



उष्णकटिबंधीय वन अनुसंधान संस्थान

TROPICAL FOREST RESEARCH INSTITUTE
Indian Council of Forestry Research & Education

(An autonomous Council under the Ministry of Environment & Forests, Govt. of India)
P.O. – R.F.R.C., Mandla Road, Jabalpur – 482 021.

**TENDER NOTICE FOR PROCUREMENT OF SCIENTIFIC
EQUIPMENT**

Advertisement No. 15-1 /49/10-11/TFRI/JBP/(II)/

Sealed tenders are invited from reputed firms for the supply of

1. BOD INCUBATOR
2. THERMOGRADIENT TABLE
3. UPRIGHT TRINOCULAR EPIFLUORESCENCE MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT
4. HOT AIR OVEN
5. FUME HOOD
6. DEEP FREEZER
7. DUAL-PLATE MAXI VERTICAL GEL UNIT WITH POWER SUPPLY
8. COLD ROOM FITTINGS
9. SUPPLY, INSTALLATION COMMISSIONING OF INTERNET FACILITY OVER EPBX SYSTEM
10. DIESAL GENERATOR SET
11. FURNITURE
12. FURNITURE & COMPUTER ITEMS

Tender Fee : 150.00 (Non Refundable)

Cash/DD/Banker's Cheque Favour of
Director, Tropical Forest Research Institute,
Jabalpur

Issue of Tender starts from : 10 AM 27 /01 /2011
Issue of Tender ends on : 1 PM 24/02 /2011
Last date of submission of tender : 1.00PM 24 /02/2011
Opening of tender : 3.15PM 24/ 02 /2011

Note: Tender document is also available on our website <http://tfri.icfre.gov.in>

To,

The Director
Tropical Forest Research Institute
P.O. R.F.R.C., Mandla Road
Jabalpur

Sub: Tender for Scientific equipments

Ref: Your Advertisement Published In the Danik
Bhaskr/Hindustan Times on.....

The undersigned hereby tenders and offers (subject to Institute's conditions of tendering) to the Tropical Forest Research Institute, Jabalpur to supply the Scientific equipments as described in the enclosures with details of specifications in good condition.

It is certified that the specifications of Scientific equipments and all other conditions wherever described in the tender document, have been replied in full, giving clear details. The decision given by the institute in this regard will be final. It is also understood that the tenderer (in case of interpretation) will have no right to furnish any technical or commercial clarification after opening of the tender.

Date.....

Tenderer's signature with date

Name of the Tenderer

Address

SUBMIT THE FORM DULY FILLED IN SEALED COVER MENTIONING DATE OF OPENING OF THE TENDER

TENDER FORM

1. Name and full address of the tenderer with
telephone/fax number (if any)
.....

2. (a) If the tenderer is an authorized dealer of a
company give detailed information of authorization
(Dealer certificate should be enclosed)

- (b) Sales tax/Commercial tax Registration

- © If registered as Contractor/Supplier of specific
equipment with any Central/State Govt. department
give details

- (d) Income tax clearance certificate (copy to
be enclosed)

- (e) Whether registered with
(i) D.G.S. & D
(ii) Small Scale Industries Corporation
(iii) National Small Scale Industries Corp.,
Etc. If any, copy of the same should be
Submitted to claim exemption from EMD(

3. Validity Period (not less than 120 days)

4. Delivery Period to be specifically mentioned.

5. Whether Proprietary Item? If yes, enclose the certificate

YES	NO
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6. Details of offer

S.No	Name of Item	Specification with make	Unit Price	Taxes & Duties (mention)	Other charges if any (mention)	Total unit cost (for TFRI, Jabalpur)

Signature of Tenderer

7. Accessories if any (To be mentioned clearly)
8. Gaurantee/Warrantee of the item
9. Enclosures
 - (i) EMD
 - (ii) Catalogus
 - (iii) Registration Certificate
 - (iv) Income Tax Clearance Certificate
 - (v) Sales Tax / Professional Tax Certificate
 - (vi) Octroi etc. if paid (proof required)
10. Any other relevant information.....

