on a single platform</p>	
13	Cut section & open models for hands-on training of EV equipment's with stand, instruction board and table	<p>BLDC in runner motor open section, Hub Motor Open Section, Differential Cut Model, Controller Open Section, DC Converted Open Section, Instrument cluster Open Model, Different Cells Cut and Open model, SMPS Charger Open Model, BMS Cut model with table and display</p>	1
14	AI EV Trainer Kiosk	<p>AI trainer to answer all EV related questions in Hindi and English Language. Must be an Indian AI model. Kiosk fitted on wall of the lab which will be powered by 15-amp AC supply and will be available 24X7 to answer any question and can take interviews. 32-inch-high performance FHD kiosk with High end graphics support and performance 2-year license validly on the AI software. Must be in Hindi, English language.</p>	1
15	Tool Box Hand Tools for Assembly & dismantling training	<p>Open Spanner, Ring Spanner, Adjustable wrench, Nose plier, Combination Plier, Clipper, +- Screw Driver (2 Nos), 100gm Hammer, 500gm Hammer, Mallet, Stroking Screw Driver, 1/2 Socket Box, 1/4 Socket Box, 1/4 T-Handle (2 Nos.), Corded Impact Gun, Battery Impact Wrench, 31 Bit SD Set, Mutimeter (2 Nos.), Drum Puller</p>	1 Set

16	Wallchart for demonstration & training & EV Tree (LED Based EV Power train arrangement)	6-10 wallcharts based on room capacity; Branding inside and 2 outside the lab; EV Tree with LED Light fitted arrangement explaining the details of the EV	1 Set
17	Sector Skill Council Authorization for training center and certification by ASDC	For Authorization of the lab, ASDC Authorization certificate for minimum 2 trainer. MoU will be signed with ASDC and Govt. ITI Rasanpur. Govt ITI Rasanpur should be able to issue certificate from ASDC to the trainee	1 Year

Non-transferable tender documents will be available from the Office of **Principal, Government Industrial Training Institute, Rasanpur, Sambalpur, PIN: 768005, Odisha** on payment of Rs. **500/-** in the shape of a **Demand Draft** drawn in favor of: "**Principal, Government Industrial Training Institute, PIN: 768005, Odisha.**" The tender document can also be downloaded from the website: <http://www.govtitirasanpur.co.in> (under the tender section).

The downloaded tender document can also be used provided it is accompanied with a crossed Demand Draft of Rs. **500/-** towards the cost of the tender document in favor of: "**Principal, Government Industrial Training Institute, PIN: 768005, Odisha.**"

N.B.: Participants are advised to visit the site before participating in the tender process.

TERMS AND CONDITIONS

1. Eligibility Criteria:

- a. Preference will be given to companies having a service center facility in Odisha.
- b. Bidder must be a registered company and must produce a valid CIN certificate.
- c. Bidder must be GST-certified and provide a GST certificate, last year's GST filing document, and PAN card.
- d. The tenderers are required to furnish attested copies of the GST clearance certificate issued by the sales tax authority of any state as applicable along with the tender.
- e. Bidder must submit IT Returns data sheets for the last three years.
- f. Bidder must have a turnover of at least Rs. 1 Crore in the last three years, certified by a Chartered Accountant.

2. Experience and Capability:

- a. Bidders/ OEM must be affiliated with the relevant Sector Skill Council (SSC) in India related to the specific skill development program or training initiative. They

need to produce true copy of Bid specific authorization from Sector Skill Council or authorization letter from ASDC.

- b. Bidder/ OEM must have prior experience setting up Electric Vehicle (EV) Labs in Government and Private Institutes in Odisha or outside Odisha. A minimum of 3 purchase orders along with Work Completion Reports must be submitted.
- c. Bidder must provide detailed OEM authorization certificates along with CE and RoHS certifications for all equipment.
- d. Trainers must be available to visit the campus for training purposes as and when needed. The bidder must publish at least 1 training study material, and at least 4 patent designs of the product, including hands-on training for students.
- e. Bidders must have signed a MoU with at least 5 Government institutions for training and placement purposes.
- f. Bidder or OEM must have supplied similar lab equipment to Govt polytechnic or ITI inside Odisha and produce minimum 4 Purchase Orders.

