# INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH

# THIRUVANANTHAPURAM [IISERTVM]

Рн0471 2597454,	CET CAMPUS, ENGINEERING COLLEGE.P.O
FAX: 0471-2597427	THIRUVANANTHAPURAM 695016,
EMAIL: <u>purchasestores@iisertvm.ac.in</u>	KERALA, INDIA
IISER/PUR/PT/05/14	18 <sup>th</sup> July 2014

# INVITATION FOR BIDS

Sealed and superscribed **Two-Part** bids are invited from well reputed and specialist sources who executed multicrore works of furnishing state of the art Labs (approx. 15000 sq. ft) of International Standards for (a) Research and (b) Teaching in Chemistry.

The Labs are to be set up at the Permanent Campus of IISERTVM coming up at Vithura, 40 KM away from Trivandrum City.

# **SCHEDULE**

1) 2)	Tender No. Pre – Bid	:	IISER/PUR/4506/14 11 <sup>th</sup> August 2014 [10 AM] @GEM BUILDING, IISERTVM QUESTIONS TO BE COMMUNICATED BY 5 <sup>TH</sup> AUGUST 2014 VIA EMAIL/ REGULAR MAIL
3)	DUE DATE	:	1 <sup>st</sup> September 2014 [3 PM]
4)	Cost of Tender <sup>#</sup>	:	Rs. 500 + 4.04% VAT
5)	EMD [BID SECURITY] **	:	Rs. 35,00,000/-
Тес	HNICAL SPECIFICATIONS	-	- Annexure I
LAY	outs & Item List	-	- ANNEXURE II

# TERMS & CONDITIONS

# [APPLICABLE TO ALL THE ABOVE TENDERS]:

- 1) <u>Bids should be superscribed with Tender No. Item Name</u> and <u>Due Date.</u>
- 2) Instruction to Bidder [Annexure III] shall be followed.
- 3) General conditions of the Contract are as per Annexure IV.
- 4) <u>Integrity Pact</u> [<u>Annexure V</u>] <u>shall be completed, signed, sealed</u> <u>and sent alongwith Technical Bid.</u>
- 5) <sup>#</sup>Tender cost in the form of DD **favouring IISERTVM** shall be sent along with 'Technical bid'.
- 6) \*\*Bid Security [refundable without any interest] shall be as per clause 1.15 of Annexure III and shall also be sent alongwith

Technical bid. Incase the Bid security is provided by Bank Guarantee, specimen for the same is at Annexure VI.

- 7) Clause 1.10[Bid Form] of Annexure III is **not** applicable for this Tender.
- 8) Tenders without Tender Cost, Bid Security and Integrity Pact shall not be considered and summarily to be disqualified from participating tender.

# 9) Tender Opening:

All tenders will be opened at our Director's Conference Hall on **2<sup>nd</sup> September 2014 at 11 AM**. Authorized representatives of the bidders may attend the Tender Opening.

# <u>Two – Part Tender</u>

# PART I - TECHNICAL BID:

Consisting of all Technical details alongwith commercial terms and conditions. DD towards Tender Cost, Bid Security [EMD] and Integrity Pact signed shall be sent alongwith Technical bids.

# PART II - PRICE BID:

Showing item-wise prices for the items mentioned in the Technical Bid. The technical bid and the Price bid should be in separate sealed and superscribed covers. Both these covers are to be put in a sealed bigger cover superscribing Tender No and due date. Technical bids will be opened first and after evaluation, price bids of only the shortlisted bidders will be opened.

# SPECIAL CONDITIONS:

# Prequalification Criteria for the Vendors

- 1. The vendors shall have a minimum of five years of experience in the supply and installation of chemistry laboratory furniture.
- 2. The vendors must have successfully completed one similar work costing not less than Rs. 2.00 Crores or at least two similar works each costing not less than Rs. 1.00 Crore in the last five years. The vendors must possess certificates issued by the end users for having satisfactorily completed works of such magnitude.
- 3. The vendors shall provide their recent brochures which will provide technical information about quality, design and technology of the quoted products.
- 4. The vendors shall have a manufacturing unit located in India and shall have a special team for maintenance of laboratory furniture.

DEPUTY REGISTRAR [F&A] [PURCHASE & STORES] IISERTVM

# **TECHNICAL SPECIFICATION FOR LABORATORY FURNITURE**

The general colour code for all the laboratory furniture shall preferably be a combination of white and light grey.

### 1. FUME HOODS

#### 1.1 Compliance of Regulations and Standards

i. IS 4209:2013; ii. ASHRAE Standard 1101995; iii. SEFA 1; iv. ANSI Z9.5; v. NFPA 45;

#### **1.2** Outer Construction/ super structure

The super structure shall be double walled construction. The double wall shall house, conceal steel framing members, attaching brackets and remote service fixture valves. It shall be constructed using high quality, cold rolled, mild and degreased steel meeting requirements of ASTM A366. The steel shall be galvanized and shall have a minimum thickness of 16 gauge. The exterior of the structure shall be epoxy coated for chemical resistance, scratch resistance and to prevent rusting. The rear part of the fume hood shall have service access for maintenance.

#### 1.3 Inner lining and worktop

Internal side wall panels shall be fabricated using minimum 6 mm thick liner of TRESPA make. The work top shall be made of minimum 18 mm thick material of TRESPA make.

#### 1.4 Sash

The sash shall be constructed from transparent, scratch-resistant, shatter-resistant and flame resistant material. Combination of vertically and horizontally moving sashes shall be provided. The movement of the sash shall be smoothly controlled by an appropriate technology. All the components shall be manufactured using non-rusting material.

#### 1.5 Electrical

Lighting fixtures shall be of fluorescent type. Light fixtures shall be sealed, vapour tight and protected by a transparent, scratch-resistant, shatter-resistant and flame resistant material. All the electrical switches and sockets shall be positioned outside the fume hood just below the work top. Each fume hood shall necessarily possess minimum six electrical sockets (220-240V, 6-16A). Each fume hood shall have a shunt tripper for the safety control of all the electrical points. All the sockets shall be wired with 2.5 sq. mm copper conductor stranded FRLS insulated cable. The switches and sockets shall of one of the following makes –Legrand (ARTEOR SQUARE) or MK (WRAP SQUARE).

### 1.6 Service Valves, Plumbing and Drain

The facility for water inlet and outlet drain is already provided. There shall be provision for water supply with a single valve tap in each fume hood with a high density polypropylene (approx. dimension 80×160 mm) cup sink directly below this point. The shut-off valve or cock for the water supply shall be provided outside the fume hood. All the fittings shall be of one of the following makes –BROEN, Water Saver or Brownall Labtap.

# 1.7 Gas Supply

Provision for supply of (a) pressurized air (b) inert gas (nitrogen or argon) All the fume hoods in each of the labs shall be provided with (a) pressurized air and (b) inert gas (nitrogen or argon) facility. All the fittings shall be manufactured using SS304. There shall be a uniform distribution system for the gas supply and the maximum pressure of the outlet gas in each fume hood shall be 2 to 5 bars. A calibrated control valve shall be provided outside each hood. All the gas valves shall be colour coded and be of one of the following makes – BROEN, Water Saver or Brownall Labtap. The inlet of the gas supply shall be placed near to the corridor adjacent to each lab. If necessary, securing belts meeting international standards shall be provided for securing at least two gas cylinders.

Wherever necessary, an inert gas (nitrogen or argon) purification and control unit delivering UHP grade gases shall be provided.

# 1.8 Baffles

The baffles shall be fabricated using minimum 6 mm thick liner of TRESPA. At least three slots shall be provided for effective distribution of flow of air. They shall be placed at a distance of approximately 5 cm from the back liner and shall be removable for cleaning.

# 1.9 Blowers, Ducting, Duct Collar, Air Flow and Face Velocity

The noise level in the fume hood shall not exceed 50 decibels. High quality blowers meeting international standards shall be provided. The blowers shall be manufactured using non-rusting material and be protected by an outer casing made of high density polypropylene. The motors shall have high insulation value and shall work on 380-415 volts, 50 Hz,  $3\varphi$ , 3W system with suitable rating MPCB and starters. The ducting and collars hall be done using fibre reinforced plastic (polypropylene). All the fume hoods shall have an approximate face velocity of 80 to 100 fpm.

# 1.10 Air Foil

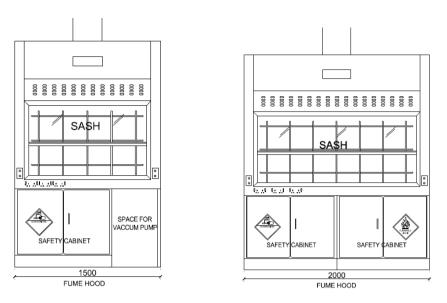
Air foil shall be manufactured using SS316 and shall be of aerodynamic design.

# 1.11 Dampers

Suitable dampers meeting international standards shall be provided wherever necessary.

# 1.12 Cabinets below fume hood

Cabinets shall be provided as specification in 2.1 and 2.2. Cabinet for keeping vacuum pump shall be provided as depicted in the figure. It shall be made using high quality, cold rolled, mild and degreased steel meeting requirements of ASTM A366. The steel shall be galvanized and shall be of 18 gauge or thicker. The door shall be completely epoxy coated for chemical resistance, scratch resistance and to prevent rusting. The door shall have perforations in order to dissipate heat generated by vacuum pumps. The cabinet shall have one electrical socket (220-240V, 6-16A).There shall be an internal provision to bring the vacuum tubing from the pump to the inside of the fume hood.



# 1.13 Scaffold/Lattice

A  $4\times4$  height and width adjustable scaffold made of SS316 (minimum 12 mm diameter) shall be provided. The scaffold shall be detachable.

# 2. CABINETS FOR CHEMICAL STORAGE

The chemical storage cabinets shall be of one of the following make

- a) Justrite
- b) Labor Security System
- c) Securall
- d) Lacont
- e) Asecos

# 2.1 Under Fume Hood Cabinets for Storage of Flammable Chemicals

The cabinets shall have double door and shall be of self-closing type. The height of the cabinets shall exactly match with the space below the fume hoods. Wherever necessary, the vents shall be connected to the fume shaft/blower. At least one height adjustable shelf shall be provided.

# 2.2 Under Fume Hood Cabinets for Storage of Corrosive Chemicals

The cabinets shall have double door. The height of the cabinets shall exactly match with the space below the fume hoods. Wherever necessary, the vents shall be connected to the fume shaft/blower. At least one height adjustable shelf shall be provided.

