



GOVERNMENT POLYTECHNIC, NAYAGADA

AT- GHASADEIPUR, PO-NANDIGHORE, PS-ODAGAON, DIST-NAYAGADA, PIN-752081

CONTACT NO: - 06753-260490, 9040428774

Website: - www.governmentpolytechnicnayagarh.org, e-mail id: - principalgpnayagarh@gmail.com

TENDER NOTICE

Government Polytechnic, Nayagarh, 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) Laboratory 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: 06.10.2026 from 11.00 AM onwards

2. Last Date for Submission of Bids: 26.10.2026 at 3PM

3. Bid Opening Date: 27.10.2026 at 11.00 AM

Interested vendors are requested to submit their proposals in a sealed envelope marked as **"RFP for EV Laboratory" to: The Principal, Government Polytechnic, Nayagarh, At-Ghasadeipur, Po-Nandighore, Ps-Odagaon, Dist-Nayagarh, Odisha- 752081.**

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: - **www.governmentpolytechnicnayagarh.org**. A non-refundable fee of Rs. 1000/- 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. Polytechnic
Nayagarh

Tender for Setting up Electric Vehicle Laboratory

Tender Notice No.:1081.....

Date: - 05/10/26.....

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, Govt. Polytechnic, Nayagarh, Pin: 752081, Odisha.

For details, please visit the website: - <https://www.governmentpolytechnicnayagarh.org> (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	06.10.2026	11:00 A.M
2	Last date of submission of tender	26.10.2026	3:00 P.M
3	Date of opening of tender	27.10.2026	11:00 A.M

The Principal, Govt. Polytechnic, Nayagarh, Pin:752081, Odisha reserves the right to accept/reject/modify & cancel the full tender or part thereof at any time without assigning any reason.

Sd/-
Principal
G. P, Nayagarh
Pin:752081, Odisha

Tender for Setting up Electric Vehicle Laboratory

Tender Notice No.: 1081

Date: - 05/10/26

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, Govt. Polytechnic, Nayagarh, Pin: 752081, Odisha.**

PACKAGE-1 (MECHANICAL ENGG.)

Sl. No.	Name of the Items	Technical Specification	Qty
1	Cut section of 4/6 cylinder diesel engine in moving condition to show movement of internal parts	6cylinder diesel engine in working condition to show movement of internal parts	1
2	HVAC Demo Kit	- Actual working model of Car Air Conditioning System. 2 HP single-phase motor fitted for driving the compressor and alternator. - Complete wiring circuit for the AC system along with switchboard. - All accessories fitted with the model shall be brand new, including: - AC Compressor - Condenser - Blower Motor - Evaporator Coil - Pipeline - Alternator - Motor - Water heater provided for heating of the system. - Heating system provided for the model. - LP & HP line pressure gauges provided with the model. - Model mounted on a powder-coated iron trolley for better handling Remark: Complete working HVAC system is provided as specified. A 2 HP motor is provided to simulate the engine drive for operating the AC compressor, while a water heater is provided to simulate engine heat/hot coolant for demonstrating the cabin heating system. Thus, the model demonstrates both AC cooling and heating functions of an automotive HVAC system.	1
3	Diesel engine (Running condition) Stationary type single cylinder	- Single-cylinder engine with Overhead (OH) Valves. - Fuel tank with manual operating handle. - Complete fuel-feed system provided. - Water-cooling system provided for engine cooling. - Complete lubrication system provided with an oil pump. - The oil pump is an integral part of the lubrication system and is provided for circulation/supply of lubricating oil to the required engine components. - Suitable arrangement provided for demonstration and study of the fuel-feed, water-cooling and lubrication systems. The mentioned oil pump is specifically provided for the engine lubrication system. Therefore, the offered model includes a complete lubrication arrangement with an oil pump	1
4	Carburetor & Injector – Fuel System Training Assembly	Carburetor – Solex type for dismantling and assembling, with Multi-hole Pintle type Injector.	1
5	Demonstration Board of Electronic Ignition System	- Working demonstration model fabricated using original automobile components/parts. 12 V Battery / DC power source provided for operation of the battery ignition circuit. - Ignition ON/OFF switch provided. - Electronic ignition coil provided for generation of high-voltage ignition output. - Distributor assembly complete with distributor cap and rotor provided. - Distributor/magneto assembly provided with suitable manual rotation arrangement/handle for demonstration. - Set of spark plugs provided for visual demonstration of sequential sparking. - Complete LT (Low-Tension) and HT (High-Tension) wiring connections provided. - Necessary ignition wiring, terminals and electrical connections provided on the demonstration unit.	1