3. Certifications:

- a. Bidder/ OEM must produce the following certifications:
 - i. ISO 9001:2015
 - ii. ISO 14001:2015
 - iii. ISO 45001:2018

4. Scope of Supply:

- a. Bid price must include all cost components, including supply, installation, demonstration, testing, commissioning of goods, and training of operators.
- b. All items supplied must meet the Institute's requirements. Any violations will result in disqualification.
- c. Bidder must submit CAD designs, technical specifications, diagrams, and a product catalog as per the Institute's requirements before the technical evaluation.

5. Financial Compliance:

- a. All installation costs must be included in the bid, and no additional charges will be entertained post-contract.
- b. Bidders are required to deposit ₹20,000 (Rupees Twenty Thousand only) as Earnest Money Deposit (EMD) in the form of a Bank Draft payable at Maneswar, drawn in favor of "**The Principal, Government Industrial Training Institute, PIN: 768005, Odisha.**" Startups are exempted from the EMD requirement, provided they submit valid startup credentials.
- c. The successful Bidder must deposit 3% of the contract value as Performance Security in the form of a Bank Guarantee.

6. Documentation and Verification:

- a. Bidder/ OEM must submit last 3 years' turnover details certified by a CA.
- b. All relevant certifications, including GMP (Good Manufacturing Practices), must be submitted.
- c. The tender should be submitted after due compliance with guidelines given in the tender documents under:
 - i. Schedule (A): Conditions of Contract
 - ii. Schedule (B): Technical Specifications
 - iii. Schedule (C): Delivery Destination
 - iv. Schedule (D): Tender Form
 - v. Schedule (E): Price Schedule
- d. Tenders submitted in incomplete form shall be rejected outright.
- e. The filled-in sealed tenders containing Techno-commercial tender and Price Tender in a double cover system as per instructions given in the tender documents shall be submitted to the: "**Office of the Principal, Government Industrial Training Institute, PIN: 768005, Odisha.**"

7. Disqualification Criteria:

- Bidders failing to comply with any of the above terms and conditions will be disqualified.
- Any deviation from the specifications provided by the Institute will result in rejection.

Note: All bidders must ensure compliance with the above terms and conditions to qualify for the tender. Failure to meet any requirements will result in immediate disqualification.

**The Principal
Govt. ITI, Rasanpur, Sambalpur
PIN: 768005, Odisha**

Schedule (A) - Conditions of Contract for Tender Notice No.: **Date:**

1. The tender papers include instructions issued in the Tender Notice along with: Schedule (A): Conditions of Contract, Schedule (B): Technical Specifications, Schedule (C): Delivery Destination, Schedule (D): Tender Form, Schedule (E): Price Schedule

2. The tenderers shall submit the following documents and information along with the tender. Incomplete or inadequate information under any of the parameters may render the tender disqualified. The technical documents must be tagged and indexed properly to facilitate easy verification.