# 2.3 Stand-alone Cabinets for Storage of Flammable Chemicals

The cabinet shall have an approximate external dimension (in mm) of 1700 H  $\times$  1100 W  $\times$  800 D. The cabinet shall have two self-closing doors. At least five height adjustable shelves shall be provided. Wherever necessary, the vents shall be connected to the fume shaft/blower.

#### 2.4 **Stand-alone Cabinets for Storage of Corrosive Chemicals**

The cabinet shall have an approximate external dimension (in mm) of 1700 H  $\times$  1100 W  $\times$  800 D. The cabinet shall have two self-closing doors. At least five height adjustable shelves shall be provided. Wherever necessary, the vents shall be connected to the fume shaft/blower.

#### 3. ISLAND TABLE

Island table with reagent racks, Trespa top, 1.5 m depth

### 3.1 **Compliance of Regulations and Standards:**

i. IS 4209:2013;ii. SEFA 8 (meant for wooden furniture)

#### 3.2 Supporting Structure

The island table shall have H-frame design. The supporting structure shall be manufactured using high quality, cold rolled, mild and degreased steel meeting requirements of ASTM A366. The H-frame steel section shall have dimensions of  $30 \times 30 \times 1.5$  mm. The exterior of the structure shall be epoxy coated for chemical resistance, scratch resistance and to prevent rusting.

# 3.3 Work top

The work top shall be minimum 16 mm thick material of TRESPA make. 3.4 **Reagent Shelves** 

Two height adjustable reagent racks made of wire reinforced glass shall be provided supported by non-corrosive metal structure.

### 3.5 Storage Cabinets and drawers

Under table cabinet and drawer combination for island table, 0.5 m wide Under table cabinet and drawer combination for island table, 1.0 m wide

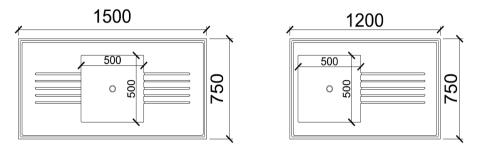
A combination of storage cabinets (single/double doors) and drawers shall be constructed using minimum 18 mm thick boiling water resistant plywood (complying IS:303:2010) and shall have a 0.8 mm thick melamine coating (complying BIS 71 0:1976, IS: 5509-1980) The coating shall comply IS: 5509-2000. The cabinet and drawer combination must be movable. The railings and hinges shall be of Hettich, Häfele or KAFF make. The door and drawer handles shall be of non-rusting type. A height adjustable partition shall be provided in all the cabinets. The drawers shall be provided with a combination of removable partitions.

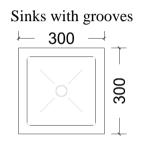
#### 3.6 Electricals

All the electrical switches and sockets shall be positioned just below the lower reagent rack. Each running meter of the island table shall necessarily possess two electrical sockets each (220-240V, 6-16A) on either side of the island table. All the sockets shall be wired with 2.5 sq. mm copper conductor stranded FRLS insulated cable. The switches and sockets shall of one of the following makes –Legrand (ARTEOR SQUARE) or MK (WRAP SQUARE).

# 3.7 Sinks, Service Valves, Plumbing and Drain

The facility for water inlet and outlet drain is already provided. The fittings from the vendor shall be compatible with the same. Wherever necessary, sink made of technical ceramic/ chemical stone ware (of one of the makes - Fridurit, MONOLITE IPERGRES, or Keraplan) shall be provided. Different designs of the sinks are mentioned in the figure below. Wherever necessary, technical ceramic/ chemical stone ware sink shall be integrated with a work top of same material having four or five parallel grooves in which the waste liquids can rapidly flow towards the basin (see figure). All the service fittings shall be of one of the following makes - BROEN/ Water Saver/ Brownall Labtap or equivalent. The water tap shall be a three valved one.





On Top Mounting Type Sink

Wherever necessary, high density polypropylene (approx. dimension  $80 \times 150 \times 150$  mm) cup sinks shall be provided.

# 3.8 Eyewasher

BROEN/ Water Saver/ Brownall Labtap make. It shall be fixed near the sink with a suitable mount. The eye shower shall have an angled double head and shall have proper grip for holding it in the hands.

# 4 WALL TABLE

Wall table, Trespa top, 0.75 m depth Wall table, Trespa top, 1.00 m depth

# 4.1 **Compliance of Regulations and Standards:**

i. IS 4209:2013;ii. SEFA 8 (meant for wooden furniture)

# 4.2 Supporting Structure

The island table shall have H-frame design. The supporting structure shall be manufactured using high quality, cold rolled, mild and degreased steel meeting requirements of ASTM A366. The H-frame steel section shall have dimensions of  $30 \times 30 \times 1.5$ . The exterior of the structure shall be epoxy coated for chemical resistance, scratch resistance and to prevent rusting. The legs shall be height adjustable.

# 4.3 Work top

4.4

The work top shall be minimum 16 mm thick material of TRESPA make. **Storage Cabinets and drawers** 

Under table cabinet and drawer combination for island table, 0.5 m wide

Under table cabinet and drawer combination for island table, 1.0 m wide

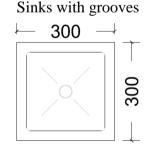
A combination of storage cabinets (single/double doors) and drawers shall be constructed using minimum 18 thick boiling water resistant plywood (complying IS:303:2010) and shall have a 0.8 mm thick melamine coating (complying BIS 71 0:1976, IS: 5509-1980) The coating shall comply IS: 5509-2000. The cabinet and drawer combination must be movable. The railings and hinges shall be of Hettich, Häfele or KAFF make. The door and drawer handles shall be of non-rusting type. A height adjustable partition shall be provided in all the cabinets. The drawers shall be provided with a combination of removable partitions.

#### 4.5 **Electricals**

All the electrical switches and sockets shall be positioned just below the lower reagent rack. Each running meter of the island table shall necessarily possess two electrical sockets each (220-240V, 6-16A) on either side of the island table. All the sockets shall be wired with 2.5 sq. mm copper conductor stranded FRLS insulated cable. The switches and sockets shall of one of the following makes –Legrand (ARTEOR SQUARE) or MK (WRAP SQUARE).

#### 4.6 Sinks, Service Valves, Plumbing and Drain

The facility for water inlet and outlet drain is already provided. The fittings from the vendor shall be compatible with the same. Wherever necessary, sink made of technical ceramic/ chemical stone ware (of one of the makes - Fridurit, MONOLITE IPERGRES, or Keraplan) shall be provided. Different designs of the sinks are mentioned in the figure below. Wherever necessary, technical ceramic/ chemical stone ware sink shall be integrated with a work top of same material having four or five parallel grooves in which the waste liquids can rapidly flow towards the basin (see figure). All the service fittings shall be of one of the following makes -BROEN/ Water Saver/ Brownall Labtap or equivalent. The water tap shall be a three valved one.



On Top Mounting Type Sink

Wherever necessary, high density polypropylene (approx. dimension 80×150×150 mm) cup sinks shall be provided.

#### 4.7 Eyewasher

BROEN/ Water Saver/ Brownall Labtap make. It shall be fixed near the sink with a suitable mount. The eye shower shall have an angled double head and shall have proper grip for holding it in the hands.

# 5. PEG BOARDS

The peg board shall be manufactured from high density polypropylene and shall be of mounting type. It shall have approximate dimensions of  $700 \times 600$  mm and shall possess at least 54 pegs. Each peg shall have an approximate length of 125 mm and diameter of 10 mm. The load capacity of each peg shall be greater than 4 kg. The peg board shall have a drip rack at the bottom which has to be directly connected to the drain

# 6. OVERHEAD CABINETS (600×1000×500)

Compliance of Regulations and Standards: SEFA 8W-2010

A combination of storage cabinets (single/double doors) and drawers shall be constructed using 18 to 20 mm thick boiling water resistant plywood (complying IS:303:2010) and shall have a 0.8 mm thick melamine coating (complying BIS 71 0:1976, IS: 5509-1980) The coating shall comply IS: 5509-2000. The railings and hinges shall be of Hettich, Häfele or KAFF make. The door and drawer handles shall be of non-rusting type. A height adjustable partition shall be provided in all the cabinets.

# 7. EMERGENCY SAFETY SHOWERS

BROEN/ Water Saver/ Brownall Labtap make. It shall be of floor mounting type and shall also have a dual head eye wash.

### 8. LABORATORY STOOLS

Laboratory stools shall be made using seasoned Mahogany wood. The material shall be straight grained free from shakes. The stool tops shall be secured from pocketed screws. All the surfaces shall be sanded, filled and polished in natural lacquer finish. All the sharp edges and corners shall be chamfered.

#### 9. STUDENT WORKING TABLE

The student working tables shall be made shall be constructed using 18 to 20 mm thick boiling water resistant plywood (complying IS:303:2010) and shall have a 0.8 mm thick melamine coating (complying BIS 71 0:1976, IS: 5509-1980). The coating shall comply IS: 5509-2000. The table shall be supported by necessary sections.

Item #	Item
1)	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width
2)	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width
3)	Variable Air Velocity (VAV) Hood, 1.5 m width
4)	Variable Air Velocity (VAV) Hood, 2.0 m width
5)	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width
6)	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width
7)	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width
8)	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width
9)	Blower*
10)	Ducting*
11)	Inert gas (nitrogen/argon) purification unit
12)	Security belts for gas cylinder
13)	Under Fume Hood Cabinets for Storage of Flammable Chemicals
14)	Under Fume Hood Cabinets for Storage of Corrosive Chemicals
15)	Stand-alone Cabinets for Storage of Flammable Chemicals
16)	Stand-alone Cabinets for Storage of Corrosive Chemicals
17)	Island table with reagent racks, Trespa top, 1.5 m depth
18)	BWRP Under table cabinet and drawer combination for island table, 0.5 m wide

LIST OF ITEMS FOR LABORATORY FURNITURE

19)	BWRP Under table cabinet and drawer combination for island table, 1.0 m wide
20)	Wall table, Trespa top, 0.75 m depth
21)	Wall Table, Trespa top, 1.0 m depth
22)	BWRP Under table cabinets and drawer combination for wall table, 0.5 m wide
23)	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide
24)	Chemical Stoneware sink with extended worktop having
	grooves(1500×750×350) fitted with three valve water tap
25)	Chemical Stoneware sink with extended worktop having grooves
	(1200×750×350) fitted with three valve water tap
26)	On Top Mounting Type Chemical Stoneware Sink (300×300×250) fitted with
	three valve water tap
27)	Polypropylene sink fitted with three valve water tap (500×500×350)
28)	Polypropylene cup sink fitted with single valve water tap
29)	Peg Board
30)	Overhead Cabinet (600×1000×500)
31)	Safety Eye washer
32)	Emergency safety shower
33)	Laboratory stools
34)	Student working table

\*Necessary ducting and blowers for the fume hoods in each lab shall be included.