		- On switching ON the ignition supply and rotating the distributor/magneto assembly, the system shall demonstrate sequential generation of sparks at the spark plugs according to the firing sequence. - All major components shall be mounted openly and suitably arranged for easy identification, observation and educational demonstration. - The model shall demonstrate the working principle of the battery ignition system, ignition coil, distributor and spark-plug firing sequence. The Battery Ignition System is included in the offered unit. A 12 V battery/DC supply powers the ignition circuit, while manual rotation of the distributor/magneto assembly demonstrates sequential sparking at the spark plugs.	
6	Clutch Assembly – Cut-Section Working Models	Clutch Assembly – Cut-Section Working Models Cut-section working models of Centrifugal Clutch, Diaphragm Clutch, Single Plate Clutch Multi Plate Clutch assemblies, sectioned to clearly demonstrate their internal construction, components, and working mechanism.	1
7	Transmission / Gear Box Demo Kit	The trainer shall consist of an actual automobile-type Synchromesh Manual Gearbox assembly, suitably sectioned/opened at selected locations to demonstrate its internal construction and working mechanism. The gearbox shall be motorized using a geared motor for safe, slow-speed demonstration of gear transmission and operation. Construction & Drive System - Actual automobile Synchromesh Manual Gearbox assembly. - Gearbox suitably cut-sectioned/opened at required locations for clear visibility of internal components. - Geared electric motor drive coupled to the gearbox input shaft. - Reduction drive shall provide slow and controlled rotation suitable for classroom/laboratory demonstration. - Motor shall have sufficient torque to rotate the complete gearbox mechanism smoothly. - Suitable motor controller/drive provided for controlling the gearbox operation. - Main ON/OFF control with necessary electrical protection. - Suitable coupling and guarding provided between motor and gearbox. - Gearbox shall remain fully operational after cut-sectioning for demonstration purposes.	1
8	Steering & Suspension System – Cut-Section Working Models	Cut-section working models of Power Steering, Rack and Pinion Steering, Recirculating Ball Steering, Worm and Roller Steering, and Shock Absorber assembly, demonstrating internal construction, components, and working mechanism.	1
9	Automotive Brake System – Working Models	Working models of Disc Brake and Drum Brake assemblies, complete with brake disc, caliper assembly, brake drum, tandem master cylinder, brake hoses, oil container/reservoir, brake pedal, and all necessary components, demonstrating the construction and working of both braking systems.	1
10	Regenerative Charging, Braking & Battery Management Training System	Regenerative Charging and Braking Training System with built-in DC power supply, digital tachometer for speed measurement, high-grade FRP control box, high-quality meters, diagrammatic representation for easy connections, and safety features; Battery Management Training System suitable for testing 3–6 series Lithium-ion cells, with voltage, current and temperature measurement, cell balancing, and onboard thermistor for temperature measurement.	1
11	Hybrid Vehicle Model Training & Simulator Set up	- Working of Hybrid Electric vehicle. - Training about HEV powertrain. - Charging of battery with ICE. - Power splitter between ICE and Electric motor. Complete Hybrid Vehicle training module with all sensors, transmission, Series, Parallel, Series-parallel systems, Power control Modules, Protection Device, Engine to Motor switching and complete circuit diagram of HEV systems Motor- 250W BLDC Motor * 2 Engine- 32CC Max RPM- 4000 Max Torque- 18 Nm Drive Mode- City, Hill, Sports Battery Capacity- 24V, 72ah Regeneration- 80W	1
12	Cut section & open models for hands-on training of EV	Cut Section of Different types of EV motors- PMSM Motor, 3 Phase induction, PMDC Motor, BLDC in runner motor open section, Hub Motor Open Section, • Other cut section of EV- Differential Cut Model, Controller Open Section, DC DC Converted Open	1

	equipments with stand, instruction board and table	Section, Instrument cluster Open Model, Different Cells Cut and Open model, SMPS Charger Open Model, BMS Cut model • Table for display and acrylic covering with naming of items • Item details and explanation board for understanding of the item	
13	Hybrid Vehicle Control Strategy Test Platform	Hybrid Vehicle Control Strategy Test Platform built on Honda Activa 5G, demonstrating dual power-source hybrid architecture, automatic 20 km/h changeover between Electric Drive and IC Engine, and real-time hybrid control strategy evaluation. Base Vehicle & Mechanical Specs 1. Model: Honda Activa 5G: 2. Engine: 109.19 cc, single-cylinder, 4-stroke, air-cooled 3. Power/Torque: 8.0 PS @ 8000 RPM / 8.79 Nm @ 6500 RPM 4. Fuel Tank: 5.3 L 5. Kerb Weight: ~109 kg 6. Top Speed: ~80 km/h Electric Drive System: 1. Motor Type: BLDC, 3-phase 2. Rated Power: 1 kW 3. Voltage: 48 V DC 4. Cooling: Air-cooled 5. Functions: EV propulsion at 0–20 km/h Assist support during hybrid mode Smooth/silent low-speed operation Battery System: 1. Type: Lithium-ion 2. Voltage/Capacity: 48 V, 35 Ah 3. Protections: Over-voltage, over-current, short-circuit 4. Functions: Supplies EV mode, supports regenerative charge Hybrid Control Strategy: 1. Changeover Threshold: 20 km/h 2. Speed Sensing: Hall-sensor wheel speed detection 3. Operating Modes: 3.1 EV Mode (0–20 km/h): Motor only, IC engine off, regen braking active 3.2 IC Mode (>20 km/h): Automatic engine start & propulsion 3.3 Reversion (<20 km/h): Automatic engine cut-off, EV resumes 4. Control Features: 4.1 Hysteresis buffer for stable switching 4.2 Smooth torque transfer and transition Regenerative Braking: 1. Active during deceleration 2. Converts kinetic energy to charge battery 3. Supports extended EV operation Experiments / Learning Outcomes: 1. Study of hybrid power flow between IC engine and EV motor 2. Observing speed-based changeover logic (20 km/h threshold) 3. Measurement of motor torque, current, battery response 4. Evaluation of regenerative braking efficiency 5. Comparison of EV vs IC mode energy consumption	1
14	Automotive exhaust 5 gas analyser (petrol & Diesel) and Diesel Smokemeter(Optional)	Exhaust 5 Gas Analyzer Petrol ARAI approved to check CO, CO ₂ , O ₂ , and HC& NO. Diesel Smoke Meter ARAI approved.	1