a) Technical Documents

- i) Copy of Tender Notice.
- ii) Acceptance of **Schedule (A)** - Conditions of Contract & **Schedule (B)** - Technical Specifications.
- iii) Documentary evidence that the tenderer is either an **Original Equipment Manufacturer (OEM)** or an **authorized dealer with tender-specific authorization from the OEM**.
- iv) Proof that the bidder (OEM or Dealer) has an **annual turnover of more than Rupees 50 Lakhs**.
- v) Declaration that all the offered materials have a **minimum one-year warranty**.
- vi) Attested copies of **GST clearance certificate** issued by the Sales Tax Authority of Odisha/other states as applicable.
- vii) Attested copies of **Income Tax Return (ITR)** certificates.
- viii) **Technical product information** released by the OEM (Original Catalog).
- ix) Documentary proof of **similar supplies** made during the **last 2 years** to Government or Public Sector Undertakings.
- x) An undertaking from the firm for providing **maintenance and warranty services** during the warranty period, effective from the date of commissioning, along with terms and conditions.
- xi) Bank Draft of **Rs. 500/-** (Rupees Five Hundred only) towards the **tender cost**.
- xii) Attested copies of **Audited Balance Sheets** for the **last 3 years**, showing the turnover.
- xiii) Proof of **Service Center availability in Odisha**.
- xiv) Bank Draft of **Rs. 20,000/-** (Rupees Twenty Thousand only) drawn in favor of: **"The Principal, Government Industrial Training Institute, Rasanpur, PIN: 768005, Odisha"** towards **EMD** (Earnest Money Deposit).

b) Price Tender Documents

- i) Acceptance of **Schedule (C)** - Delivery Destination.
- ii) Filled-up **Schedule (D)** - Tender Form.
- iii) Filled-up **Schedule (E)** - Price Schedule.

3. The quoted rates shall be inclusive of all Taxes, Duties, Levies, Labor costs, Packaging and forwarding charges, Transportation costs

The quoted rates shall remain **valid until the delivery of materials in good condition** at the designated location.

4. The validity of the quoted rates shall be 90 days from the date of opening of the bid.

5. The items are to be delivered in good condition and verification by the competent authority.

6. The materials supplied shall be subject to verification by the competent authority at the delivery destination, as specified in Schedule (C)

7. All materials supplied shall be new and unused, The items must be from a reputed Original Equipment Manufacturer (OEM), The supplied items shall conform to the latest models, designs, and standards as per Schedule (B).

8. If any item fails to satisfy the required standards, the item shall be rejected and must be removed by the tenderer, at their own cost, from the point of delivery.

9. All items are to be delivered within 30 days from the date of issue of the purchase order.

10. The tenderer shall provide a minimum warranty period of 1 year from the date of commissioning of the items at the delivery destination. A declaration from the OEM regarding the warranty must be submitted by the tenderer.

11. The tenderer shall rectify any defects in the supplied items within 7 days of receiving intimation during the warranty period. Failure to rectify the defect within the specified timeframe shall result in the forfeiture of 1% of the performance security for each day of delay.

12. If the tenderer fails to supply the items within the prescribed time period, it shall be treated as a breach of contract.

In such a case: The **EMD will be forfeited, the supply order will be cancelled.** The tenderer shall remain **fully responsible** for the breach without any liability on the part of the tender-calling authority.

13. Tenders must be submitted in a double-cover system: First Sealed Envelope: Marked as "Technical Tender", containing all technical documents. Second Sealed Envelope: Marked as "Price Tender", containing the price bid. Both the above envelopes are to be placed in a third sealed envelope, clearly marked: "Tender for Setting up Electric Vehicle Lab".

The **From** and **To** addresses must be written on each of the envelopes.

14. Tenders must be submitted by Registered Post, courier service, or handed over to an authorized person. The tender-calling authority shall not be responsible for any:

Delays caused by postal or courier services. Missing documents during transit.

Tenders received **late** (as per the time mentioned in the Tender Notice) shall **not be considered.**

15. Conditional Tenders may be rejected outright. The decision of the **Technical Committee** and **Purchase Committee** regarding tender evaluation shall be **final and binding**.

16. 100% Payment shall be made to the successful tenderer only after:

Items are received in **good/serviceable condition**. Successful **installation and commissioning**. Submission of **Performance Security** as a Bank Guarantee amounting to **5% of the total order value**, valid for **14 months**. Submission of the following documents: Triple copy of **TAX Bill**. Warranty certificates. Installation certificate duly signed by the competent authority.