- 1) Vendors shall be provided with the layouts of all the labs.
- 2) Vendors must submit a full 3D rendering of one representative lab in both hardcopy [full colour printout] & softcopy [CD] formats.
- 3) Vendors shall be allowed to visit the actual site with prior appointment.
- 4) Vendors shall provide separate quotes for each item in the above list. Consolidated quote for the total project, transportation, installation, taxes and any other incidental charges shall be provided.
- 5) The total project quote shall be considered to evaluate the financial bid.
- 6) All the listed items shall have a minimum warranty of one year from date of issue of completion certificate.
- 7) Items fabricated in the vendor's factory should be inspected and cleared by an authorized team from IISERTVM before shipping to site.
- 8) The vendor must demonstrate the compliance of all the installations to the listed standards and specifications at site before handing over to the users.

#### **Optional to be provided by Vendors**

Vendors shall additionally quote the annual maintenance cost (AMC) for furniture that requires regular service.

#### **Evaluation of the Technical Bid**

The vendors shall adhere to the technical specifications as decided by T&PC. The technical bid will be evaluated on the following points:

S1.No.	Technical Bid Evaluation Criteria	Maximum Marks
1	Technical specifications	50
2	Assessment of the quality of the executed projects*	30
3	Rework of the provided lab layouts for all labs	10
4	3-D layouts.	05
5	Execution plan and time schedule	05

\* During the evaluation of the technical bid, T&PC shall set up sub-committees to assess the quality of the executed projects which are at least two years old and having similar technical specifications. The sub-committee will make visits, assess the executed projects and report to the T&PC with their recommendations.

Vendors shall require 60 marks to be technically qualified.

The compliance table must be necessarily filled by the vendors.

	COMPLIANCE OF TECHNICAL SPECIFICATIONS					
Pt.No	Technical Specifications	Specifications by Vendor				
1	Fume Hoods:	1				
1.1	Compliance of Regulations and Standards					
1.2	Outer Construction/ super structure					
	Super structure design					
	· · · · · · · · · · · · · · · · · · ·					
	Steel quality					
	Steel thickness					
	Coating for the exterior structure					
1.3	Inner lining and worktop					
	Make and thickness internal lining.					
	Make and thickness of the worktop.					
1 /	Sash					
1.4	Design					
	Material					
	Technology for sash movement					
1.5	Electrical					
	Protection of light fixtures					
	Positioning of switches and sockets					
	Wiring specification					
	Number of electrical sockets					
	Make of switches and sockets					
	Safety control of electrical points					
1.6	Service Valves, Plumbing and Drain					
	Make of the service valves					
	Make and specification of plumbing material					
	Make and specification of sink					
1.7	Gas Supply					
	Provision for supply of (a) pressurized air (b)					
	inert gas (nitrogen or argon)					
	Fittings and piping material					
	Make of the gas valves and control valves					
	Details of belts for securing gas cylinders					
	Details of inert gas purification unit					
1.8	Baffles					
	Baffle material					
	Baffle thickness					
	Positions of baffles in the fume hood					
1.9	Blowers, Ducting, Duct Collar, Air Flow and					
	Face Velocity					
	Noise Level					
	Blower details					
	Material for collar and ducting					
	Face velocity					

**COMPLIANCE OF TECHNICAL SPECIFICATIONS** 

1.10	Air Foil	
	Material and design	
1.11	3	
1.11	<b>Dampers</b> Material and design.	
1.12	Cabinets below fume hood	
	Cabinets shall be provided as specification in	
	2.1 and 2.2.	
	Cabinet for keeping vacuum pump – material,	
	finish and design.	
1.13	Scaffold/Lattice	
	Material and design	
2	Cabinets for Chemical Storage	
	Make of the cabinet	
2.1	Under Fume Hood Cabinets for Storage of	
	Flammable Chemicals	
	Dimensions of the cabinet	
	Number of shelves	
	Connectivity to the fume shaft/blower	
2.2	Under Fume Hood Cabinets for Storage of	
	Corrosive Chemicals	
	Dimensions of the cabinet	
	Number of shelves	
	Connectivity to the fume shaft/blower	
2.3	Stand-alone Cabinets for Storage of	
	Flammable Chemicals	
	Dimensions of the cabinet	
	Number of shelves	
0.4	Connectivity to the fume shaft/blower	
2.4	Stand-alone Cabinets for Storage of Corrosive Chemicals	
	Dimensions of the cabinet	
	Number of shelves	
	Connectivity to the fume shaft/blower	
3	Island Table	
3.1	Compliance of Regulations and Standards	
3.2	Supporting Structure	
	Design and dimensions	
	Steel quality	
	Exterior coating	
3.3	Work top	
	Make	
	Thickness	
	Depth	
3.4	Reagent Shelves	
	Design	
	Number of shelves	
	Material	
3.5	Storage Cabinets and drawers	
	Dimensions	
	Plywood quality and compliance	
	Fire retardant coating for the plywood and	
	compliance	

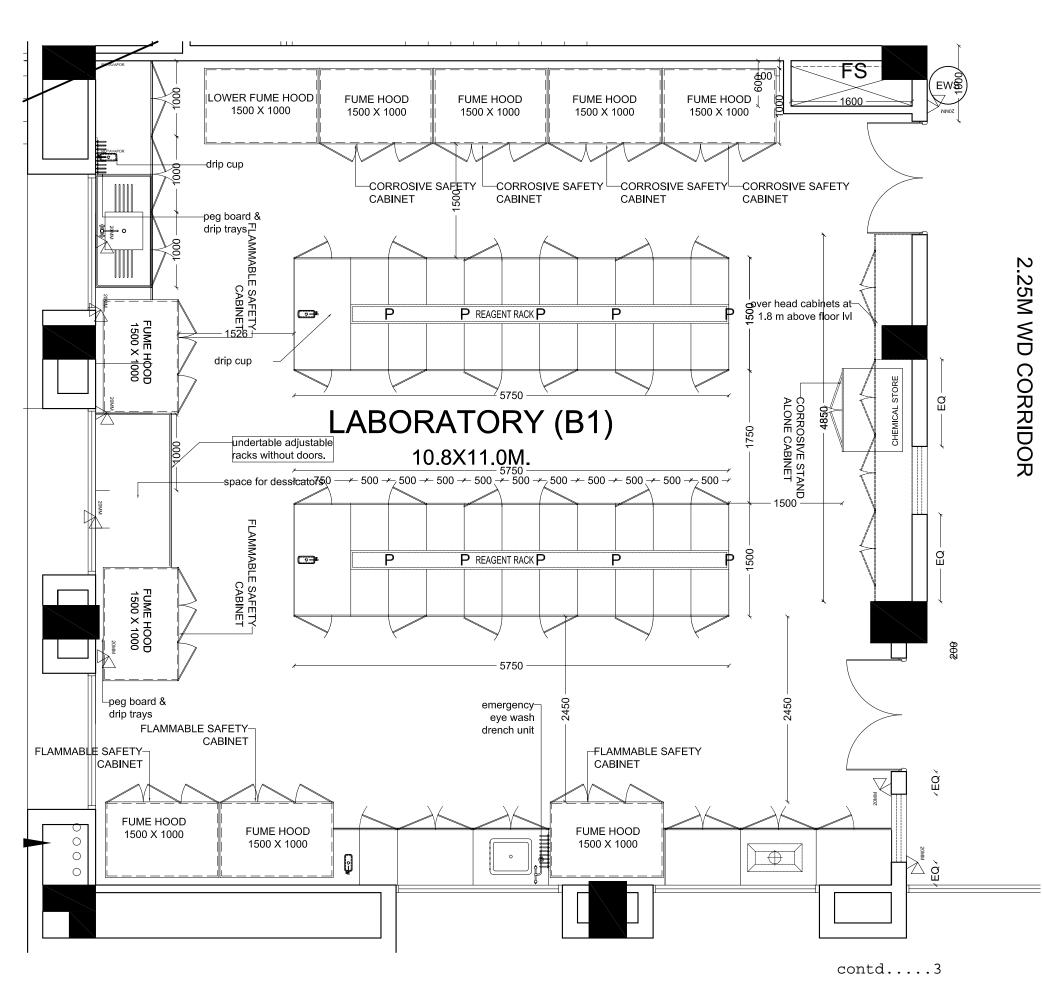
	Make and railings and hinges	
	Specification for door and drawer handles	
	Number of removable partition in cabinets	
0.6	Number of removable partition in drawers	
3.6	Electricals	
	Positioning of electrical switches and sockets	
	Number of electrical sockets	
	Specification of the wire quality	
	Make of switches and sockets	
3.7	Sinks, Service Valves, Plumbing and Drain	
	Make of the sink	
	Sink material	
	Make of the service fittings	
3.8	Eye washer	
	Make	
	Design	
4	Wall Table	
4.1	Compliance of Regulations and Standards	
4.2	Supporting Structure	
	Design and dimensions	
	Steel quality	
	Exterior coating	
4.3	Work top	
	Make	
	Thickness	
	Depth	
4.4	Storage Cabinets and drawers	
4.4	Dimensions	
4.4	Dimensions Plywood quality and compliance	
4.4	Dimensions Plywood quality and compliance Fire retardant coating for the plywood and	
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4.4	Dimensions Plywood quality and compliance Fire retardant coating for the plywood and compliance Make and railings and hinges Specification for door and drawer handles	
4.4	Dimensions Plywood quality and compliance Fire retardant coating for the plywood and compliance Make and railings and hinges Specification for door and drawer handles Number of removable partition in cabinets	
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4.4	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawersElectricals	
	Dimensions Plywood quality and compliance Fire retardant coating for the plywood and compliance Make and railings and hinges Specification for door and drawer handles Number of removable partition in cabinets Number of removable partition in drawers Electricals Positioning of electrical switches and sockets	
	Dimensions Plywood quality and compliance Fire retardant coating for the plywood and compliance Make and railings and hinges Specification for door and drawer handles Number of removable partition in cabinets Number of removable partition in drawers Electricals Positioning of electrical switches and sockets Number of electrical sockets	
	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of the wire quality	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of the wire qualityMake of switches and sockets	
	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of the wire qualityMake of switches and socketsSpecification of the wire qualityMake of switches and sockets	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of the wire qualityMake of switches and socketsSpecification of the wire qualityMake of the sink	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of the wire qualityMake of switches and socketsSpecification of the wire qualityMake of the sinkSink material	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of the wire qualityMake of switches and socketsSpecification of the wire qualityMake of the sink	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMake of the service fittingsEye washer	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMake of the service fittingsEye washerMake	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMake of the service fittingsEye washerMakeDesign	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMake of the service fittingsEye washerMakeDesignPeg Board	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMake of the service fittingsEye washerMakeDesign	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMakeDesignPeg BoardMaterial	
4.5	DimensionsPlywood quality and complianceFire retardant coating for the plywood and complianceMake and railings and hingesSpecification for door and drawer handlesNumber of removable partition in cabinetsNumber of removable partition in drawers <b>Electricals</b> Positioning of electrical switches and socketsNumber of electrical socketsSpecification of the wire qualityMake of switches and socketsSinks, Service Valves, Plumbing and DrainMake of the sinkSink materialMake of the service fittingsEye washerMakeDesignPeg Board	