Signature of the tenderer with stamp

SPECIFICATION

I. BOD INCUBATOR

EMD - RS. 6000.00

Description and specification of the items
<p style="text-align: center;">ପଠକୋଠ ଡିଜିଟାଲ</p> <p>Castor wheel mounted cabinet is double-walled with inner chamber of stainless steel and outer wall of M.S. sheet duly powder coated. Triple walled back of the unit is fitted with two air circulation fans for maintaining temperature uniformity throughout the chamber. Temperature from 5°C to 60°C is controlled by Microprocessor Electronic Digital temperature indicator-cum controller with an accuracy of $\pm 5^{\circ}\text{C}$ with automatic voltage stabilizer. Interior illumination arrangements with automatic cyclic timer 0-24 hrs. Size: 650mmx580mmx900mm</p>

II. THERMOGRADIENT TABLE

EMD 7500.00

S. No.	Description and specification of the items
1	<p>THERMOGRADIENT TABLE</p> <p>Programmable: One/two Dimensional Programmable Tables</p> <ul style="list-style-type: none">• Alternating Temperatures of 0-50°CLED light-programmable for 8-12h• Temperature Range: temperature experiments to be conducted over a wide range of temperatures from 0- 50 degrees C• Durable Materials: The polymer case should not warp, distort, and is water resistant unlike its wood counterparts and are environmentally friendly with no lead, mercury, or glass.• Portable: Thermogradient tables should be portable and can be placed on tables or temporary supporting structures and moved by the handles attached to the unit.

III. UPRIGHT TRINOCULAR EPIFLUORESCENCE MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT

EMD 7500.00

UPRIGHT TRINOCULAR EPIFLUORESCENCE MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT

- Four Fluorescence Magnifications: 40x, 100x, 250x, and 400x.
- Two Fluorescence DIN Objectives: 25x (0.65 NA, 0.62mm Working Distance), 40x (Glycerin Immersion or can use Dry, 1.0 NA, 0.25mm W.D.).
- Four BrightField Magnifications: 40x, 100x, 400x, and 1000x.
- Four Plan DIN BrightField Objectives: 4x (0.1 NA, 17.9mm W.D.), 10x (0.25 NA, 8.8mm W.D.), 40x (0.65 NA, 0.56mm W.D.), 100x (1.25 NA, 0.33mm W.D., Oil Immersion).
- Eyepiece Set Included: Wide Field 10x.
- Spring Loaded 25x, 40x, and 100x Objectives to Protect Slides.

Illumination

- Fluorescence Light Source: Super High Pressure Mercury Lamp (100W DC). Mounted to the Rear and Enclosed in a Sturdy Metal Housing.
- External Power Supply for Mercury Lamp: 100W DC with Current Adjustment Knob and Volt / Amp Analog Gauges.
- The Arc of the Mercury Lamp is Easily Centered by using Two Lamp Positioning Knobs on the Lamp Housing.
- Epi-Fluorescence Illumination System: Blue and Green Excitation Fluorescence Filter Cubes.
- BLUE Fluorescence Excitation Dichroic Filter Cube: Excitation Spectrum 420 - 485nm, Emission Filter 515nm.
- GREEN Fluorescence Excitation Dichroic Filter Cube: Excitation Spectrum 460 - 550nm, Emission Filter 590nm.
- 3-Position Fluorescence Filter Cube Slider Assembly: Blue Filter, Green Filter,
- BrightField: Transmitted Light Source: Variable Intensity 6V/20W Tungsten Halogen Base Illumination.
- BrightField: Koehler Illumination System with Focusable Field Diaphragm on Base to allow for Better Control and more Efficient Use of Light Source.

Head - Interpupillary Distance - Diopter

- 30 Degree Inclined Trinocular Head (Easier to View than 45 Deg.).
- Adjusts to the Distance Between your Eyes: 53 to 75mm InterPupillary Distance.
- Diopter Adjustment to Correct for Specific Vision Needs.

Condenser - Iris - Filters

- Fluorescence Light Condenser with Condenser Movement Knob.
- Fluorescence Light Field Diaphragm with Centering Adjustment Knobs.
- BrightField: 1.25 N.A. Abbe Substage Condenser, Condenser Movement Knob, Iris Diaphragm, Swing-Out Filter Holder, and Condenser Alignment Screws.

- BrightField: Four BrightField Filters Included: Blue, Green, Yellow, Frosted White.