The tenderer shall **not raise any claims** of any nature after the **bill amounts** are cleared against the purchase order.

17. In the event of any **dispute** between the tenderer and the buyer regarding the interpretation of tender document conditions, the decision of the **tender-calling authority** shall be **final and binding** on all parties.

18. Any **civil suits** arising out of this contract shall be filed at **Maneswar**, under Sambalpur District, Odisha. **Writ petitions** (civil or criminal) shall be filed in the **High Court of Orissa, Cuttack**.

19. The **EMD amount** shall be returned to the **successful bidder** after the submission of **Performance Security** in the form of a Bank Guarantee.

Acceptance of Conditions

I/We hereby accept the above **Conditions of Contract** under **Schedule (A)** of the tender.

(Signature of the Tenderer)

Name: _____

Address: _____

Contact Number: _____

Date: _____

SCHEDULE (C) - DELIVERY DESTINATIONS

1. **Place of Delivery:**

The items are to be supplied and installed at:

Government Industrial Training Institute, PIN: 768005, Odisha.

2. **Installation and Operation:**

All the items must be supplied and installed in a **professional manner**, adhering to **standard industry practices**. The tenderer is required to provide **training to the purchaser** on the **safe operation** of the equipment, if required.

Acceptance of Delivery Terms

I/We hereby accept the above-mentioned conditions under **Schedule (C)** of the tender for our item of supply.

(Signature of the Tenderer)

Name: _____

Address: _____

Contact Number: _____

Date: _____

SCHEDULE (D) - TENDER FORM

To

The Principal
Office of the Principal
Government Industrial Training Institute, PIN: 768005, Odisha.

Sir,

I/We have gone through the **Tender Notice** relating to **Tender for Setting up Electric Vehicle Lab** at **Government Industrial Training Institute, Sambalpur, PIN: 768005, Odisha**, and the **Schedule (A), (B), (C), (D), and (E)** of the Tender document.

A sum of **Rs. 20,000/- (Rupees Twenty Thousand only)** is hereby tendered in the shape of Demand Draft, duly pledged as **Earnest Money Deposit (EMD)**. I/We also agree that I/We will pay **Five percent (5%)** towards **Performance Security** as **Bank Guarantee**.

I/We agree that the **Govt. ITI, Rasanpur, PIN: 768005, Odisha** shall be at liberty to forfeit the **EMD** or **Performance Security** as per the conditions of the contract in case of defaults on my/our part in fulfilling contractual obligations.

I/We have gone through all terms and conditions stated in the Tender documents and agree to all the terms and conditions.

(Signature of Tenderer)

Date: _____

Name: _____

Address: _____

SCHEDULE (E) –Price Schedule

Sl. No.	Description of Equipment	Unit Price with GST Quantity	Measure Total Price with GST
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(Insert the equipment details here)

(Signature of Tenderer)

Date: _____

Name: _____

Address: _____

SCHEDULE-E- PRICE SCHEDULE

Sr. No.	Name of the Items	Technical Specification	Quantity	Price	Price with GST
1	Electric Scooter Training Model with battery & Charger	BLDC Out-Runner Motor(Hub Motor) 1KW 48V Smart Controller 48V/60V Wire Harness 6mm Dc/DC Converter 48V / 60V to 12V Instrument Cluster Digital with Problem Detection Front Light 12V LED Back Light 12V LED Indicators LED Anti-Theft System 12V with Keyless System Flashers 12V Switches Breaking System Drum Suspension Front: Telescopic Fork Rare- Coil Accelerator With forward/reverse and 3 Speed RFID start, key less start, Bluetooth connections and other latest features to be present for students training The vehicle should be new one.	1		
2	4-Wheeler Model EV training system with Test rig with Advanced controller feature & IOT & Embedded System with battery and charger	BLDC In-runner Motor 1kw 48v controller 48v Wire harness with extended secondary harness to accommodate proper wiring and facilitate training provision Dc/dc converter 48v to 12v instrument cluster Digital Front light 12v led Back light 12v led Indicators Led High break system Anti-theft System 12v with keyless system Flashers 12v Switches Accelerator Handle bar	1		