6	Overhead Cabinets	
	Dimensions	
	Compliance of Regulations and Standards	
	Plywood quality and compliance	
	Fire retardant coating for the plywood and compliance	
	Make and railings and hinges	
	Number of height adjustable partitions	
7	Emergency Safety Showers	
	Make	
	Design	
8	Laboratory Stools	
	Wood specification	
	Design	
9	Student Working table	
	Design	
	Plywood quality and compliance	
	Fire retardant coating for the plywood and	
	compliance	

# DEPUTY REGISTRAR [F&A] ADDL. CHARGE [P&S]

	ITEMLIST FOR LAB	<u> 8- B1</u>			
		Reference	Quantity in	Quantity	
tem No	Item	No.**	No's	in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	9		
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width		1		
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	*Blower	1.9			REQUIREI
10	*Ducting	1.9			REQUIRE
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
		1.1			
12	Security belts for gas cylinder		2		
13	Under Fume Hood Cabinets for Storage of Flammable Chemicals	2.1	5		
14	Under Fume Hood Cabinets for Storage of Corrosive Chemicals	2.2	4		
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4	1		
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		12	
18	BWRP Under table cabinet and drawer combination for island table, 0.5 m wide	3.5	20		
19	<b>BWRP Under table</b> cabinet and drawer combination for island table, <b>1.0 m wide</b>	3.5	4		
20	Wall table, Trespa top, 0.75 m depth	4		9	
21	Wall Table, Trespa top, 1.0 m depth	4		2	
22	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>0.5 m wide</b>	4.4	1		
23	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>1.0 m wide</b>	4.4	8		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7	1		
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)		1		
28	Polypropylene cup sink	4.6	6		
29	Peg Board	5	2		
30	Overhead Cabinet 600×1000×500	6	4		
31	Safety Eyewasher	4.7	1		
32	Emergency safety shower	7			
33	Laboratory stools	8			
34	Student working table	9			

Note: Ducting and Blowers to be installed.



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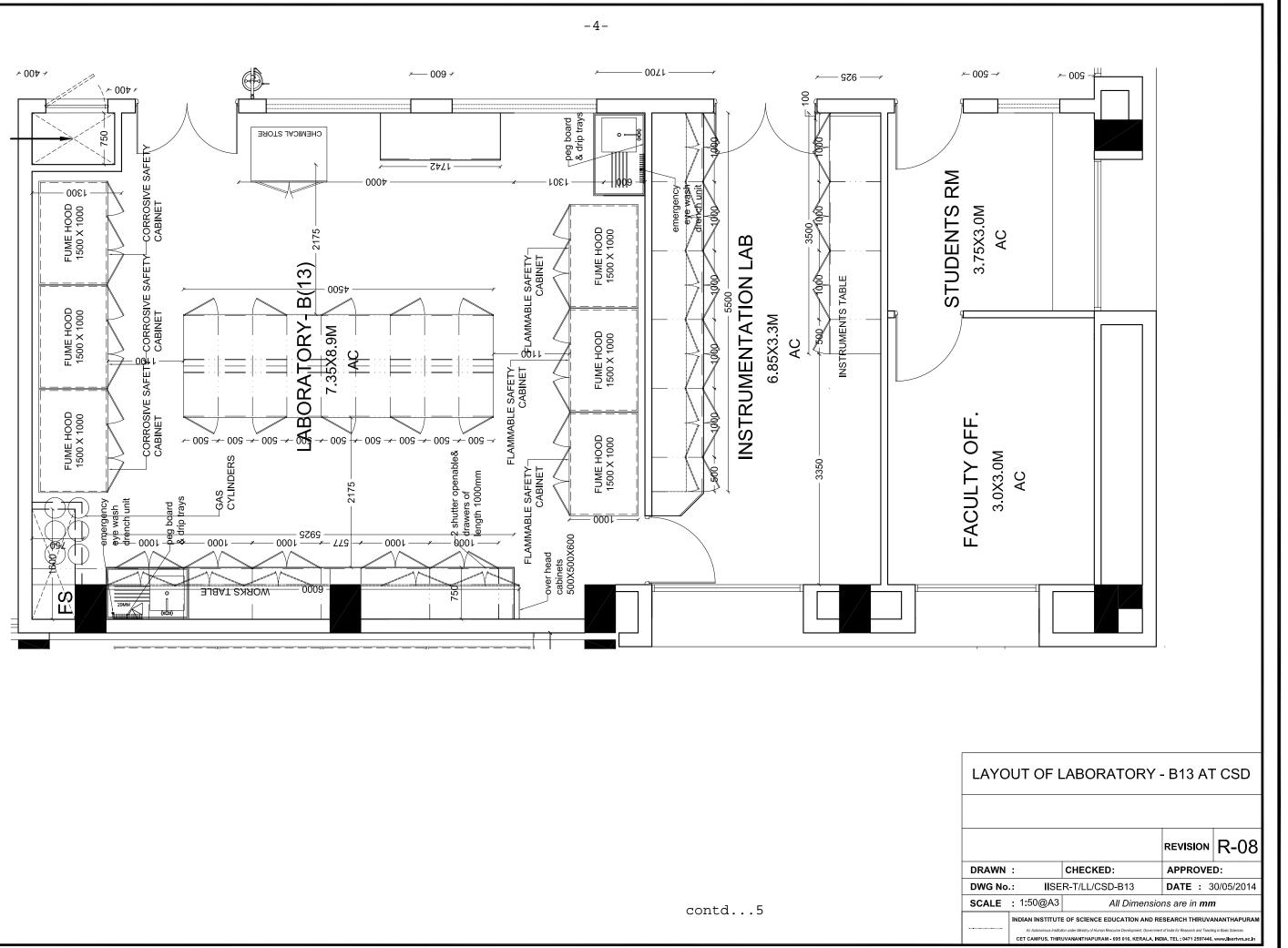
CHEMICAL SCIENCE DEPARTMENT				
			REVISION: R11	
DRAWN	:	CHECKED:	APPROVED:	
DWG No	.: IISER	R-T/LL/CSD-B1, R2	DATE : 20/06/2014	
SCALE	: 1:50@A3	All Dimensio	ns are in <b>mm</b>	
ang tin kan ting tin sike	An Autonomous Institut	E OF SCIENCE EDUCATION AND RE ian under Ministry of Human Resource Development, Governmer UVANANTHAPURAM - 695 016, KERALA, INI	t of India for Research and Teaching in Basic Sciences	

LAYOUT OF LABORATORY - B1

#### **ITEMLIST FOR LAB- B13**

Item No	Item	Reference No.**	Quantity in No's	Quantity in meter	total
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1	6		
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			REQUIRED
10	Ducting*	1.9			REQUIRED
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
12	Security belts for gas cylinder		2		
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1	3		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2	3		
15	Stand-alone Cabinets for Storage of <b>Flammable</b> Chemicals	2.3	1		
16	Stand-alone Cabinets for Storage of <b>Corrosive Chemicals</b>	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		5	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5	10		1
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5			
20	Wall table, Trespa top, 0.75 m depth	4		16.5	16
21	Wall Table, Trespa top, 1.0 m depth	4			
22	BWRP Under table cabinets and drawer combination for wall table, 0.5 m wide	4.4	2		
23	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide	4.4	13		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7	2		
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5	2		
30	Overhead Cabinet 600×1000×500	6		11	
31	Safety Eyewasher	4.7	1		
32	Emergency safety shower	7			
33	Laboratory stools	8	15		
34	Student working table	9			

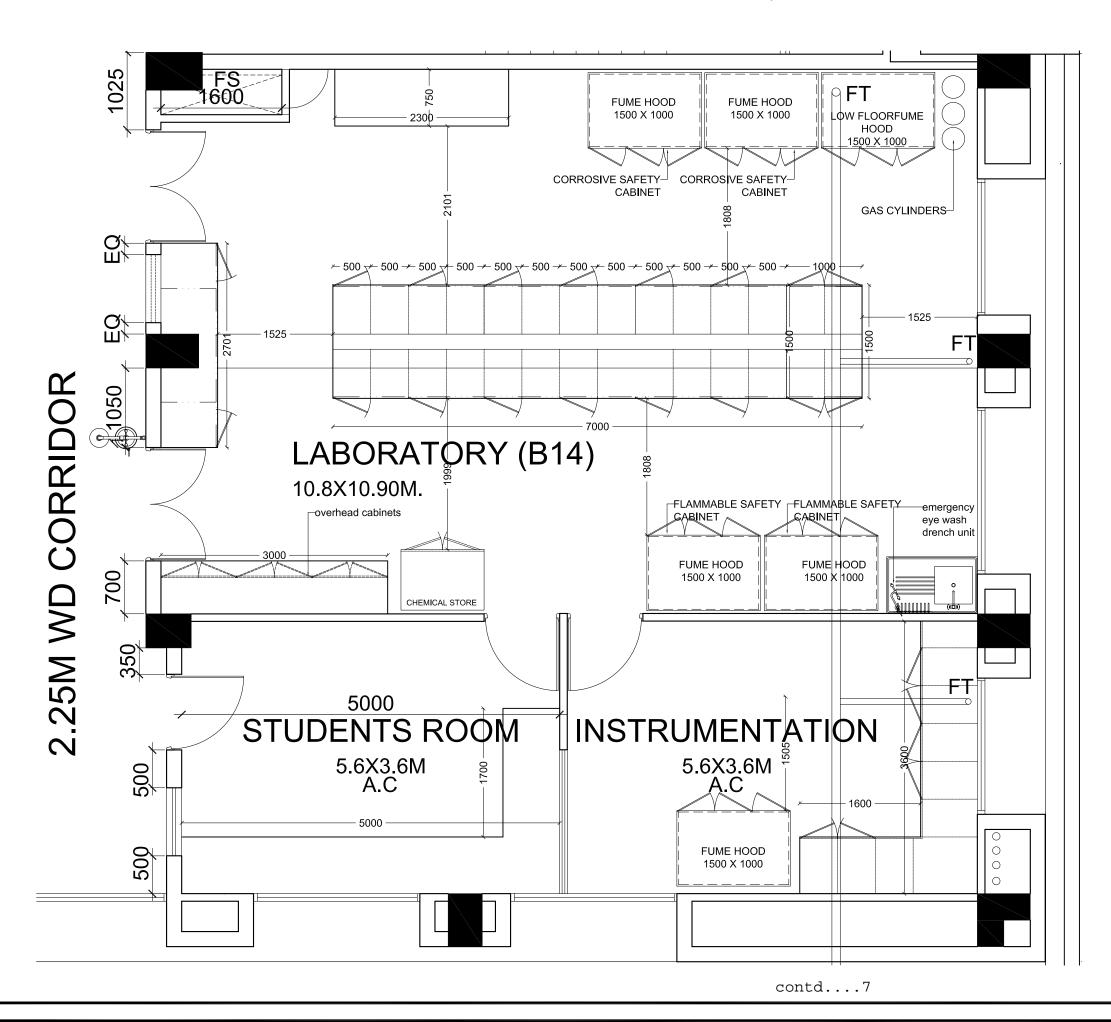
Note: \*Ducting and Blowers to be installed.