PACKAGE-2 (ELECTRICAL ENGG.)

Sl. No.	Name of the Items	Technical Specification	Qty
1	Electric 2W Assembly Teardown Setup	The 2-Wheeler Assembly Process Demonstration Training Workbench is an educational tool designed to provide hands-on training in the assembly of two-wheeled vehicles. This workbench simulates real-world assembly processes, allowing trainees to gain practical experience in various components and techniques involved in 2-wheeler manufacturing. Technical Specifications & Features are: • 2W Electric Vehicles • BLDC Hub Motor - 1Kw • Wiring Harness • Lead Acid Battery-48V • Lighting System such as Head Light, Indicators etc. • Throttle & On/Off Switch key etc. • Bluetooth Enabled Assembly and Dismantling Training	1

		Special Tools- Battery Impact Wrench, 1/4 Socket Box, 1/2 Socket Box, 1/4 T Handle, Allen Key, Screwdrivers, Pliers, Spanners, Multimeter Ramp- Type: Hydraulic Scissor Lift Table (Motorized) Weight Capacity: Upto 300 kg Platform Size: Minimum 1800 mm x 600 mm Lift Height: Min. 600 mm – Max. 1100 mm Power Supply: Single Phase AC / Battery Operated Operation: Foot pedal or motorized push-button system	
2	2 wheeler simulator with complete working model and data display With 4 Nos of Catalogues	• Complete drivetrain model with chassis of 2-wheeler • Complete wiring and fitment training data display of 3 phase outrunner motor individual phase data Display (Voltage, Current, Power and Battery SOC, Cell performance and Cell Balancing) RPM measurement secondary component voltage measuring facility. • Smart speedometer with troubleshooting feature. Technical • Electric 2W-with Open Chassis • BLDC Hub Motor-1KW, 48V, 1000 • RPM • DC-DC Converter-48V-12V, 10 • Harness, Lighting, Indicator, Circuit Breaker, Hand Throttle & Aluminum • Panel with wiring structure diagram etc. Features are: • Electric 2 W Architecture DC Circuit and Component Study • Interactive Components Working • Digital Infotainment System for Current Consumption at Various Load Condition • Efficiency Monitoring of Electric 2W Hub Motor • Motor Reverse Potential & Application and Implementation of Convertors. Smart Battery with BMS Assembly and Dismantling Training Additional 4 Nos of Catalogues as per syllabus	1
3	Retrofitted Hybrid 2 wheeler	Vehicle Type: Pre-owned petrol two-wheeler (100–125cc category) Motor Type: BLDC hub motor, 48V, 500W–1000W (based on model) Battery Pack: Lithium-ion (LFP) battery Voltage: 48V Capacity: 15Ah Smart BMS with cell balancing and protection features Controller: Dual mode (Petrol + Electric) controller Regenerative braking support (optional) Manual switch for petrol/electric mode toggle Drive Modes: Electric mode (fully functional up to 40–50 km range) Petrol mode (original ICE functionality retained) Charging System: 48V portable battery charger Input: 230V AC Charging time: 3–4 hours Dashboard: Analog speedometer (original) with additional indicators for electric mode Optional: Smart digital dashboard (on request) Wiring & Electronics: Complete retrofit wiring harness DC-DC converter for 12V accessories Fuse and safety circuitry Tools & Accessories: Tool kit for assembly/disassembly Safety gloves and goggles Instruction and maintenance manual	1
4	Charging Station Instruction and Training Kit	Charger Type: 3.3kW AC Charger with BIE (Built-In Energy) Technology Model Configuration: 1 Working unit for real-time operation and performance monitoring 1 Open unit with exposed internals for learning circuit design and layout Connectivity: RFID based application & for mobile application integration Smart Indicators: Multicolor LED status indicator Real-time charging status visualization	1