		Reverse camera 3-speed system differential 35inch Advance feature WIFI enabled Table size 4ft*2.5ft*6ft IOT Enabled system with remote locking, Mobile (Cell phone) operated features with Bluetooth & WIFI & Complete facility for IoT training in the rig 48 volt 15 ah LFP battery with SMPS charger			
3	2-wheeler simulator with Basic Dyno fitted on roller to test variable load with complete working model and data extraction with battery and charger	<ul style="list-style-type: none"> • Complete drivetrain model with bare body chassis of 2wheeler • Basic Dyno with roller with load cells to get variable load data • Complete wiring and fitment training data display of 3 phase outrunner motor individual phase data display rpm measurement secondary component voltage measuring facility. • Smart speedometer with trouble shooting feature. •48 volt 15 ah LFP battery with SMPS charger 	1		
4	3-Wheeler simulator with complete working model and data extraction with battery and charger	<ul style="list-style-type: none"> • Complete drivetrain model with bear body chassis of 3wheeler • Complete wiring and fitment training data extraction of 3 phase in runner motor individual phase data extraction rpm measurement secondary component voltage measuring facility. • Smart indicator with troubleshooting feature. •48 volt 15 ah LFP battery with SMPS charger 	1		
5	4-Wheeler electric Buggy simulator with complete working & EV training facility with display board	Open model of a 4-wheeler chassis with tires & all mechanical & electrical fitted arrangement. Integrated steering system, Suspension system, braking	1		

	with battery and charger	<p>system for training & Demonstration BLDC In-runner Motor 1kw 48v Controller 48v Wire harness 10mm Dc/dc converter 48v to 12v instrument cluster Digital Front light 12v led Back light 12v led Indicators Led High break system Anti theft System 12v with keyless system Flashers 12v Switches Accelerator Steering System Rack and pinion Breaking System Drum Break suspension Leap spring 3-speed system differential 35inch Chassis dimension 300cm*100cm, Display board fitted for electrical & Electronics connection & Troubleshooting training Data display board for current, voltage, 4 phases</p>			
6	3- wheeler loader with open cargo with battery and charger	<ul style="list-style-type: none"> • A complete 3-Wheeler loader having an open cargo carrier. • Complete assembly disassembly training of motor, wiring harness and other electrical components. <p>Know more about front assembly and telescopic suspension.</p> <ul style="list-style-type: none"> • 1000 KW BLDC motor with 100 Ah lead acid battery. <p>Suitable charger to charge the battery</p>	1		
7	Li-ion Battery Characteristics Training System	<ul style="list-style-type: none"> • User friendly software. • Facilitates the interfacing of real-world signals with PC through USB bus. • Real time and interactive training setup. • Includes DC Power source for Battery charging. 	1		

