IISER-MOHALI

Expression of Interest for "Supply and installation of Laboratory furniture & Equipment

Expression of Interest are hereby invited on behalf of Board of Governor's from the Manufacturers, Suppliers, Authorised Dealers for the Supply and installation of Laboratory furniture & Equipment for Academic Block-I as per the details given below:

1.0 This tender is for the supply and installation and commissioning (where applicable) of laboratory furniture and equipment consisting of the following in Academic Building-1, IISER Mohali, sector 81, S.A.S Nagar
1.1 Workbenches, both against the wall and Island type.
1.2 Chemical fumehoods including exhaust ducting (upto the terrace), exhaust blowers and scrubbers, room exhaust grills, ducts upto to terrace to be connected to the above (in 9 chemical lab only)
1.3 Chemical cabinets with & without exhaust.
1.1 Writing tables
1.2 Wall mounted storage cabinets
1.3 Sinks (stainless steel/ ceramic) installed in the work benches where shown
1.4 Water piping- supply and drain (from and to the control valves and floor raps provided outside the labs, with high quality taps, control valves as necessary, upto the sinks & Cup sinks in work benches & hoods.
1.5 Piping to hoods for, vacuum and nitrogen from the pumps and gas cylinders located within the labs; compressed air piping (from the terrace) to the hoods.
1.6 Extending the power supply from the existing DB'S to the lights and socket outlets as shown(including the lights and socket outlets)
1.7 Where island workbenches are shown, vertical shaft (not more than 1 foot square divided into 2). out of CRC. sheets (with removable panels where required) are to be provided for running the water lines and power wiring.
1.8 Time allowed: 8 weeks from the date of the order with the grace period of one week for the supply, Two weeks for installation.

Note 1: Bidders are advised to visit the site to familiarize themselves with the site conditions (exhaust ducting, blowers etc could be take- up in advance).

Note2: As this is a new building not yet occupied installation work can be done over two shifts or even three shifts with adequate labour.
1.0.1 All workbenches (WB) are to be constructed with a gas welded skeletal framework of ERW welded hollow steel frames 30mm x 30mmx 2mm wall thickness, as shown in the key plans of various modules (900 mm high and 900 mm deep, of various lengths). Bottom ends of all legs to be welded closed with 3mm plates with tapped holes to receive levelling bolts.

- Table tops should be of jet black polished granite tops 18 mm thick, with edges rounded and polished. The backing material used for granite should be BWR ply,

12 mm thickness, firmly glued to granite with water repellent adhesive.

- Storage units under the table tops are to be constructed of crc steel sheets and firmly supported by bottom bearer members and fixed to the framework by machine screws.

- All storage units are to be lockable.

- The fumehoods are to be constructed in such a way that all utility pipelines run below the table top.

- There will be no gap between the back of hoods and the wall.

- All storage units should be removable so as to access the utility lines at the back without disturbing the workbenches and hoods.

- For the wall workbenches utility lines may be run horizontally on the surface of the walls if desired. Vertical runs to reach sockets outlets, switches etc should be concealed in wall chaser.

- In the island workbenches, utility lines should run in cable trays races to reach end use points.

- Colours required (out of the available range which is to be submitted with the offer) would be intimated at the time of work order.
- All storage units will consist of smooth operating pull out drawers; some will be having 4 drawers of equal heights, some with 3 drawers of equal height and a few with 2 shallow drawers on top and a big drawer which can take bigger storage containers (total load of 12 kgs)

- All drawers shall be on telescopic sliding arms, with smooth, heavy duty rollers/ bearings.

1.0.2. All writing tables (WT) will be of similar construction 740 mm high and 600 deep and 750 wide with table top of 20 thick water proof plyboard with white cedar laminate post -formed at the front edge and with flush hard wood lipping 12mm thick for the other 3 sides. Below the top frame, 1 shallow drawer 75mm high lockable drawer with crc steel construction should be provided, for the full width of the table (750 mm).