Stage Specifications

- Large Graduated Mechanical Movable (up/down and longitudinal Y-direction) Stage: 160 x 140mm.
- Low Position Coaxial X-Y Slide/Stage Movement Knobs - Range of Movement: 75mm (X-Direction - Slide Movement) x 50mm (Y-Direction - Stage Movement).
- FOCUSING
- Coaxial Fine and Coarse Focusing Knobs on Both Sides of Microscope.
- Coarse Adjustment Travel Range: 22mm. (Stage Movement Distance Up/Down).
- Fine Adjustment Division: 0.002mm.
- Adjustable Lock Ring Stop to Limit Coarse Range to Protect Slides.
- Tension Adjustable Coarse Focusing.
- OTHER SPECIFICATIONS
- Manufactured under ISO: 9001 Standards.
- High Quality Solid Construction
- Precision Made Glass Optics

Camera: 1/3 Inch CCD Color Video Camera, NTSC Video Output Format, 420 Horizontal Lines Resolution, Low Light Requirement, with power supply and video cable with RCA jack

IV . HOT AIR OVEN

EMD - RS. 3000.00

1.	<p><u>HOT AIR OVEN</u> SILVA</p> <p>Double walled, with glass wool insulation with digital temperature display and controller. Two adjustable shelves. Inside chamber is made of stainless steel, outside is made of MS sheet finished in oven baked enamel paint. Facility to programme different temperature level for different time interval and programme locking facility.</p> <p>Temperature: Ambient to 250°C</p> <p>Electronics: Micro controller based digital display of temperature</p> <p>Display: LCD display with backlit</p> <p>Size: inner chamber: 90x90x90cm</p>
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EMD - RS. 4000.00

2.	<p>Hot Air Oven - GMP Model</p> <p>Double wall design, inlet port at the bottom allows air entry, air passes through heating elements, is warmed then flows upward through the inner chamber and flows out through a 2" adjustable vent at the top. Include motorized air blower for fast drying times. Fully Stainless Steel body.</p> <p>Specification:-</p> <ul style="list-style-type: none"> • Temperature Range: Ambient +5°C to 250°C. • Temperature control accuracy ±1°C of set point. • Temperature uniformity ±5% of set value. • Control type: Time proportionate digital / Microprocessor PID, Auto tune, Calibration off set. • Temperature display: 3 ½ digit LED. • Rock wool insulation. • Input voltage: 230Volts AC, 50 Hz. • Calibration certificate by ERTL – Mumbai with traceability to NPL – New Delhi • Outer cabinet S.S304 grade dull matt finish • Inner stainless steel mirror finish S.S.316 grade • Precise PID Temp. Controller CE marked • Silicon door gasket. Validation port • SS Wire mesh shelves. • Safety control. • With DQ, IQ, OQ documentation • Inner Chamber Diamention :- 60cm x 60cm x 60cm (24"x124"x24") • Outer Body Diamention :- 90cm x 85cm x 110cm • Volume :- 215Ltr • Model No. :- OOG G-215 • Watt :- 2500 • Shelves :- 3 (S.S.)
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V. FUME HOOD CHAMBER

E
EMD RS. 7000.00

1.	<p>FUME HOOD</p> <p>The main body of the fumes hood made of FRP. The work surface (Worktable) is of stainless steel sheet. A small S.S. Sink, water tap and water outlet provided. A sliding door made of acrylic, moves vertically up/down with counter balanced weight operated by steel rope. Hope is provided with fluorescent ligjht for easy working in chamber. A metal clad socket and gas cock is also provided in switches for mains, motor-blower and tube light and mains indicator.</p> <p>Power Supply:- 220, Single Phase, 50 Cycles, AC Standard Sizes of working platform:- 4" x2" x2"</p>
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VI. DEEP FREEZER

SILVA

EMD RS. 7500.00

(I) DEEP FREEZER (-20°C) WITH AUTOMATIC VOLTAGE STABILIZER

Double walled vertical freezer with inner chamber made of stainless steel and the exterior one is made of sheet duly acrylic enamel painted Temperature ranges: ambient to -20°C. Extremely efficient PUF insulation to minimize heat loss. Microprocessor based digital temperature indicator cum controller. Body is mounted on a sturdy angle iron frame and is mounted on castor wheel. Refrigeration system with CFC –free compressor and eco-friendly refrigeration system with time delay. Audio-visual alarm if the temperature deviates from the preset temperature. Open stainless steel utility baskets, air-cooled hermetic sealed compressor. Volume: 300-400 lit.