		Protection Features: MCB with auto power cut-off after charging completion Auto cut-off on no-load detection to avoid idle energy use Monitoring & Data Logging: Integrated Energy Meter Supports data viewing and control through the mobile app Mounting Platform: Wall or stand-mounted black MS frame with laminated tabletop Color-printed working circuit diagram and labeled I/O points User Interface: Clearly marked plug socket, breaker, and system indicators Provision for EV connector simulation Training Outcomes: Understand the functional flow of an AC charging unit Learn internal component architecture via the open model Practice safety protocols in EV charging environments Monitor energy flow, usage, and cutoff mechanisms Learn app-based diagnostics and remote control basics	
5	Battery DIY Kit with IR Tester & Battery charging and discharging machine	Battery Pack Assembly & Testing Setup (1 Set): Complete station for assembling and testing Lithium Iron Phosphate (LiFePO₄) battery packs Includes testing leads, cell holder, BMS mounting provision, and output terminals Soldering Equipment (2 Sets): Soldering rods and temperature-controlled soldering irons Solder wire and flux for battery tab connections and BMS wiring Practice & Demo Components: 2 Sets of LiFePO₄ Battery Cells 1 set for instructor-led demonstration 1 set for student practice 2 Sets of Battery Management Systems (BMS) for practical training Consumables & Accessories: Extra battery cells for replacement during training Wrapping material, insulating tapes, nickel strips Heat gun (1 unit) for shrink wrapping and insulation Multimeters (2 sets) for voltage and continuity checks Workstation Furniture & Infrastructure: 1 x Heavy-duty Table-based Workstation (6 ft) with upper racks for tool and material storage 1x Prismatic Lithium Cells IR Testing Machine, Internal Resistance Charge discharge machine 0 to 100v 100Ah ch1: • Battery charge-discharge cycle test. • Battery charging protection voltage, discharge protection voltage, capacity etc. • The device has four test steps: charging, discharging, shelving, and cycling. • Charge and discharge Function: With constant current and constant voltage charging function, Constant current discharge function. • Check voltage protection: By charging and discharging the battery. • Safety protection: Anti-reverse connection protection function.	1
6	PMSM Motor Tester with Rope Pulley based variable loading system with BMS Training Bench	4-Wheeler Test Rig – BMS incorporates an advanced dynamic loading facility including precision fitting and assembly. 1. Open Bearing Mounting System (BMS) with integrated variable loading mechanism for realistic testing conditions. 2. Phase-wise digital display panel for accurate monitoring of electrical parameters and performance data. 3. Analog load measurement unit for real-time visualization of applied loads. PMSM Motor & Drive System: 1. PMSM Motor: 1000 W rated power, high-efficiency rotor-stator assembly. 2. Controller: Matching PMSM controller with programmable parameters. 3. Wiring: Complete primary and secondary wire harness, labelled for circuit traceability. 4. Transmission: EV drivetrain assembly for load, torque, 5. Application: Supports creation of a full EV test rig including motor control, drive cycle simulation, and performance testing. Vehicle Safety & Control Modules 1. Auto-braking system integrated with motor cutoff. 2. Anti-theft braking and immobilizer interface. 3. Remote lock / ignition ON–OFF control module.	1

		4-Wheeler Electrical & Drivetrain Architecture 1 Structured layout of 4-wheeler drivetrain components for functional analysis. 2. Harnessing includes connectors, junctions, fuse links, relays, and signal paths. 3. Diagnostic access points provided for fault simulation and troubleshooting. Smart Battery Management System (BMS) 1. Smart BMS with digital display for SOC (State of Charge) and SOH (State of Health). 2. Integrated cell balancing (active/passive depending on configuration). 3. Protection features: Over-voltage, under-voltage, over-current, short-circuit, and thermal protection. 4. Data Interface: Real-time data logger for cell-wise voltage and current. 5. Connectivity: Web-based monitoring application for battery parameter visualization and logging.	
7	Cut Sectional Workbench of EV Components with stand, instruction board and table With Diagnostics and Safety Testing Equipment	Tachometer, Infrared Ray Thermometer, Multimeter, Clampmeter and Basic OBD Scanner Hands-on visualization of internal construction and functioning of key EV subsystems. These models are mounted on a demonstration table with proper labeling and safety protection, aiding theoretical and practical understanding. • Cut Section of Different types of EV motors- PMSM Motor, 3 Phase induction, PMDC Motor, BLDC in runner motor open section, Hub Motor Open Section, • Other cut section of EV- 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 • Table for display and acrylic covering with naming of items • Item details and explanation board for understanding of the item. Provided with Acrylic Covering	1

Non-transferable tender documents will be available from the Office of **Principal, Govt. Polytechnic, Nayagarh, Pin: 752081, Odisha** on payment of Rs. **1000/-** in the shape of a **Demand Draft** drawn in favor of: **“Principal, Govt. Polytechnic, Nayagarh, Pin: 752081, Odisha**. The tender document can also be downloaded from the website: <https://www.governmentpolytechnicnayagarh.org/> (under the tender section).