SPECIFICATIONS:

LABORATORY TABLES AND ACCESSORIES

1.1 Technical Specifications of Modular Units

1.1.1 General Description- The steel frames, panels & shutters should be made from Prime Quality CRCA (Cold Rolled Cold Annealed) Steel. All cabinet bodies shall be of over closing design component parts cut & shaped entirely on CNC fabricating machines with Knock down construction. The bodies should be neatly jointed together with accurately matching sides- avoiding any gaps in between the units. All units are specified for 30 mm square ERW steel tubes frame work and all storage units of CRC steel sheets. The units can have independent construction to form a rigid integral structure. The units should have machine thread bolts at the bottom for level adjustment with fine pitch & wide nylon moulded base of diameter of 32mm. These legs are height adjustable with a range of +/- 5 mm.

Most units- Drawers or shutters have locking facility with 6 or 10 lever cam lock mechanism (as per the Institute requirement) with unique feature that in case of twin-shutters, locking one shall simultaneously lock both.

Bidder are free to offer the entire construction of CRC sheets (instead of tubular steel sections skeletal framework and CRC storage Units) provided design intent is fully met, and access to the services lines running under the workbench is available from the front. For wall workbenches there is no free space between the back of the benches and the wall.

1.1.2 Features

- **Surface Treatment:** The complete M.S. material of cabinet to be pre-treated (degreased, Zinc Phosphated) and epoxy powder coated 45 to 50 microns, which passes the Salt Spray test for 1000 hours and having the Scratch Hardness of 3 Kgs.

- **Shelves and Drawers:** CRCA shelves having a load carrying capacity of 40 Kg. The overall load carrying capacity of cabinet should be 80 Kg of UDL (40 kgs. on each shelf and 40 kgs. on bottom). The overall load carrying capacity of drawer should be 40 kgs. of UDL for a pair of telescopic ball side.

- **Door Pulls:** Flush pulls of PVC, providing a recessed finger grip should be used.

- **Drawer:** Drawer and door, when closed, shall be over closing on the cabinets.

- **Slides:** High precision Double Extension Ball slides which have passed more than 55000 cycles of Drawer Cycle test (forward & backward movements) with a 15 kg load in the drawer should be used which enables the drawer to open fully. Roller Slides should not be used because of comparatively much poorer in performance both on the smoothness of movement & the side play.

- **Shutters:** Metal Shutters should be double walled and made up of 0.8mm thick CRCA MS sheet with profile inserts and 40-50 microns pure epoxy powder coated. Inside of double walled shutters should be filled with expanded polyethylene to avoid ringing noise & give a solid feel.

Also the shutter edges should be provided Neoprene Beading all around to take the impact of shutter while closing & giving a smooth feeling.

- **Hinges:** Hinges shall be made of SS. The hinges shall be spring loaded with 105 degree opening. Welding of hinges to door should not be done; instead those should be fixed with machine screws & Rivet Nuts.Doors under 36" in height shall be hung on one pair of hinges, and doors over 36" high shall be hung on 3 hinges in case of storage cabinets.

- **Positive Catch:** All units to be with self closing type spring loaded hinges. The hinge close the doors once left at a certain angle. No additional catch should be used in the units.

- **Shelf supports:** Shelf support clips shall be nickel-plated steel.

- **Legs:** All legs to be made of powder coated pipe framework with stainless steel height adjustors & Nylon base with a load carrying capacity of 45 kg each. All units to be on legs for better clean ability of the lab area. Fully enclosed flush design will not be shall make the maintenance difficult by making the underneath inaccessible. Legs with adjustors would be able take unevenness of the floor. It should have at least 12-50mm adjustability.

- **Support Brackets:** Granite/Reagent Support Brackets which serve the purpose of supporting the granite and for carrying the service lines should be made of 2mm CRCA MS sheet with epoxy powder coating.
- **Configuration of Storage Units:** The storage units should be available in three configurations:

  Storage unit with one/two shutters and one adjustable shelf
  Storage unit with one drawer, one/two shutters and one adjustable shelf
  Storage unit with 3-4 drawers.