(II) VERTICAL DEEP FREEZER (-80°C)

GEN

EMD RS. 7500.00

- Vertical Deep Freezer (-80C) (with field sample collector device & voltage stabilizer)

Specification-

- External Dimension 76cmx94cmx160cm
- Internal Dimension 51cmx51cmx73cm
- Capacity 185 litre
- PUF insulation
- High Tech solid state digital indicator-
- Cum-controller
- Counter balanced door
- Inside acrylic doors
- Inside acrylic doors
- Micro processor based temperature control system with centronics interface for keeping hard copy of temperature, time and date.
- Seven days circular chart recorder
- Field sample collector device(-24oC)
 - a. External Dimension 67cmx39cmx48cm
 - b. Internal Dimension 36cm x25cmx35cm
 - c. Weight 17kg
- Voltage Stabilizer: Compatible with the above Deep Freezer of the same company

VII. DUAL-PLATE MAXI VERTICAL GEL UNIT WITH POWER SUPPLY

G
EMD RS. 7000.00

Description & specification of items
<p>name of Instrument/Chemicals Dual-Plate Maxi Vertical Gel Unit ideal for HANDCAST GELS; Include gel running module and gel tank, lid, 2 x(20.5x20cm) plain glass plates, 2 x (20.5x20cm) notched glass plates, 4x1 mm spacers, 2 x spacer aligners, 1x dummy plate, and 2x 1mm tgcuj 24-well combs, casting base and 2 x silicone seals. (Gel Size-20.5 x 20 cm) 0.25 mm thick spacer (for TVS 1000)x2 Thickness 0.25 mm, 24 wells, well volume:6ul Thickness 0.25 mm, 36 wells, well volume:3ul Labnet"s Enduro 300 Volt Power Supply</p>

VIII. COLD ROOM FITTINGS

G
EMD RS. 25000.00

Description & specification of items
<p>COLD ROOM FITTINGS :- SPECIFICATION- - Inner Dimension 10ft (K)x 10ft (W)x7.5ft (H) - Working platform(top) 2ftx10ft (2 nos) - Cupboards (4nos) for storage 2.5 ftx2ftx3ft - Temperature 4oC - Power socket -5Amp, 15Amp (2 nos each) - Light (4 nos): Fluorescent tube light</p>

IX. SUPPLY, INSTALLATION COMMISSIONING OF INTERNET FACILITY OVER EPBX SYSTEM C
EMD RS. 6500.00

- (A) 24 Port IP DSLAM WITH SPLITTER
- (B) MODEM WITH SPLITTER
- (C) CABLE LAYING AND INSTALLATION

X. DIESEL GENERATOR SET E
EMD RS. 40000.00

Description & specification of items
<u>Diesel Generator Set (100 KVA)</u> <u>PREFER- KIRLOSKAR,LUMINUS,ASHOK LELAND, JACKSON,CATER PILLAR</u> <u>Specifications of DG set, Engine and Alternator</u> <ul style="list-style-type: none">-water cooled technology-3phase and voltage-415 volt-Low fuel consumption- should comply latest emission norms-Output current load 115-130 amp-Rated output at 1500rpm (bhp) = 125-130-KVA/ (kw) rating at 0.8 pf = 100/80-provide with auto mains failure system<ul style="list-style-type: none">- Alternator suitable for continuous and smooth operation, best in class efficiency with class insulation conforming to IS.-High circuit current capacity up to 300% ensuring controlled regulation even at variable loads.-Provided with good safety controls and protection devices.<ul style="list-style-type: none">-Compact in size, rugged and durable design, with aesthetically superior, fully integrated weather proof acoustic enclosure,-low noise emission norms as per CPCB.- Electrical starting system with Battery capacity12 volt, 150 amps (dry) <u>Documentation to be enclosed</u> <ul style="list-style-type: none">-O&M manual of diesel engine.-Spare parts catalogue of Diesel engine,-Test certificate of diesel engine- Test certificate of Alternator.-Test certificate of DG set.

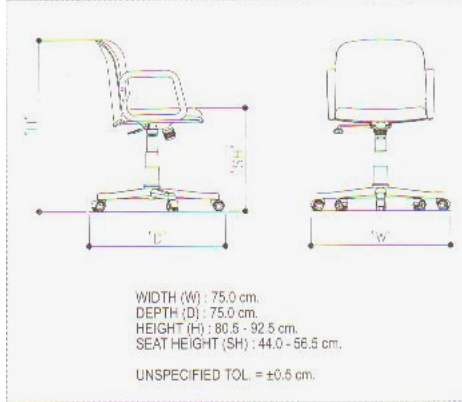
XI. EXECUTIVE CHAIR

E

EMD RS. 13000.00

Description & specification of items

Executive chairs with medium back:-REVOLVING TYPE



**Spec-(W):75.0cmx(D):75.0cmx(H):80.5-92.5cms
Seat Height 44-56cm**

The chair should have a locking facility which can lock the tilting mechanism. It should also have the facility to adjust the tilting tension.