#### **ITEMLIST FOR LAB- 14**

ltem No	Item	Reference No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	5		
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width		1		
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			
10	Ducting*	1.9			REQUIRED
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
12	Security belts for gas cylinder		3		
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1	2		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2	3		
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4	1		
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		7	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5	12		1
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5	2		
20	Wall table, Trespa top, 0.75 m depth	4		11	1
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for wall table. 0.5 m wide	4.4			
23	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide	4.4	6		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7	1		
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5	1		
30	Overhead Cabinet 600×1000×500	6	-		1
31	Safety Eyewasher	4.7	1		1
32	Emergency safety shower	4.7	1		
33	Laboratory stools	8	10		
34	Student working table	9		7	+

Note: Ducting and Blowers to be installed.



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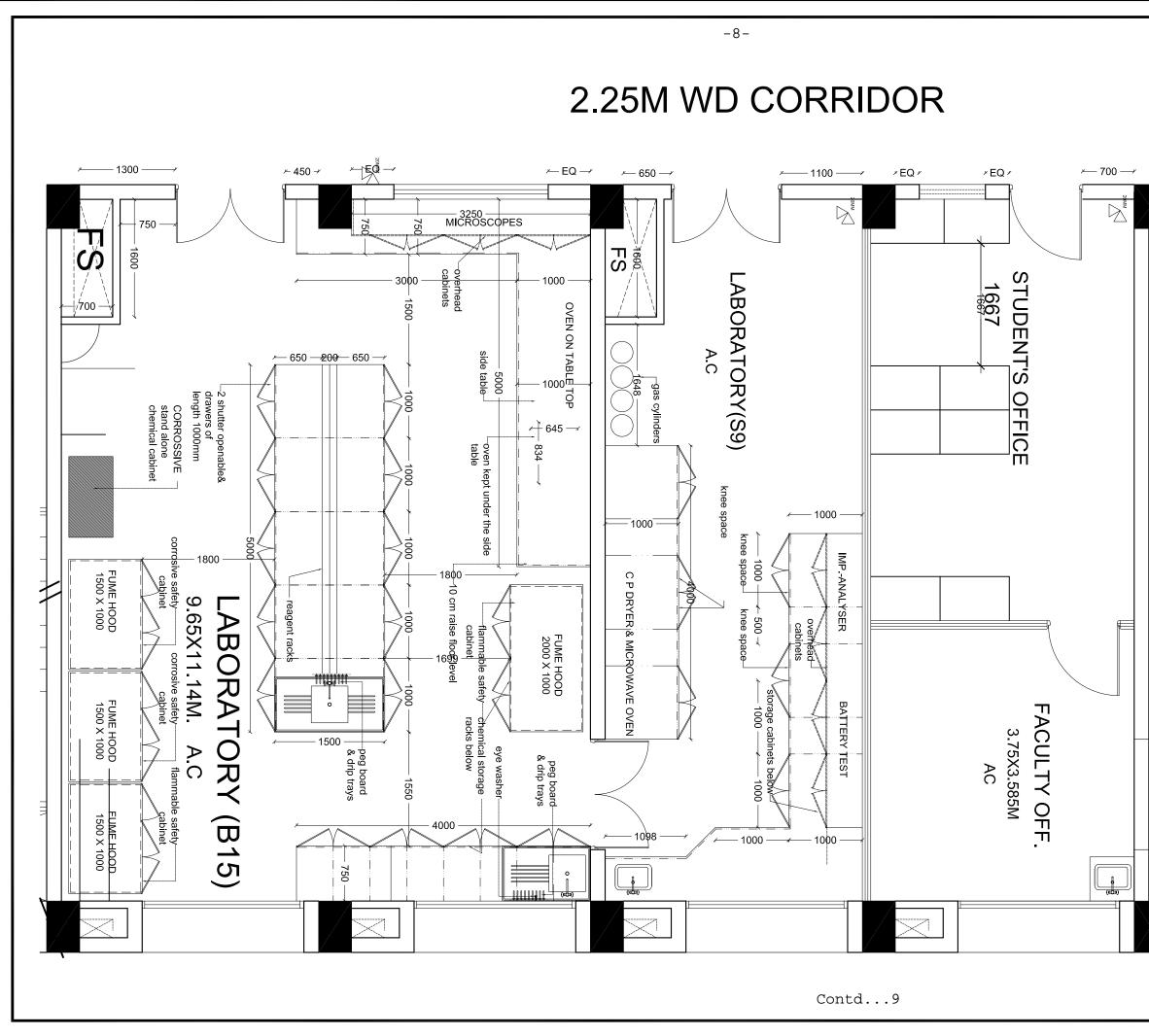
LAYOUT OF LABORATORY - B14				
CHEMICAL SCIENCE DEPARTMENT				
REVISION: R5				VISION: R5
DRAWN :	CHE	CKED:		APPROVED:
DWG No.:	ISER-T/L	L/CSD-B14		DATE : 21/06/2014
SCALE : 1:5	0@A3	All Dime	ensio	ns are in <b>mm</b>
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM An Autocompute institution under Ministry of Human Resource Development, Gowment of Idals for Research and Teaching in Basit Sciences CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, INDIA, TEL : 0471 2597446, www.llsertvm.ac.ln				

# ITEMLIST FOR LAB- B15

-7-

		5.4			
ltem No	Item	Reference No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1	3		
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1	1		
5	Low Floor Solvent Distillation Fume Hood (CAV) $1.5\ \mathrm{m}$ width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			REQUIRED
10	Ducting*	1.9			REQUIRED
11	Inert gas (nitrogen/argon) purification unit	1.7	2		
12	Security belts for gas cylinder		9		
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> <b>Chemicals</b>	2.1	3		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2	2		
15	Stand-alone Cabinets for Storage of <b>Flammable Chemicals</b>	2.3			
16	Stand-alone Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.4	1		
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		5	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5			
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5	10		
20	Wall table, Trespa top, 0.75 m depth	4		8	
21	Wall Table, Trespa top, 1.0 m depth	4		15	
22	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>0.5 m wide</b>	4.4			
23	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>1.0 m wide</b>	4.4	10		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7	1		
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7	1		
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)		2		
28	Polypropylene cup sink	4.6			
29	Peg Board	5	2		
30	Overhead Cabinet 600×1000×500	6	7		
31	Safety Eyewasher	4.7	1		
32	Emergency safety shower	7	1		
33	Laboratory stools	8	16		
34	Student working table	9			1

Note: Ducting and Blowers to be installed.



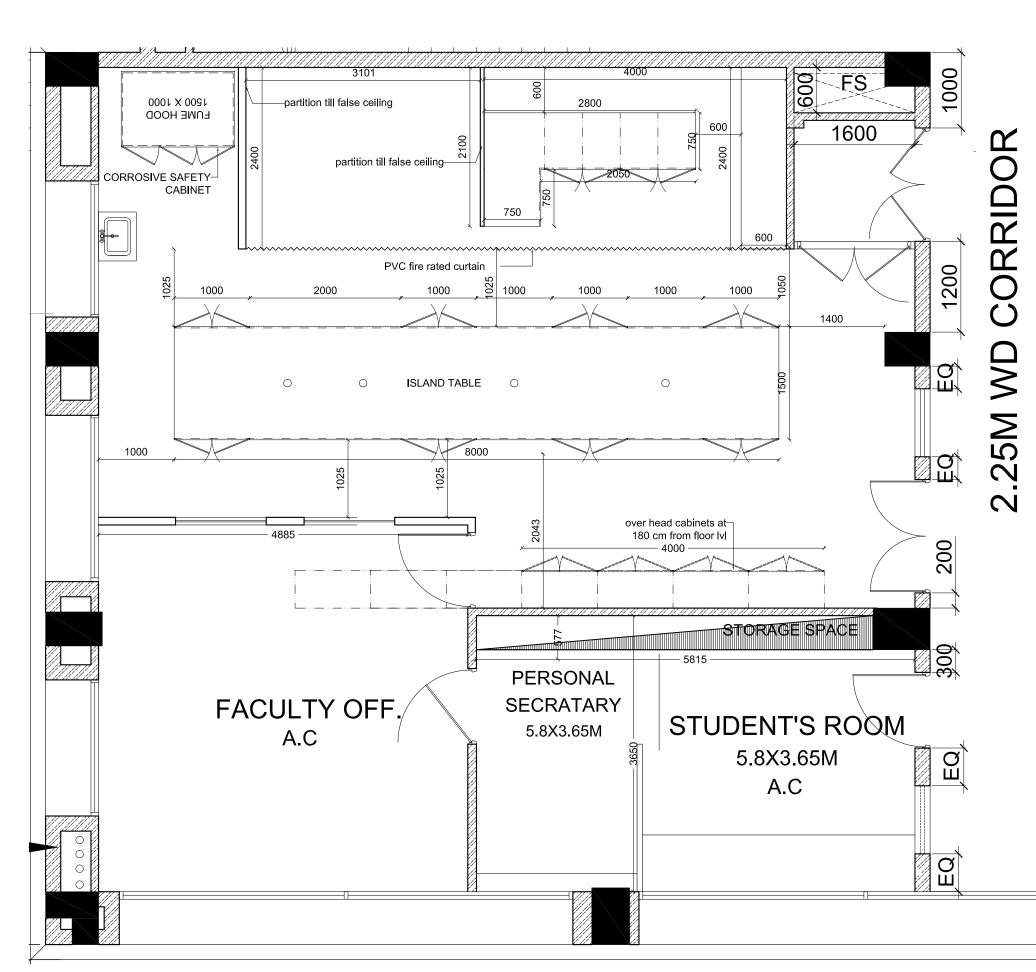
# LAYOUT OF LABORATORY - S9

#### CHEMICAL SCIENCE DEPARTMENT

			REVISION: R6
DRAWN	:	CHECKED:	APPROVED:
DWG No	.: IISE	ER-T/LL/CSD-S9	DATE : 30/05/2014
SCALE	: 1:50@A3 All Dimensions are in <b>mm</b>		
fan Drocker Horter en org	An Autonomous Institut	E OF SCIENCE EDUCATION AND RE ion under Ministry of Human Resource Development, Governmen, UVANANTHAPURAM - 695 016, KERALA, INC	t of India for Research and Teaching in Basic Sciences