All storage's are fitted with 6 or 10 (as per the Institute requirement) lever cam locks when not specified.

1.2 **Sink Units**- The sink unit consists of base cabinet, polypropylene sink and a faucet. The raw material used for a base cabinet is 0.8mm thick CRCA M.S. Sheet. The complete M.S. material of cabinet should be pretreated (degreased, Zinc Phosphated) and epoxy powder coated (Ivory colour) for better corrosion resistance. The thickness of powder coat should be 40-50 microns and should pass the test of Salt Spray for 1000 Hours and has a scratch hardness of 3 kg.

1.3 **Reagent Shelves**- Reagent Shelves to be made of complete modular design consisting of horizontal 2 stage storage shelves. The end vertical support should be 0.9mm& horizontal shelves of 0.8mm thick CRCA M.S. mounted on PP caps. Each shelf should have a load carrying capacity of 30 kgs of UDL for the length of 1000 mm. Each vertical panel shall be assembled with horizontal shelf with M6 fasteners having Zinc-Cobalt coating for better corrosion resistance. The complete M.S. material of reagent shelf should be pretreated (degreased, Zinc phosphated) and epoxy powder coated for better corrosion resistance. The thickness of powder coat to be 45-50 microns, which passes the test of Salt Spray for 1000 hours and has a Scratch Hardness of 3 kgs.

1.4 **Electrical Trunking**- Electrical trunking should be made up of 0.8mm thick CRCA MS sheet. The complete M.S. material of cabinet should be pretreated (degreased, Zinc phosphated) and epoxy powder coated for better corrosion resistance. The thickness of powder coating should be 45-50 microns and should pass the test of Salt Spray for 1000 hours. It should have a high temperature withstanding capacity with excellent electrical insulation properties.

1.5 **Top Units**

- The top unit to be the same construction as that of the base storage cabinets and shall have a completely finished interior same as exterior.

1.6 **Acid Storage Cabinets (Ext. Dim- W x D x H is 1200 x 600 x 1900)**

- Smooth, air-damped door closing which is outside the storage compartment offering increased protection of moving and safety relevant components against corrosion.
- Wing doors having 90^0 opening and the interior of the cabinet is completely visible.
- Cylinder locking system which is suitable for master-key system.
- The shelves are height adjustable (at 32mm increments) with a load carrying capacity of 75 kg UDL and are secured against tilting.
- The adjusting aids are integrated inside the cabinet and helps in easy alignment to compensate for uneven floor.
- The bottom collecting sump with 3 aided lip seal provides safe collection of lekage.
  PE tray protects shelves from corrosive materials.

1.7 **Service Panels**- The service panels should be made of 0.6 mm thick CRCA M.S. sheet. The M.S. material should be pretreated (degreased, Zinc Phosphated) and epoxy powder coated for better corrosion resistance. The thickness of powder coat to be 45-50 microns, which passes the test of salt spray for 1000 hours and having the scratch hardness of 3 kgs. All the electrical fittings, wires coming from mains to switches on service panels should be completely enclosed to avoid any accidental situations. All the accessories should have a very high temperature withstanding capacity and excellent electrical insulation properties.

1.8 **Sinks**

Polypropylene Molded Sinks: Should be made up of 5 mm thick high density and elastic poly propylene with good resistance to organic solvents. Standard bowl size (L x W x D) to be 380 x 270 x 180 mm and 490 x 390 x 290mm.

1.9 **Pegboard**- Single faced stainless steel pegboard having a tray hole for water drainage and detachable pegs. The face should be made up of 1.2mm thick stainless steel (SS 304) whereas the pegs should be made up of polypropylene and should be adjustable with an minimum 10mm distance between peg holes. The size of pegboard should be LxWxH-60cm x 60cm x 10cm.