The downloaded tender document can also be used provided it is accompanied with a crossed Demand Draft of Rs. **1000/-** towards the cost of the tender document in favor of: **“Principal, Govt. Polytechnic, Nayagarh, Pin: 752081, 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 Nayagarh, drawn in favor of "**The Principal, Govt. Polytechnic, Nayagarh, Pin: 752081, Odisha.**" Startups are exempted from the EMD requirement, provided they submit valid startup credentials.
- c. The successful Bidder must deposit 5% 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, Govt. Polytechnic, Nayagarh, Pin: 752081, Odisha.**"

7. Disqualification Criteria:

- o Bidders failing to comply with any of the above terms and conditions will be disqualified.
- o 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.

Sd/-
Principal
G. P, Nayagarh
Pin:752081, Odisha

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. 1000/-** (Rupees One Thousand 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, Govt. Polytechnic, Nayagarh, Pin: 752081, 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, Labour 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 **Nayagarh**, under Nayagarh 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:

Govt. Polytechnic, Nayagarh, Pin: 752081, 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
Govt. Polytechnic, Nayagarh,
Pin-752081 Odisha.

Sir,

I/We have gone through the **Tender Notice** relating to **Tender for Setting up Electric Vehicle Lab** at **Govt. Polytechnic, Nayagarh, Pin: 752081, 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. Polytechnic, Nayagarh, Pin: 752081, 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)

Name: _____

Address: _____

Contact Number: _____

Date: _____

SCHEDULE (E) –Price Schedule

Sl. No. Description of Equipment Unit Price with GST Quantity Measure Total Price with GST

(Insert the equipment details here)

(Signature of Tenderer)

Name: _____

Address: _____

Contact Number: _____

Date: _____

SCHEDULE-E- PRICE SCHEDULE

PACKAGE-1 (MECHANICAL ENGG.)

Sl. No.	Name of the Items	Technical Specification	Qty	Price	Price with GST
1	Cut section of 4/6 cylinder diesel engine in moving condition to show movement of internal parts	6cylinder diesel engine in working condition to show movement of internal parts	1		
2	HVAC Demo Kit	- Actual working model of Car Air Conditioning System. 2 HP single-phase motor fitted for driving the compressor and alternator. - Complete wiring circuit for the AC system along with switchboard. - All accessories fitted with the model shall be brand new, including: - o AC Compressor - o Condenser - o Blower Motor - o Evaporator Coil - o Pipeline - o Alternator - o Motor - Water heater provided for heating of the system. - Heating system provided for the model. - LP & HP line pressure gauges provided with the model. - Model mounted on a powder-coated iron trolley for better handling Remark: Complete working HVAC system is provided as specified. A 2 HP motor is provided to simulate the engine drive for operating the AC compressor, while a water heater is provided to simulate engine heat/hot coolant for demonstrating the cabin heating system. Thus, the model demonstrates both AC cooling and heating functions of an automotive HVAC system.	1		
3	Diesel engine (Running condition) Stationary type single cylinder	- Single-cylinder engine with Overhead (OH) Valves. - Fuel tank with manual operating handle. - Complete fuel-feed system provided. - Water-cooling system provided for engine cooling. - Complete lubrication system provided with an oil pump. - The oil pump is an integral part of the lubrication system and is provided for circulation/supply of lubricating oil to the required engine components. - Suitable arrangement provided for demonstration and study of the fuel-feed, water-cooling and lubrication systems. The mentioned oil pump is specifically provided for the engine lubrication system. Therefore, the offered model includes a complete lubrication arrangement with an oil pump	1		
4	Carburetor & Injector – Fuel System Training Assembly	Carburetor – Solex type for dismantling and assembling, with Multi-hole Pintle type Injector.	1		