Seat / back assembly: the seat & back should be made up of min 1.2 cm thick hot pressed plywood, and back injection moulded from black co-polymer

polypropylene should be upholstered with fabric and moulded polyurethane foam together with covers. The back foam should be designed with contoured lumbar support for extra comfort.

Polyurethane foam: the polyurethane foam should be moulded with density = 45j/-2 kg/m and hardness = 20 +/-2 kg. On standard machine at 25 % compression.

Armrest tube: the armrest tube should be made up of 3.5 cm x 1.5 cm x 16 bg. M.s.e.r.w. Oblong connecting tube welded to dia. 2.54cm. X 16 bg m.s.e.r.w. Support tubes and black powder coated.

Armrests; the armrests should be made of black integral skin polyurethane with 50-70 shore 'a' hardness and reinforced with m.s. Insert

Chair should have adjustable back mechanism which should be designed with the following features

360 revolving type. Provision for backrest tube (2.54cm x 1.5cm x 16bg)

Lumbar support adjustment 9.0cm Infinite locking of back

. Pneumatic height adjustment: the pneumatic height adjustment should be maintenance free, has an adjustment stroke of 12.5 mm and can be operated at 30kgs, extension force.

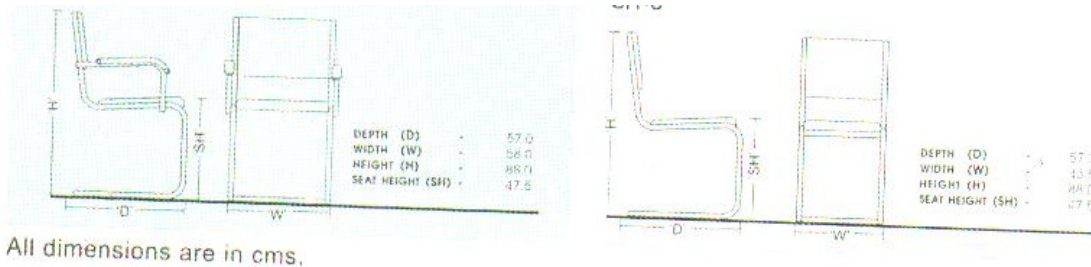
. Pedestal assembly: the pedestal should be made of hr steel and fitted with 5 nos. Twin wheel castors (castor wheel dia. 5.0 cm). The pedestal should be covered with a p.p moulded hub cap at the central column and end caps at the end of each prong for modern and aesthetic looks. The pedestal should be 55.0 cm pitch-centre dia (65.0 mm with castors)

. Twin wheel castor: the twin wheel castors should be injection moulded in black nylon and Under go the following Test':; castor durability test, castor retention test, castor pull out test, castor wheel pull out test castor breakability test

Please submit the Test certificate for Existing orders not older than 6 Months.

EMD RS. 5500.00_E

(I) OFFICE CHAIR



Arms-Size- (D)-57.0cmx(W)-58.0cmx(H)88.0 SH :47.5
Without Arms-Size- (D)-57.0cmx(W)-43.0cmx(H)88.0 SH :47.5

The seat and back are made from chemically treated and seasoned wood, upholstered with black leather cloth (PVC coated cloth and U foam. Understructure assembly is a cantilever type frame made of dia 2.5cmx 14GB thick MSERW tube and powder coated.

(II) ALMIRAH BIG AND SMALL

Almira :

The size of the almira- **height 1980mmx width 915 mm x depth 485 mm (BIG)**
height 1270mmx width 785 mm x depth 440 mm (SMALLG)

- 1-The almira should be made up of CRCA (code rolled close annealed steel) and treated with seven step anti corrosion treatment for extra durability.
- 2-The painting should be done by automatic airless electrostatic process using alkyd amino paint.
- 3-The almira should have multi-bend seamless construction to ensure rigidity and prevent pests from entering.
- 4-The almira should have the way bolting device with six lever lock. The almira should four adjustable shelves.
- 5-Metallic key cover electroplated nickkel chrome on front side of the door shall be provided.