1.10 **Worktop (Granite) –** It shall be 18 mm thick +/- 1mm jet black granite with edges having round profiles of 5mm radius on top side. The overhang on the storage cabinet is 40 mm at the front side and 50mm at the side. It should also have a V-Groove cut at 30 mm from the front edge. The backing material used for granite should be BWR ply, 12mm thickness, firmly glued to granite with water repellant adhesive.

FUME HOODS

2.1 Standard Fume Hood Performance Requirements

- Fume hoods shall be of complete KD (Knock down) construction with airfoil design to insure maximum operating efficiency. Foil sections at the front facials of the hood shall minimize eddying of air currents at the hood face and the rear baffle system shall minimize turbulence in the upper portion of the hood interior.

  ✔ Test Method – The hood shall be tested by a third party as per the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 110-1995 and EN-14175.

2.2 Quality Assurance

- The laboratory fume hood manufacturer shall provide fume hood work tops and casework all **manufactured & shipped with** proper packing & should take the full responsibility of the entire scope of works as specified in the tender.
- **Each fume hood should come Pre Wired along with PDI (Pre Dispatch Inspection Report)**

2.3 Specifications

- **Superstructure Frame –** A free-standing rigid panel structure of steel (G.I.)
- **Interior Walls**- Double wall ends, not more than 6" wide, shall be provided to maximize interior working area. The area between the double wall ends shall be closed to house the remote control valves. Cutouts to be provided inside the fume hood for service line accessibility. The same to have a cover with a fastener free design. The vertical facias shall contain the required service controls, electrical switches and receptacles.
- **Airfoil** – A streamlined airfoil shall be integral at the bottom of the hood opening on bench and distillation hoods. This foil shall provide a nominal 20mm open space between the foil and the top front edge of the work surface to direct an air stream across the work surface to prevent back flow of air. The sash to be provided with a separate handle which also provides for air flow when in completely closed position. The foil shall be 1.2mm steel to resist denting and flexing.
- Baffle- A stable, non-adjustable baffle with a single slot on the back baffle to aid in distributing the flow of air into and through the hood. The baffle shall be space out from the back liner and shall be removable for cleaning.
- **Duct Collar**- A 8”-10” diameter polyethylene funnel shaped rectangular duct collar shall be located in the top of the hood plenum chamber.
- **Lighting**- Two fluorescent light fixture (inclusive of CFL tubes) of 20 volts each to be provided in the fume hood. The lighting fixture to be completely outside the fume hood area.
- **Sash**- A sash provided should be move in a vertical rising steel frame without any noise. The bottom of the sash frame shall have a full length metal handle. The ash track has minimum protrusion to avoid any kind of turbulence. The sash shall be counterbalanced with a weights to prevent tilting and binding during operation. The glass panels shall be 5mm toughened glass mounted in an leveled channel with roller for smooth operation.