		<ul style="list-style-type: none"> • Built in Charge controller. • Provided Li-ion Battery. • Battery charge and discharge management techniques. • Provided with high quality Meters. • Battery Level Indicator to analyse battery capacity. • Provided load for discharging characteristics 			
8	Battery Manufacturing Raw material (2 set of cells, packing material)	<p>Battery DIY kit for Manufacturing of Li-Ion Phosphate battery pack</p> <ol style="list-style-type: none"> 1. One set for complete assembly & testing of Battery pack 2. Practice set for assembly testing and dismantling 3. Packing materials, tools, soldering iron & rod, Hot gun, Glues, Cell holders, Wires and other tools 4. Smart BMS to connect with the Battery pack (2 Sets- One for Assembly and other for Practice) 	1		
9	Telescopic rocker arm high-power spot-welding machine 7	<ol style="list-style-type: none"> 1. Power consumption 3.6kW Weldable material (Thickness range), Power input up to 10 KVA, 2. Stainless steel/Iron/Nickel /Titanium (0.05-0.35mm) pulse Battery arrangement Single row & double rows Multiple rows 3. Easy to weld 0.2mm pure nickel. 4. Adjustable telescopic arm easily. Convenient magnetic arm. 5. Handle Push Welding Arm Microcomputer Controlled Spot Welding Machine 	1		
10	Battery Pack testing Machine with charging & Discharging System	<p>Power Supply: AC 220V±10% 50/60HZ</p> <p>Rated Voltage: 12V-84V</p> <p>CHARGE</p> <p>Charge Methods: CV & CC</p> <p>Charge Current: 0.5-10A adjustable, 0.1A stepping</p> <p>Charge Cut-Off Current: 0.1-5A adjustable, 0.1A step</p> <p>Charge</p>	1		

		<p>Voltage Range: 9V-99V, 0.1V stepping Charge Current Accuracy: $\pm 0.03A$ Charge Voltage Accuracy: $\pm 0.1V$ Discharge Methods: CC Discharge Current: 9V-21V: 0.5-10A adjustable 21V-99V: 0.5-20A adjustable Discharge Cut-Off Voltage 9V-99V, 0.1V stepping Discharge Current Accuracy: $\pm 0.03A$ Discharge Voltage Accuracy: $\pm 0.1V$</p>			
11	Charging Station Instruction and Training Kit	<p>3.3Kw AC Charger with BIE technology (1 Open Unit and 1 Working Model Connectivity: BLE 5.0 Smart LED Indicator Light MCB Auto Power Cut Off After Charging Session Auto Power Cut Off On No Load Data Management System APP Connectivity – Android And iOS Inbuilt Energy Meter</p>	1		
12	Tool Panel trolley with Basic Maintenance & Servicing	<p>Tools Movable tool panel with wheels for hanging tools, can be used for assembly and ,maintenance of vehicle to easy access of tools on a single platform</p>	1		
13	Cut section & open models for hands-on training of EV equipments with stand, instruction board and table	<p>BLDC in runner motor open section, Hub Motor Open Section, Differential Cut Model, Controller Open Section, DC DC Converted Open Section, Instrument cluster Open Model, Different Cells Cut and Open model, SMPS Charger Open Model, BMS Cut model with table and display</p>	1		
14	AI EV Trainer Kiosk	<p>AI trainer to answer all EV related questions in Hindi and English Language. Must be an Indian AI model. Kiosk fitted on wall of the lab which will be powered by 15-amp AC supply and will be available 24X7 to</p>	1		

		answer any question and can take interviews. 32 inch high performance FHD kiosk with High end graphics support and performance 2-year license validly on the AI software. Must be in Hindi, English language.			
15	Tool Box Hand Tools for Assembly & dismantling training	Open Spanner, Ring Spanner, Adjustable wrench, Nose plier, Combination Plier, Clipper, +- Screw Driver (2 Nos), 100gm Hammer, 500gm Hammer, Mallet, Stroking Screw Driver, 1/2 Socket Box, 1/4 Socket Box, 1/4 T-Handle (2 Nos.), Corded Impact Gun, Battery Impact Wrench, 31 Bit SD Set, Mutimeter (2 Nos.), Drum Puller	1 Set		
16	Wallchart for demonstration & training	6-10 wallcharts based on room capacity; Branding inside and 2 outside the lab; EV Tree with LED Light fitted arrangement explaining the details of the EV	1 Set		
17	Sector Skill Council Authorization for training center and certification by ASDC	For Authorization of the lab, ASDC Authorization certificate for minimum 2 trainer. MoU will be signed with ASDC and Govt ITI Rasanpur. Govt ITI Rasanpur should be able to issue certificate from ASDC to the trainee	1 Year		