5	Demonstration Board of Electronic Ignition System	- Working demonstration model fabricated using original automobile components/parts. 12 V Battery / DC power source provided for operation of the battery ignition circuit. - Ignition ON/OFF switch provided. - Electronic ignition coil provided for generation of high-voltage ignition output. - Distributor assembly complete with distributor cap and rotor provided. - Distributor/magneto assembly provided with suitable manual rotation arrangement/handle for demonstration. - Set of spark plugs provided for visual demonstration of sequential sparking. - Complete LT (Low-Tension) and HT (High-Tension) wiring connections provided. - Necessary ignition wiring, terminals and electrical connections provided on the demonstration unit. - On switching ON the ignition supply and rotating the distributor/magneto assembly, the system shall demonstrate sequential generation of sparks at the spark plugs according to the firing sequence. - All major components shall be mounted openly and suitably arranged for easy identification, observation and educational demonstration. - The model shall demonstrate the working principle of the battery ignition system, ignition coil, distributor and spark-plug firing sequence. The Battery Ignition System is included in the offered unit. A 12 V battery/DC supply powers the ignition circuit, while manual rotation of the distributor/magneto assembly demonstrates sequential sparking at the spark plugs.	1		
6	Clutch Assembly – Cut-Section Working Models	Clutch Assembly – Cut-Section Working Models Cut-section working models of Centrifugal Clutch, Diaphragm Clutch, Single Plate Clutch Multi Plate Clutch assemblies, sectioned to clearly demonstrate their internal construction, components, and working mechanism.	1		
7	Transmission / Gear Box Demo Kit	The trainer shall consist of an actual automobile-type Synchronesh Manual Gearbox assembly, suitably sectioned/opened at selected locations to demonstrate its internal construction and working mechanism. The gearbox shall be motorized using a geared motor for safe, slow-speed demonstration of gear transmission and operation. Construction & Drive System - Actual automobile Synchronesh Manual Gearbox assembly. - Gearbox suitably cut-sectioned/opened at required locations for clear visibility of internal components. - Geared electric motor drive coupled to the gearbox input shaft. - Reduction drive shall provide slow and controlled rotation suitable for classroom/laboratory demonstration. - Motor shall have sufficient torque to rotate the complete gearbox mechanism smoothly. - Suitable motor controller/drive provided for controlling the gearbox operation. - Main ON/OFF control with necessary electrical protection. - Suitable coupling and guarding provided between motor and gearbox. - Gearbox shall remain fully operational after cut-sectioning for demonstration purposes.	1		
8	Steering & Suspension System – Cut-Section Working Models	Cut-section working models of Power Steering, Rack and Pinion Steering, Recirculating Ball Steering, Worm and Roller Steering,	1		

		and Shock Absorber assembly, demonstrating internal construction, components, and working mechanism.			
9	Automotive Brake System – Working Models	Working models of Disc Brake and Drum Brake assemblies, complete with brake disc, caliper assembly, brake drum, tandem master cylinder, brake hoses, oil container/reservoir, brake pedal, and all necessary components, demonstrating the construction and working of both braking systems.	1		
10	Regenerative Charging, Braking & Battery Management Training System	Regenerative Charging and Braking Training System with built-in DC power supply, digital tachometer for speed measurement, high-grade FRP control box, high-quality meters, diagrammatic representation for easy connections, and safety features; Battery Management Training System suitable for testing 3–6 series Lithium-ion cells, with voltage, current and temperature measurement, cell balancing, and onboard thermistor for temperature measurement.	1		
11	Hybrid Vehicle Model Training & Simulator Set up	• Working of Hybrid Electric vehicle. • Training about HEV powertrain. • Charging of battery with ICE. • Power splitter between ICE and Electric motor. Complete Hybrid Vehicle training module with all sensors, transmission, Series, Parallel, Series-parallel systems, Power control Modules, Protection Device, Engine to Motor switching and complete circuit diagram of HEV systems Motor- 250W BLDC Motor * 2 Engine- 32CC Max RPM- 4000 Max Torque- 18 Nm Drive Mode- City, Hill, Sports Battery Capacity- 24V, 72ah Regeneration- 80W	1		
12	Cut section & open models for hands-on training of EV equipments with stand, instruction board and table	• Cut Section of Different types of EV motors- PMSM Motor, 3 Phase induction, PMDC Motor, BLDC in runner motor open section, Hub Motor Open Section, • Other cut section of EV- 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 • Table for display and acrylic covering with naming of items • Item details and explanation board for understanding of the item	1		
13	Hybrid Vehicle Control Strategy Test Platform	Hybrid Vehicle Control Strategy Test Platform built on Honda Activa 5G, demonstrating dual power-source hybrid architecture, automatic 20 km/h changeover between Electric Drive and IC Engine, and real-time hybrid control strategy evaluation. Base Vehicle & Mechanical Specs 1. Model: Honda Activa 5G: 2. Engine: 109.19 cc, single-cylinder, 4-stroke, air-cooled 3. Power/Torque: 8.0 PS @ 8000 RPM / 8.79 Nm @ 6500 RPM 4. Fuel Tank: 5.3 L 5. Kerb Weight: ~109 kg 6. Top Speed: ~80 km/h Electric Drive System: 1. Motor Type: BLDC, 3-phase 2. Rated Power: 1 kW 3. Voltage: 48 V DC 4. Cooling: Air-cooled 5. Functions: EV propulsion at 0–20 km/h Assist support during hybrid mode Smooth/silent low-speed operation Battery System: 1. Type: Lithium-ion 2. Voltage/Capacity: 48 V, 35 Ah 3. Protections: Over-voltage, over-current, short-circuit 4. Functions: Supplies EV mode, supports regenerative charge Hybrid Control Strategy: 1. Changeover Threshold: 20 km/h 2. Speed Sensing: Hall-sensor wheel speed detection 3. Operating Modes:	1		