- **Plumbing Services –** Utility services like Nitrogen, Vacuum, Compressed Air & Potable water shall consist of remote control valves as selected located within the end panels, controlled by in and out facility with flexible hose passing through the side panels of the hood, with color coded plastic handles. Interior fitting for water shall be with powder coated brass. All gas valves for regular lab gases to have standard needle valve and push and turn type arrangement for all burning gases to be supplied. All supplied valves to clear the following pressures test conditions: Gas Fittings- 7 bar, Water fittings-10 bar.
- **Electrical Services –** The hood superstructure shall be fully wired and should have a control box with MCB blower starter all safety devices like trip etc. Inlet to be of 3 phase power supply and the whole electrical to be of plug and play type. It also has 4 nos. electrical sockets and switches of Northwest make (230 V, 5/16 A, 50 Hz)
- **Liner- I**nterior liner panels shall be 6 mm thick Phenol resin base industrial laminate.
- **Digital Panel-** Fume hoods shall be provided with an alarm system to detect low and high hood face velocities. The alarm system shall indicate the actual face velocity of sash position. The system have an air velocity sensor mounted on the interior side liner of the hood where it is easily accessible for cleaning. The velocity monitor shall have a digital display of the air velocity through the hood face in feet per minute. The alarm signals shall activate any time the face velocity falls below the low velocity alarm set point or rises above the high velocity alarm set point. There shall be both visual and audible alarm signals. The audible alarm shall have a mute. Low and high alarm contacts shall be provided for remote monitoring.
- **Lattice Rod Assembles –** 12mm diameter solid SS rods shall be completed with the PP clamps to form a lattice arrangement to hold the test samples and rotors within the fume hood.
- **Centrifugal Blower**- Silent high efficiency remote blower consisting of continuous rating motor and chemical resistant impellar. The blower is designed to give a face velocity at safe working height as per the international safe velocity norms. (ANSI/AIHA Z9.5). The blower body is polypropylene UV treated, high density and chemical (corrosion) resistant and is mounted on a metallic stand.
- **Ducting –** Rigid Ducting of PP (Polypropylene) + FRP (Fibre Reinforced Polyester) and flexible ducting with flanges, bends, damper transitions, clamps etc. Flexible joint is provided in the ducting in order to avoid transmitting the blower vibrations to the hood. A weather proof rain cowl is provided at the outlet of blower.
- **Scrubbers Specifications:**

General details			
	For 1 no. LCV fume hoods of 6 feet width	For 2 nos. LCV fume hoods of 6 feet width each	For 3 nos. LCV fume hoods of 6 feet width each
Capacity	1000 CFM for two 6 feet width LCV fume hoods	2000 CFM for two 6 feet width LCV fume hoods	3000 CFM for three 6 feet width LCV fume hoods
Working temp.	Ambient	Ambient	Ambient

Design temp.	60 degree celcius	60 degree celcius	60 degree celcius
Type	Vertical Packed Bed scrubber with circulation tank and recirculation pipes and fittings	Vertical Packed Bed scrubber with circulation tank and recirculation pipes and fittings	Vertical Packed Bed scrubber with circulation tank and recirculation pipes and fittings
Motor	1 HP, 2900 RPM	1 HP, 2900 RPM	1.5 HP, 2900 RPM
Material for Construction			
Bottom/room/ shell	PP + FRP	PP + FRP	PP + FRP
Manway necks/Reinf. Pads	PP + FRP	PP + FRP	PP + FRP
Manway flanges	PP + FRP	PP + FRP	PP + FRP
Nozzle necks	PP + FRP	PP + FRP	PP + FRP
Nozzle flanges	PP + FRP	PP + FRP	PP + FRP
Gasket	Natural resin – 3mm	Natural resin – 3mm	Natural resin – 3mm
Bolts and nuts	GI	GI	GI
Thickness			
Tank	3 mm PP + 5 mm FRP	3 mm PP + 5 mm FRP	3 mm PP + 5 mm FRP
Scrubber	3 mm PP + 3 mm FRP	3 mm PP + 3 mm FRP	3 mm PP + 3 mm FRP
Painting			
Outside of tank	Smoke grey	Smoke grey	Smoke grey
Inside of tank	NIL	NIL	NIL

Others

- Accessories like overflow provision and water level indicator.
- Less space occupation, maximum efficiency and maximum recollection.
- All nozzles shall be provided with FRP gussets.
- Water fill shall be done to take care of leakage.
- Floor space requirement of 2 m X 2 m.
- Water fill test shall be done to take care of leakage

- **Base Cabinets –** Fume hoods are designed to rest on a bench (high base stand, pedestal or a cabinet) which is a complete rigid steel structure. Gauge of steel used in its construction shall be 0.8 mm GI.
- **Transition-** Used to connect fume hood with ducting should be designed to reduce the static pressure and is made up of PP-FRP.
- **Work Surface** – Hood work surface shall be 20mm thick jet black granite made in the form of a watertight pan, not less than 7 mm deep to contain spillage. Worktop will have oval 100mm x 200mm 'PP' Cup-Sink for drainage. The work surface and cup drain shall be available in black colour.