	ITEMLIST FOR LA	<u>B- B17</u>			
Item No	Item	Reference No.**	Quantity in No's	Quantity in meter	total
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1	1		
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			
10	Ducting*	1.9			
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
12	Security belts for gas cylinder				
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> <b>Chemicals</b>	2.1			
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2			
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		8	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5			
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5	8		
20	Wall table, Trespa top, 0.75 m depth	4	4		
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for <b>wall table</b> , <b>0.5 m wide</b>	4.4			
23	<b>BWRP Under table cabinets</b> and drawer combination for <b>wall table</b> , <b>1.0 m wide</b>	4.4	2		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)		1		
28	Polypropylene cup sink	4.6			
29	Peg Board	5			
30	Overhead Cabinet 600×1000×500	6		4	
31	Safety Eyewasher	4.7			
32	Emergency safety shower	7			
33	Laboratory stools	8	8		
34	Student working table	9		4	

Note: \*Ducting and Blowers to be installed.



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contd....11

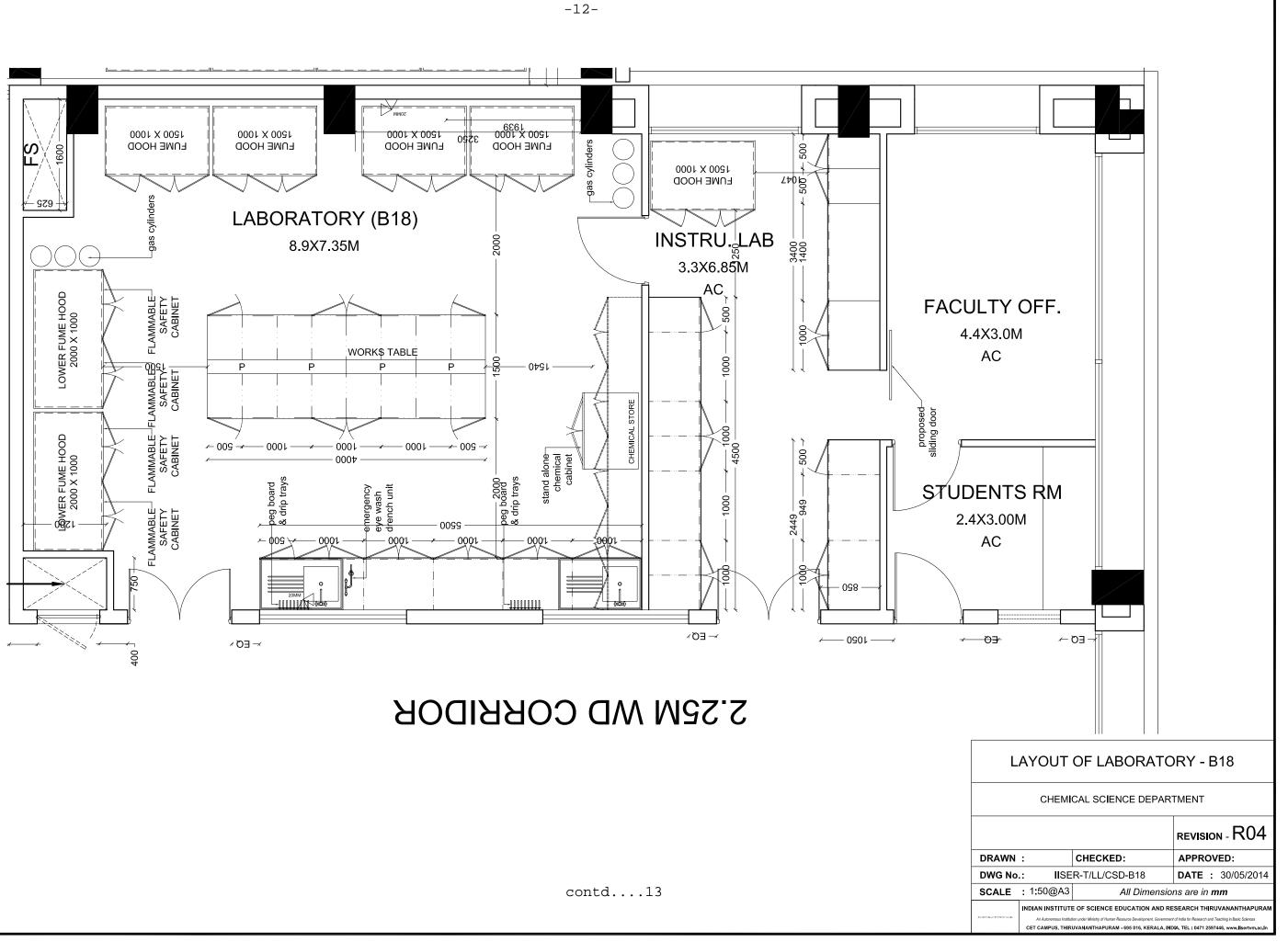
	CHEMICAL SCIENCE DEPARTMENT				
-				REVISION: R5	
	DRAWN	:	CHECKED:	APPROVED:	
	DWG No.: IISE		R-T/LL/CSD-B17	DATE : 21/06/2014	
-	SCALE	: 1:50@A3	All Dimensio	ns are in <b>mm</b>	
	INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAL An Automotous Institution under Ministry of Human Resource Development, downment of India for Research and Todohig in Basic Sciences CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, INDIA, TEL : 0471 2597446, www.lisertvm.ac.in				
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# LAYOUT OF LABORATORY - B17

ITEMLIST	FOR	LAB-	<b>B18</b>
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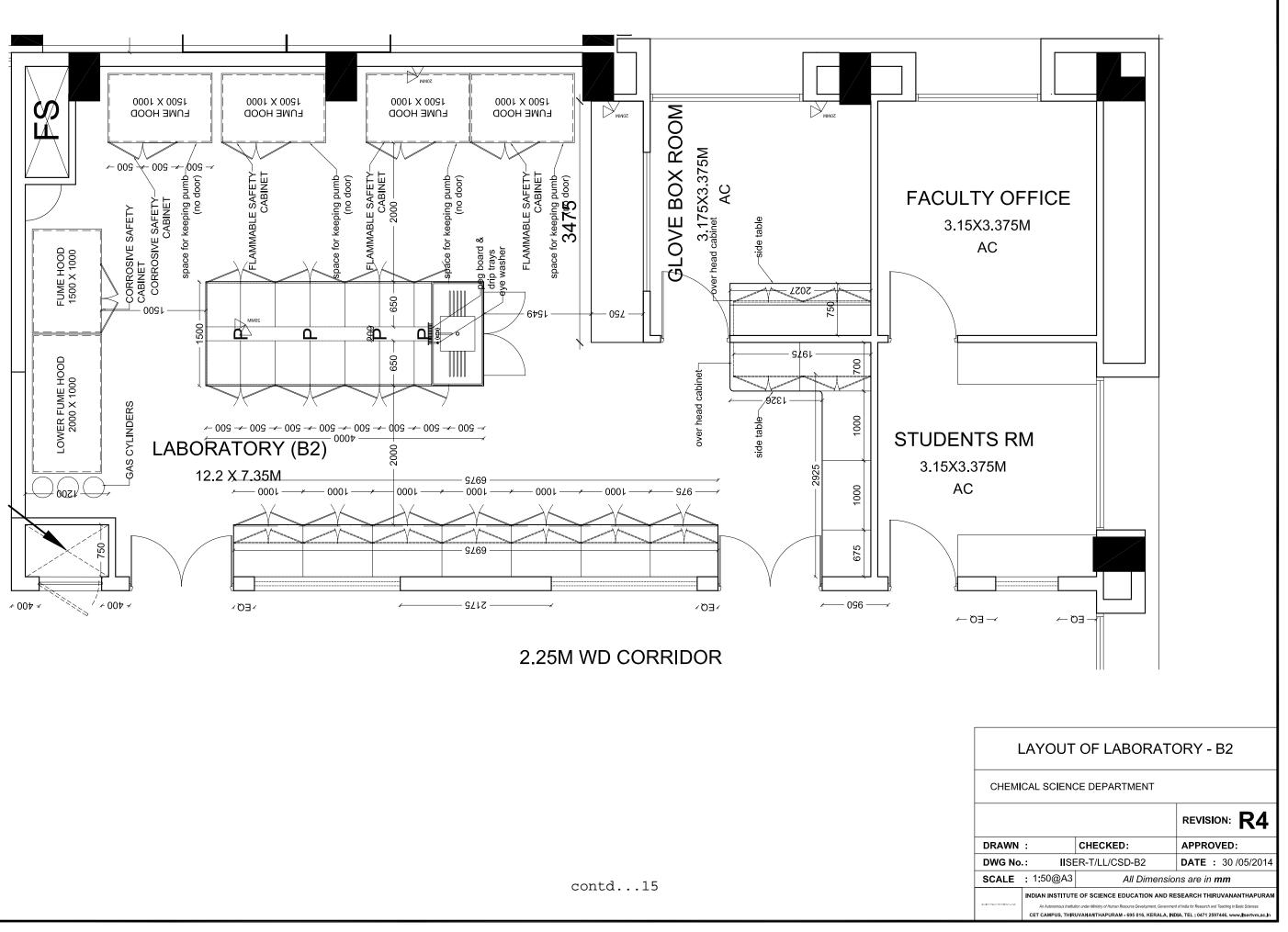
tem	T.	Reference	Quantity	Quantity	
No	Item	No.**	in No's	in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	4		
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1	2		
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1	1		
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			REQUIR
10	Ducting*	1.9			REQUIR
11	Inert gas (nitrogen/argon) purification unit	1.7	1		-
12	Security belts for gas cylinder		4		
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1	6		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> Chemicals	2.2	2		
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3	1		
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		4	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5	4		
19	BWRP Under table cabinet and drawer combination for island table, 1.0 m wide	3.5	2		
20	Wall table, Trespa top, 0.75 m depth	4		16	
21	Wall Table, Trespa top, 1.0 m depth	4			
22	BWRP Under table cabinets and drawer combination for wall table. 0.5 m wide	4.4	3		
23	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide	4.4	10		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7	2		
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5	3		
30	Overhead Cabinet 600×1000×500	6	-	5	
		4.7	1		
31	Safety Eyewasher		1		
32	Emergency safety shower	7			
33	Laboratory stools	8	8		
34	Student working table	9			

Note: Ducting and Blowers to be installed.