		3.1 EV Mode (0–20 km/h): Motor only, IC engine off, regen braking active 3.2 IC Mode (>20 km/h): Automatic engine start & propulsion 3.3 Reversion (<20 km/h): Automatic engine cut-off, EV resumes 4. Control Features: 4.1 Hysteresis buffer for stable switching 4.2 Smooth torque transfer and transition Regenerative Braking: 1. Active during deceleration 2. Converts kinetic energy to charge battery 3. Supports extended EV operation Experiments / Learning Outcomes: 1. Study of hybrid power flow between IC engine and EV motor 2. Observing speed-based changeover logic (20 km/h threshold) 3. Measurement of motor torque, current, battery response 4. Evaluation of regenerative braking efficiency 5. Comparison of EV vs IC mode energy consumption			
14	Automotive exhaust 5 gas analyser (petrol & Diesel) and Diesel Smokemeter(Optional)	Exhaust 5 Gas Analyzer Petrol ARAI approved to check CO, CO2, O2, and HC& NO. Diesel Smoke Meter ARAI approved.	1		

PACKAGE-2 (ELECTRICAL ENGG.)

Sl. No.	Name of the Items	Technical Specification	Qty	Price	Price with GST
1	Electric 2W Assembly Teardown Setup	The 2-Wheeler Assembly Process Demonstration Training Workbench is an educational tool designed to provide hands-on training in the assembly of two-wheeled vehicles. This workbench simulates real-world assembly processes, allowing trainees to gain practical experience in various components and techniques involved in 2-wheeler manufacturing. Technical Specifications & Features are: • 2W Electric Vehicles • BLDC Hub Motor - 1Kw • Wiring Harness • Lead Acid Battery-48V • Lighting System such as Head Light, Indicators etc. • Throttle & On/Off Switch key etc. • Bluetooth Enabled Assembly and Dismantling Training Special Tools- Battery Impact Wrench, 1/4 Socket Box, 1/2 Socket Box, 1/4 T Handle, Allen Key, Screwdrivers, Pliers, Spanners, Multimeter Ramp- Type: Hydraulic Scissor Lift Table (Motorized) Weight Capacity: Upto 300 kg Platform Size: Minimum 1800 mm x 600 mm Lift Height: Min. 600 mm – Max. 1100 mm Power Supply: Single Phase AC / Battery Operated Operation: Foot pedal or motorized push-button system	1		
2	2 wheeler simulator with complete working model and data display With 4 Nos of Catlogues	• Complete drivetrain model with chassis of 2-wheeler • Complete wiring and fitment training data display of 3 phase outrunner motor individual phase data Display (Volatge, Current, Power and Battery SOC, Cell performance and Cell Balancing) RPM measurement secondary component voltage measuring facility. • Smart speedometer with troubleshooting feature. Technical • Electric 2W-with Open Chassis • BLDC Hub Motor-1KW, 48V, 1000 • RPM • DC-DC Convertor-48V-12V, 10 • Harness, Lighting, Indicator, Circuit Breaker, Hand Throttle &Aluminum • Panel with wiring structure diagram etc. Features are:	1		

		• Electric 2 W Architecture - DC Circuit and Component Study • Interactive Components Working • Digital Infotainment System for Current Consumption at Various Load Condition • Efficiency Monitoring of Electric 2W Hub Motor • Motor Reverse Potential & Application and Implementation of Convertors. Smart Battery with BMS Assembly and Dismantling Training Additional 4 Nos of Catalogues as per syllabus			
3	Retrofitted Hybrid 2 wheeler	Vehicle Type: Pre-owned petrol two-wheeler (100–125cc category) Motor Type: BLDC hub motor, 48V, 500W–1000W (based on model) Battery Pack: Lithium-ion (LFP) battery Voltage: 48V Capacity: 15Ah Smart BMS with cell balancing and protection features Controller: Dual mode (Petrol + Electric) controller Regenerative braking support (optional) Manual switch for petrol/electric mode toggle Drive Modes: Electric mode (fully functional up to 40–50 km range) Petrol mode (original ICE functionality retained) Charging System: 48V portable battery charger Input: 230V AC Charging time: 3–4 hours Dashboard: Analog speedometer (original) with additional indicators for electric mode Optional: Smart digital dashboard (on request) Wiring & Electronics: Complete retrofit wiring harness DC-DC converter for 12V accessories Fuse and safety circuitry Tools & Accessories: Tool kit for assembly/disassembly Safety gloves and goggles Instruction and maintenance manual	1		
4	Charging Station Instruction and Training Kit	Charger Type: 3.3kW AC Charger with BIE (Built-In Energy) Technology Model Configuration: 1 Working unit for real-time operation and performance monitoring 1 Open model with exposed internals for learning circuit design and layout Connectivity: RFID based application & for mobile application integration Smart Indicators: Multicolor LED status indicator Real-time charging status visualization Protection Features: MCB with auto power cut-off after charging completion Auto cut-off on no-load detection to avoid idle energy use Monitoring & Data Logging: Integrated Energy Meter Supports data viewing and control through the mobile app Mounting Platform: Wall or stand-mounted black MS frame with laminated tabletop Color-printed working circuit diagram and labeled I/O points User Interface: Clearly marked plug socket, breaker, and system indicators Provision for EV connector simulation Training Outcomes:	1		