3. PERFORMANCE REQUIREMENTS

3.1 **Steel Casework Construction Performance**

- Base cabinets shall be constructed to support at least a uniformly distributed load of 250 kgs.
- Each leg should have a load capacity of 450 kg
- Each adjustable and fixed shelf support an evenly distributed load of 40 Kg.
- All drawers shall operate smoothly, a minimum of 1,00,000 cycles with an evenly distributed load of 25 kg.
- Swinging doors on floor-mounted casework shall support 45+45 Kg. suspended at a point 1 feet from hinged side, with doors swung through an arc of 90 degrees. Weight load test shall allow only a temporary deflection, without permanent distortion or twist. Door shall operate freely after test and assume a flat plan in a closed position.

The steel surface to follow the following testing standards

S.No.	Characteristic	Specifications	Method Used
1	DFT (DRY FILM) THICKNESS	35 micron	ELCOMETER OR DFT METER
2	GLOSS AT 60 DEGREE	70+units -	GLOSS METER
3	SCRATCH	3Kgs	SCRATCH HARDNESS TESTER
4	IMPACT RESISTANCE	275 Kg.cm	IMPACT TESTER
5	CROSS CUT ADHESION	1X1 mm or GT	
6	FLEXIBILITY	3.25 mm	CYLINDERICA LMANDREL BENDING TESTERS
7	ERICHSEN CUPPING	8 mm	ERICHSEN CUPPING TESTER
8	SLAT SPRAY	1000 hours	SALT SPRAY CHAMBER

Zinc Phosphate deposition rate: 1.1 gm/mt. Square, IS – 3618 (1966) Reaffirmed in 1991 and IS -6005 (1998).

Mild Steel (CRC): IS-513 (1994) Reaffirmed in 1998.

3.2 Service Fittings and Accessories

- Laboratory Service Fittings: Service fittings shall be laboratory grade, and water faucets and valve bodies shall be cast red brass alloy or bronze forgings. All fittings shall be powder plated unless specified otherwise.
- Service Indexes: Fittings shall be identified with service indexes in the colour coding as per DIN 12920.
- All water faucets and gas valves should meet the following performance tests and requirements.

3.2.1 Chemical Resistance: Finish shall meet the following tests for chemical resistance:

3.2.2 **Fume Test :** Suspended coated sample in a container at least 6 cubic foot capacity, approximately 12" above open beakers, each containing 100 cc of 70% nitric acid, 94% sulfuric acid and 35% hydrochloric acid respectively. After exposure to these fumes for 150 hours, the finish on the samples shall no discoloration, disintegration or other defetcs.

3.2.3 **Direct Application Test:** Subject coated samples to the direct action of the reagents and solvents listed below at a temperature of 25 degree C dropping from a burette at the rate of 60 drops per minute for ten minutes. Finish on the samples shall not rupture, though slight discoloration or temporary softening is permissible.

3.2.4 ***Mar and Abrasion Resistance:*** Finishes shall a have pencil hardness of 2H-4H with adhesion substantial enough to withstand both direct and reverse impacts of 160 inch pounds. Finish shall have excellent mar resistance and be capable of withstanding scuffing, marring and other ordinary wear.

3.2.5 **Reparability:** Finish shall b capable of surface repair in the event that a fitting is scratched or a surface rupture occurs. The service fitting manufacturer shall have available an air-drying coating, specially formulated to match the existing finish colour, which may be applied in the field to repair coated surfaces.