(III) VERTICAL FILE CABINET

The size of the file cabinet- **height 1980mm x width 915 mm x depth 485 mm**

1-The file cabinet should be made up of CRCA (cold rolled close annealed steel) and treated with seven step anti corrosion treatment for extra durability.

2-The painting should be done by automatic airless electrostatic process using alkyd amino paint.

3-The file cabinet should have multi-bend seamless construction to ensure rigidity and prevent pests from entering.

4-The file cabinet should have the key bolting device with six lever lock. The cabinet should have four adjustable shelves.

5-Metallic key cover electroplated nickel chrome on front side of the door shall be provided.

5.-The drawers should glide open smoothly and they should be properly design to take full load without a groan.

(IV) EXECUTIVE OFFICE TABLE

Table : Executive

Size :- (w) 1665mm x (d) 900mm x (h) 750 mm

Large work surface.

Two sets of storage units:

i) 3 drawer unit

ii) 1 box and 1 file drawer unit

The table should have large work surface with Two sets of storage units:

i) 3 Drawer units

ii) 1 Box and 1 File Drawer unit.

The table should have Round tubular understructure and Footrest for comfort during long working hours.

The table should be made up of CRCA (cold rolled close annealed steel) and treated with 8 steps anti corrosion treatment for extra durability.

The painting should be done by automatic airless electrostatic process using alkyd amino paint. The table has multi-bend seamless construction to ensure rigidity and prevent pests from entering.

The top should be made up of pre laminated board.

XII.FURNITURE & COMPUTER ITEMS P
EMD RS. 10000.00

Description & specification of items
<p>Computer with Accessories Intel® Core™ i5 processor 750, 2.66 GHz, DMI 2.5GT/s, 4 GB DDR3 RAM, 750 GB SATA 3G Hard Disk Drive (7200 rpm), SuperMulti SATA Drive and Double Layer supporting Lightscribe Technology, ATI Radeon™ HD 5570 with Avivo technology, up to 2303 MB total available graphics memory, with 1 GB dedicated, HP Wireless NIC 802.11b/g/n Mini Card, 19" wide TFT Monitor, DVD Writer, Multimedia Keyboard, Optical Mouse, Genuine Windows 7 Professional with 3 years onsite warranty. (Make (HP/Compaq Presario/Wipro).</p> <p>UPS 1.5 KVA offline with 30 minutes battery backup and 2 years onsite warranty along with battery. (Make APC/Microtek/Luminous/Elnova/Doelin)</p>

Description & specification of items
<p>LCD Projector DLP Multimedia Projector with Media Card Imager Adaptor Digital DLP Technology, Native XGA (1024x768) resolution, 3000 ANSI Lumens, 2500:1 contrast ration, 5000 Hrs. lamp life, Terminal ports with connectors DVI and/or Analog RGB in x 2, RGB out, Audio in and Media card image adaptor with 3 years onsite warranty.</p> <p>Multimedia Projector Screen 80x80(113 Diag.) Tripod Projector Screen, Square Format, Matte White Screen Fabric - TPS-T80</p>

FURNITURE-

EMD 10,000.00

<p>1. Table Top size 3'x2' height 2'6", made up of pre laminated board without drawer ERW square steel pipe frame/ round tubular</p>
<p>2.Chair Multipurpose office chair without arms, size H 91.5x W55.5x D 58.5 (cm). Frame ERW prime quality tube of 16 swg, reinforced in all bends by additional pipe for static and impact load, powder coated finish after 8 tank anti rust treatment</p>
<p>3.Table, Top size L. 168xD 87x H75 (cm) (66" x 34") Executive with square/round tabular frame, 3 drawers in one side and drawer cum filing cabinet on the other side with a foot rest and knee cover, Top made up of pre-laminated board.</p>
<p>4.Chair Full arm multipurpose chair without arms, size H 91.5x W53.5x D 61 (cm). Seat and back with PU foam cushioning on teak wood frame. Frame ERW prime quality tube of 16 swg, reinforced in all bends by additional pipe for static and impact load, powder coated finish after 8 tank anti rust treatment</p>

1	PODIUM SIZE HEIGHT 4'x4" L 2'3",B 2'3" Teak wood frame .
2	Computer Table- With Steel /teak wood frame ,pool out tray for key board and collecting tray for print out . size w 145xD76xS75 (cm) 57x30"

1	White board 6' x 4' with hanger for fixing on the class room wall
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