		Understand the functional flow of an AC charging unit Learn internal component architecture via the open model Practice safety protocols in EV charging environments Monitor energy flow, usage, and cutoff mechanisms Learn app-based diagnostics and remote control basics			
5	Battery DIY Kit with IR Tester & Battery charging and discharging machine	Battery Pack Assembly & Testing Setup (1 Set): Complete station for assembling and testing Lithium Iron Phosphate (LiFePO4) battery packs Includes testing leads, cell holder, BMS mounting provision, and output terminals Soldering Equipment (2 Sets): Soldering rods and temperature-controlled soldering irons Solder wire and flux for battery tab connections and BMS wiring Practice & Demo Components: 2 Sets of LiFePO4 Battery Cells 1 set for instructor-led demonstration 1 set for student practice 2 Sets of Battery Management Systems (BMS) for practical training Consumables & Accessories: Extra battery cells for replacement during training Wrapping material, insulating tapes, nickel strips Heat gun (1 unit) for shrink wrapping and insulation Multimeters (2 sets) for voltage and continuity checks Workstation Furniture & Infrastructure: 1 x Heavy-duty Table-based Workstation (6 ft) with upper racks for tool and material storage 1x Prismatic Lithium Cells IR Testing Machine, Internal Resistance Charge discharge machine 0 to 100v 100Ah ch1: • Battery charge-discharge cycle test. • Battery charging protection voltage, discharge protection voltage, capacity etc. • The device has four test steps: charging, discharging, shelving, and cycling. • Charge and discharge Function: With constant current and constant voltage charging function, Constant current discharge function. • Check voltage protection: By charging and discharging the battery. • Safety protection: Anti-reverse connection protection function.	1		
6	PMSM Motor Tester with Rope Pulley based variable loading system with BMS Training Bench	4-Wheeler Test Rig – BMS incorporates an advanced dynamic loading facility including precision fitting and assembly. 1. Open Bearing Mounting System (BMS) with integrated variable loading mechanism for realistic testing conditions. 2. Phase-wise digital display panel for accurate monitoring of electrical parameters and performance data. 3. Analog load measurement unit for real-time visualization of applied loads. PMSM Motor & Drive System: 1. PMSM Motor: 1000 W rated power, high-efficiency rotor-stator assembly. 2. Controller: Matching PMSM controller with programmable parameters. 3. Wiring: Complete primary and secondary wire harness, labelled for circuit traceability. 4. Transmission: EV drivetrain assembly for load, torque, 5. Application: Supports creation of a full EV test rig including motor control, drive cycle simulation, and performance testing. Vehicle Safety & Control Modules 1. Auto-braking system integrated with motor cutoff. 2. Anti-theft braking and immobilizer interface. 3. Remote lock / ignition ON–OFF control module. 4-Wheeler Electrical & Drivetrain Architecture	1		

		1 Structured layout of 4-wheeler drivetrain components for functional analysis. 2. Harnessing includes connectors, junctions, fuse links, relays, and signal paths. 3. Diagnostic access points provided for fault simulation and troubleshooting. Smart Battery Management System (BMS) 1. Smart BMS with digital display for SOC (State of Charge) and SOH (State of Health). 2. Integrated cell balancing (active/passive depending on configuration). 3. Protection features: Over-voltage, under-voltage, over-current, short-circuit, and thermal protection. 4. Data Interface: Real-time data logger for cell-wise voltage and current. 5. Connectivity: Web-based monitoring application for battery parameter visualization and logging.			
7	Cut Sectional Workbench of EV Components with stand, instruction board and table With Diagnostics and Safety Testing Equipment	Tachometer, Infrared Ray Thermometer, Multimeter, Clampmeter and Basic OBD Scanner Hands-on visualization of internal construction and functioning of key EV subsystems. These models are mounted on a demonstration table with proper labeling and safety protection, aiding theoretical and practical understanding. • Cut Section of Different types of EV motors- PMSM Motor, 3 Phase induction, PMDC Motor, BLDC in runner motor open section, Hub Motor Open Section, • Other cut section of EV- 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 • Table for display and acrylic covering with naming of items • Item details and explanation board for understanding of the item. Provided with Acrylic Covering	1		