4..1 Dampers and Flexible Hose

4.1.1 General – Volume control damper sets shall be provided where specified according to the specifications in the offer BOQ. Dampers shall be double thickness heavier than the thickness of the large duct & shall be rigid in construction. The volume control dampers shall be of an approved type, lever operated & complete with locking devices which will permit the dampers to be adjusted & locked in any positions. Construct blades of 3 mm thick PP MOC, provide heavy-duty molded self-lubricating nylon bearings, 13mm (1/2") diameter Plastic axles spaced on 225 mm (9") centers. Construct frame of 300 mm diameter outer with Flange for fitting minimum 6 bolts and nuts. The outer shell body shall be transparent material of Poly propylene. Automatic $ manual volume opposed blade shall be not over 225mm wide. The dampers for fresh air inlet shall additionally provide with fly mesh screen, on the outside of 0.8 mm thickness with fines mesh.

4.1.2 Manually Adjustable Damper Sets – Damper sets shall be arranged in substantial supporting frames and each blade shall be mounted on a shaft, which turns in sintered bronze bearings. All

damper blades shall be inter-connected by means of a suitable bar linkage for ganged operation. All dampers shall be arranged with spindle horizontal and shall be sized to handle the air quantities shown on the drawings. Where manually adjustable damper sets are installed in duct work or other accessible locations the operating shafts shall be extended through the duct and a lockable quadrant fitted.

4.1.3 Bird Screens – Galvanized woven mesh or weld mesh bird screens in rigid galvanized iron frames shall be installed behind all Bypass exhaust air openings to the outside of the building.

4.1.4 Flexible Connections – Provide flexible duct connections wherever duct work connects to vibration isolated equipment and on all exhaust final connections to spot extractor and as indicated on the drawings. Construct flexible connections of neoprene-coated flameproof fabric crimped into duct flanges for attachment to duct and equipment. Make air-tight joint. Provide adequate joint flexibility to allow for thermal, axial, transverse and tensional movement and also capable of absorbing vibrations of connected equipment. Flexible connections shall be air tight and resistant to water and fire. Flexible connections shall be fitted to isolate fans from equipments and/or duct work. The connections shall be arranged to permit the renewal of the connection without distributing the duct work or the plant. The metal parts of connected equipment shall be separated by not less than six inches and installed with sufficient slack to compensate for free movement of fans or spring vibration isolators.

5.0 Technical Specifications for Physics Lab:
LAB WORK TABLE FOR PHYSICS LAB
SIZE: 2100mm L x 685mm D x 890mm Ht
Table frame to be made out of 50mm x 25 mm x 1.2 mm CRCA rectangular pipe mounted on 4 vertical supports square section of 50 x 50 x 1.2mm CRCA pipe. The CRCA steel frame section to be powder coated oven baked after proper pre-treatment. The top of the table should be made from 25 mm thick MDF board. The top should be post-formed with laminate on the front. The sides of the top should be protected with PVC lipping affixed with hot melt glue. MDF top should be fixed to the frame with the help of 6mm insert nuts & bolts only. The legs should be provided with rubber shoes to prevent the floor from being damaged.
Table should be provided with swing door cabinet of size600mm W x 605mm Depth x 605mm Height on both LHS and RHS, having one removable shelf. Storage cabinets to be rested on 50mm x 25mm x 1.2mm frame welded to the vertical supports. A foot rest of 50mm square pipe is also provided. The door should be lockable. The body of the cabinet unit should be made from 0.8mm CRCA sheet and doors are made from 1mm CRCA sheet and to be stiffened with hat type stiffener. All the sheet metal parts to be powder coated oven baked after proper pre-treatment.