Item No	Item	Referenc e No.**	Quanti ty in	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	No's		
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1	5		
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1	0		
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width	-			
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width		1		
9	Blower*	1.9			require
10	Ducting*	1.9			require
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
12	Security belts for gas cylinder		3		
13	Under Fume Hood Cabinets for Storage of Flammable Chemicals	2.1	3		
14	Under Fume Hood Cabinets for Storage of Corrosive Chemicals	2.2	2		
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			(
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		4	
18	BWRP Under table cabinet and drawer combination for island table, 0.5 m wide	3.5	2		
19	BWRP Under table cabinet and drawer combination for island table, 1.0 m wide	3.5	6		
20	Wall table, Trespa top, 0.75 m depth	4		11	1
21	Wall Table, Trespa top, 1.0 m depth	4			
22	BWRP Under table cabinets and drawer combination for wall table, 0.5 m wide	4.4			
23	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide	4.4	7		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7	1		
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350) On Top Mounting Type Chemical Stoneware Sink	3.7			1
26 27	(300×300×250) Polypropylene sink(500×500×350)	4.6			
27	Polypropylene sink (500×500×550) Polypropylene cup sink	4.6			
28	Peg Board	4.0 5	1		
30	Overhead Cabinet 600×1000×500	6	11		1
31	Safety Eyewasher	4.7	1		
32	Emergency safety shower	7	-		
33	Laboratory stools	8	5		
00	20.0101010		5	ļ	L

Note:	*Ducting	and Blowers	to i	be	installed.
				~ ~	

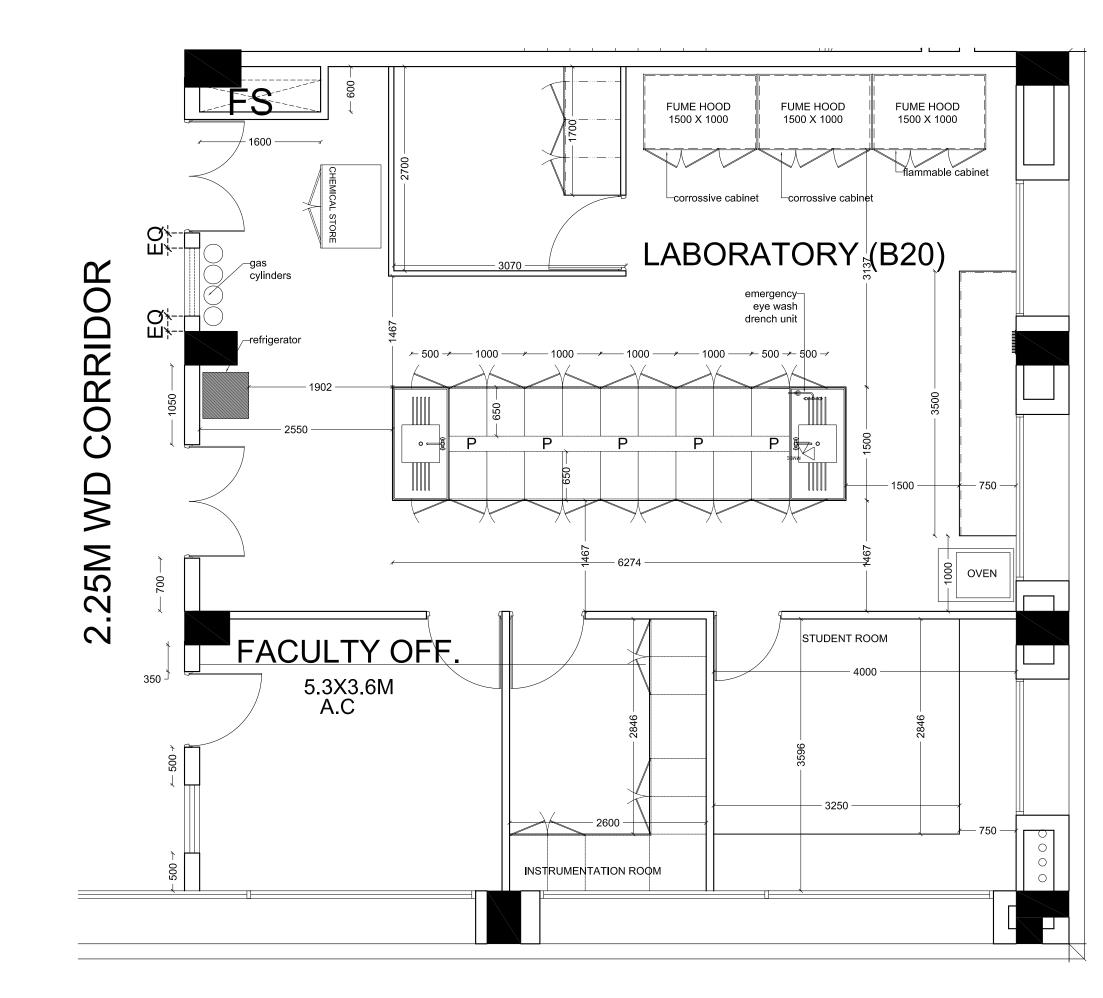


-14-

# **ITEMLIST FOR LAB- B20**

-15-

Item No	Item	Reference No.**	Quantity in No's	Quantity in meter	total
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	3		
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			required
10	Ducting*	1.9			required
11	Inert gas (nitrogen/argon) purification unit	1.7	1		roquirou
12	Security belts for gas cylinder		12		1
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1	1		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2	2		
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3	1		
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		6	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5	2		
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5	10		1
20	Wall table, Trespa top, 0.75 m depth	4		9	
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for <b>wall table</b> , <b>0.5 m wide</b>	4.4	1		
23	<b>BWRP Under table cabinets</b> and drawer combination for <b>wall table</b> , <b>1.0 m wide</b>	4.4	4		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7	2		
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5	2		
30	Overhead Cabinet 600×1000×500	6			1
31		4.7	1		
	Safety Eyewasher		1		
32	Emergency safety shower	7			<b> </b>
33	Laboratory stools	8	8		<u> </u>
34	Student working table	9		8	



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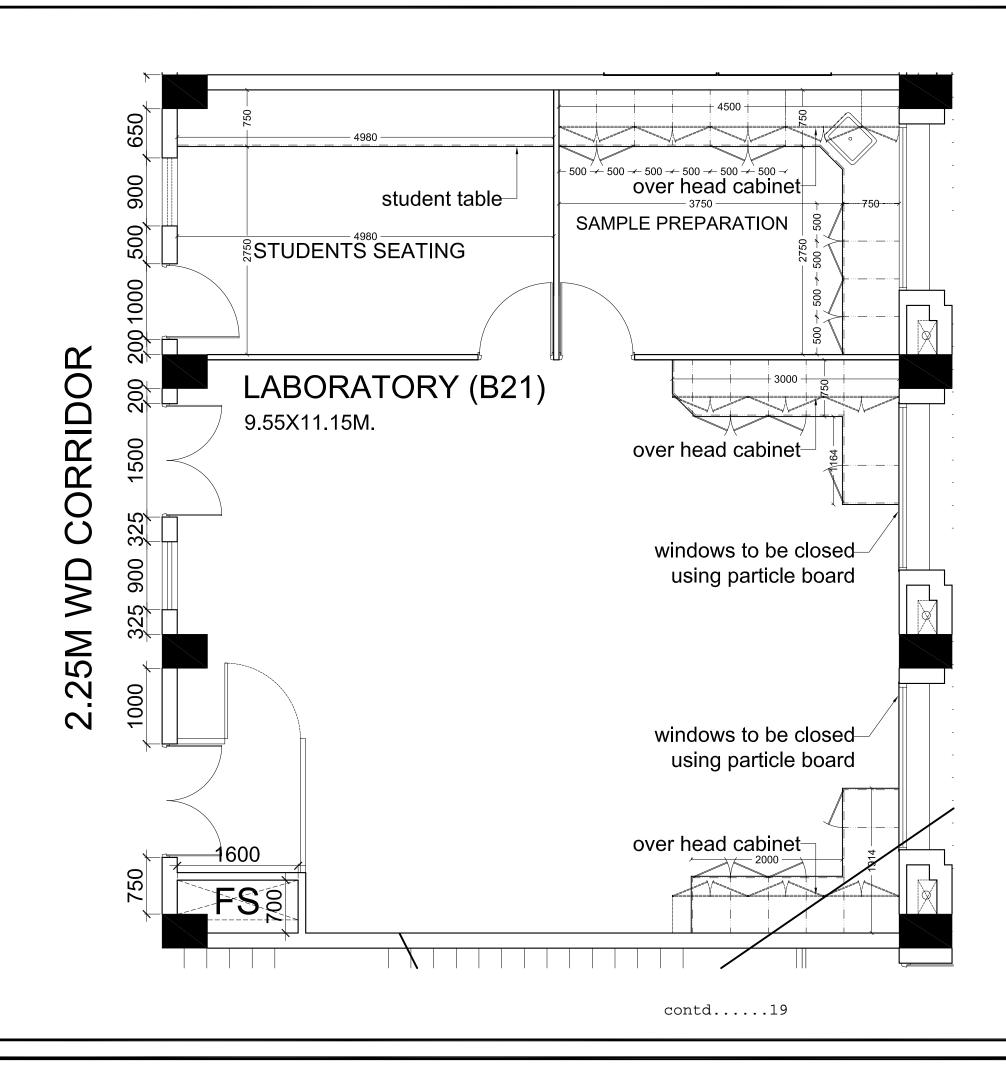
CHEMICAL SCIENCE DEPARTMENT				
			REVISION: R6	
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DWG No	.: IISE	R-T/LL/CSD-B 20	<b>DATE : </b> 02/06/2014	
SCALE	: 1:50@A3	All Dimensio	ns are in <b>mm</b>	
for a first of the second s	INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURA An Autonomous Institution ander Utilisaty of Human Rescurse Development Government of India for Research and Teaching in Basic Sciences CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, INDIA, TEL : 0471 2597446, www.lisertvm.ac.li			

# LAYOUT OF LABORATORY - B20

# ITEMLIST FOR LAB- B21

tem No	Item	Referenc e No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			
10	Ducting*	1.9			
11	Inert gas (nitrogen/argon) purification unit	1.7			
12	Security belts for gas cylinder				
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1			
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2			
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3			
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5			
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5			
20	Wall table, Trespa top, 0.75 m depth	4		16	
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for <b>wall table</b> , <b>0.5 m wide</b>	4.4	4		
23	<b>BWRP Under table cabinets</b> and drawer combination for <b>wall table</b> , <b>1.0 m wide</b>	4.4	6		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)	1.5	1		
28	Polypropylene cup sink	4.6			
29	Peg Board	5	10		
30	Overhead Cabinet 600×1000×500	6	10		
31	Safety Eyewasher	4.7			
32	Emergency safety shower	7			
33	Laboratory stools	8			

Note: Ducting and Blowers to be installed.