6.0 Eligibilty criteria :

6 .1 -Vendor /firms should have successfully completed the “Supply & Installation of Laboratory Furniture/Equipments” during last 5 years ending last day of the month previous to the one in which the bidding are invited (duly attested certificates of supply of laboratory furniture/equipments are required):
Two similar Supply and Installation of Laboratory Furniture/Equipment for 20,000 sqft area
Three similar Supply and Installation of Laboratory Furniture/Equipment for 32000 sqft area out of which at least one should have been executed in Govt Department(s)
6.2-Average annual financial turn over during the last 3 (three) years ending 31st March of the

previous year should at least be 30% of the estimated cost of work.
6.3Should not have suffered loss in more than one year in last 3 years
6.4The vendor should also submit a copy of partnership deed if any and power of attorney duly attested and countersigned by the vendor at the time of application.
6.5The vendor should also submit the proof of VAT number, Sales Tax number and PAN number with request for issue of tender form.
6.6 The vendor/firm should not have been blacklisted or debarred for supply in any Government Departments/Autonomous Body/PSU's.

7.0 Expression of Interest should be submitted in the following manner:

7.1 Cover A should contain the details the supply (duly attested certificates of satisfactory supply of lab furniture) as per the eligibility criteria 5.0 above, financial turn over in past three financial years, confirming/agreeing to our specifications, time required for supply, partnership deed, VAT/Sales Tax/PAN No. etc.

7.2 Cover B should contain the details of the financial offer [including all applicable taxes and levies)

7.3Price quoted should include Transport up to the erection site in the Institute campus including unloading , and also transit insurance.

7.4 Cover C should contain the earnest money of Rs. 4,00,000 /- in the form of demand draft in favour of The Registrar , IISER Mohali, payable at Chandigarh.

7.5 All the 3 covers should be placed in our outer cover superscribed “Expression of Interest for lab furniture for Academic Block-I, so as to reach the undersigned on or before 3 pm on

8.0 Method of selection:

8.1 The expression shall be received by the undersigned by 1500 hrs on ( ) and Cover 'A' only containing earnest money, eligibility document as stipulated at 6.0 above conditions shall be opened on the day (to be notified later) in the presence of vendor/firm or their authorized representative who may like to be present. No consideration will be given to a expression received after the above stipulated time and date.

8.2 The technical bids would be examined by a committee constituted by Director, IISER-MOHALI and a shortlist arrived at.

8.3 The screened Agency/Contractors would be invited to make a presentation alongwith the samples to the committee to explain their offer and answer questions if any. Out of 100 marks for the whole exercise 75 would be based on the Technical Evaluation (A) which will have 40 marks for samples, 15 marks for executing similar types of labs in the past 5 years, 10 marks for setup near Mohali & Chandigarh, 5 marks for completion time and 5 marks for financial capability. The presentation would be called for soon after the last date for submission of offers.

8.4 The financial bids of only the shortlisted applicants after technical presentation would be opened.

8.5 25 marks would be based on the Financial Bid. The lowest bidder would be assigned full 25 marks and others assigned marks in inverse proportion based on their offer (B).

8.6 The Agency/contractor securing the highest marks (A+B) would be awarded the said work who should sign an agreement with the Institute and **undertake the assignment immediately.**

8.7 The Director IISER Mohali reserves the right to reject any or all the offers based on Technical Evaluation Report.

8.8 If the Financial offers (B) of the successful applicant is considered by the Institute committee to be unreasonably high the Institute reserves the right to negotiate for the price to be reduced. If there is no agreement reached, the Institute reserves the right to cancel this invitation for Expression of Interest and decide further course of action by a fresh invitation or otherwise.

9.0 General Conditions:

9.1 Time for supply at the Institute's campus : Eight weeks form the date of order with a grace period of one week for the supply and two weeks for the installation.

9.2 Performance guarantee: 5% of the quoted price to be furnished within 10 days of the placing of the order and must be valid for the time required for completing the work plus 60 days.

9.3 Security @ 5% will be deducted and will be released after completion of the defect liability period of one year from the date of handing over.

9.4 The bidders have to quote on unit base rates for each item as per the BOQ. The rates for each items as given in the BOQ will be valid for a year.

9.5 The Institute can increase or decrease the Quantity as per its requirement.

10. Dispute:

Any dispute arising out of this work would be subject to the jurisdiction of the Court of Mohali.