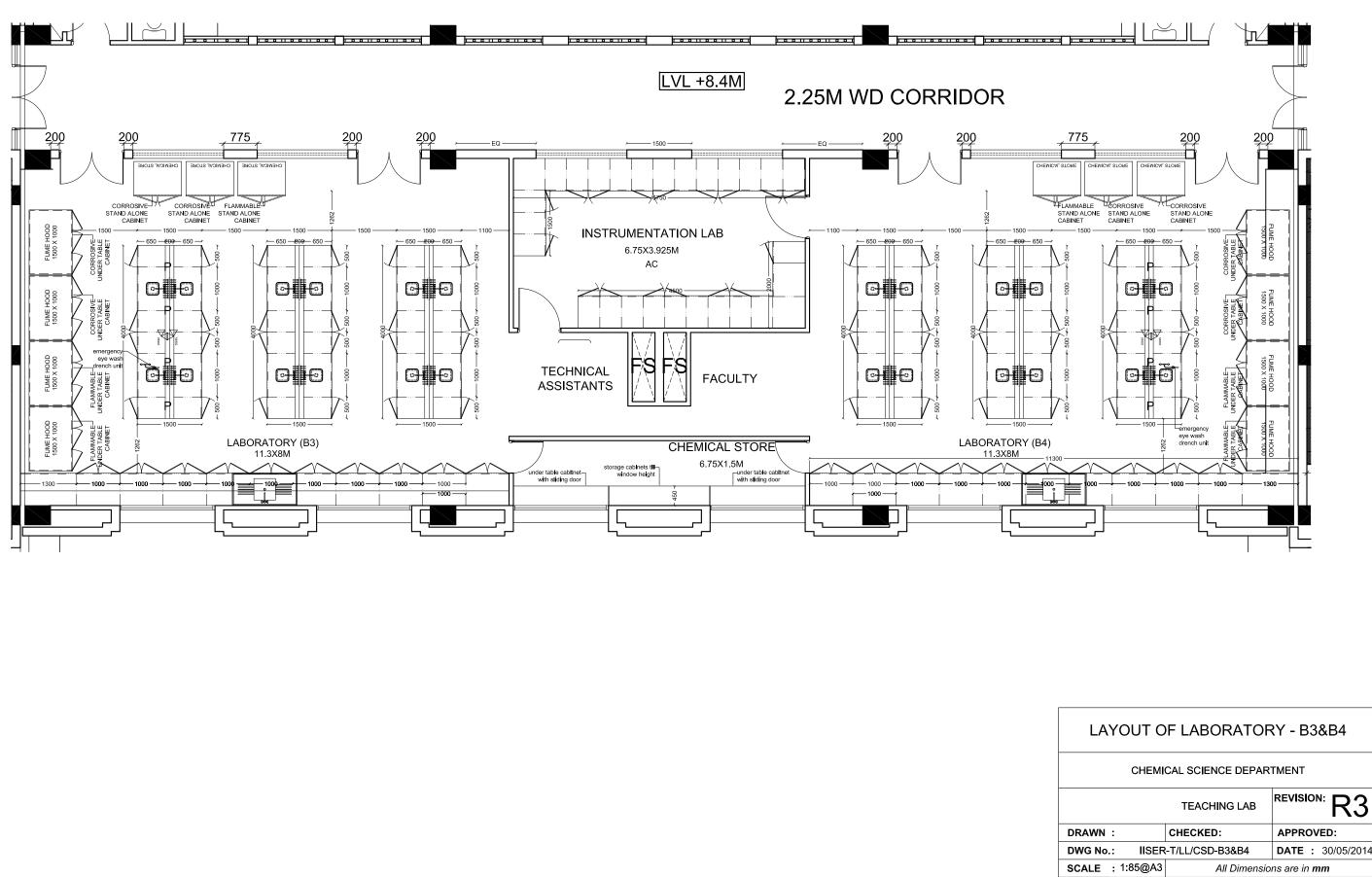


CHEMICAL SCIENCE DEPARTMENT					
			REVISION: <b>R2</b>		
DRAWN :		CHECKED:	APPROVED:		
DWG No.: IISE		R-T/LL/CSD-B 21	<b>DATE</b> : 02/06/2014		
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gentlemagner i sublici e aug	INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPUR An Autonomoa Institution under Ministry of Human Resource Development, Government of India for Research and Teaching in Basic Solaross CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, INDIA, TEL: 0471 2597446, www.lisertvm.ac				

# LAYOUT OF LABORATORY - B21

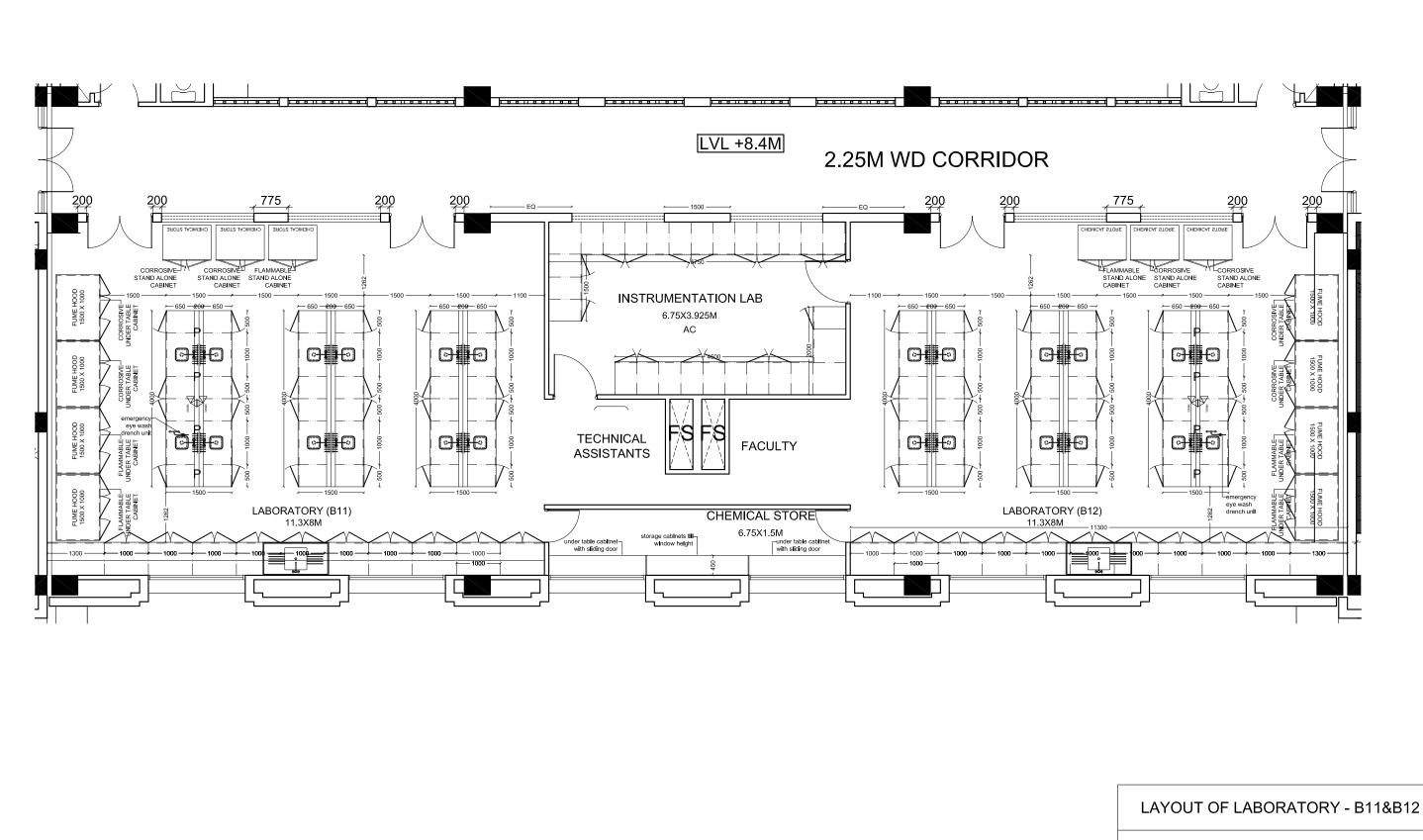
	<b>▼</b> .4.				
tem No	Lab Item	Reference No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	16		1
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			REQUIRE
10	Ducting*	1.9			REQUIRE
11	Inert gas (nitrogen/argon) purification unit	1.7	4		
12	Security belts for gas cylinder				
13	Under Fume Hood Cabinets for Storage of Flammable Chemicals	2.1	8		
14	Under Fume Hood Cabinets for Storage of Corrosive Chemicals	2.2	8		
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3	4		
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4	8		
17	Island table with reagent racks, Trespa top, 1.5 m depth	3		48	
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5	48		
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5	24		
20	Wall table, Trespa top, 0.75 m depth	4		70	
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for wall table, <b>0.5 m wide</b>	4.4			
23	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>1.0 m wide</b>	4.4	30		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7	4		
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6	48		
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6	1		
29	Peg Board	5	48		
30	Overhead Cabinet 600×1000×500	6			
31	Safety Eyewasher	4.7	4		
32	Emergency safety shower	7			
33	Laboratory stools	8	40		
34	Student working table	9	-		

#### Note: \*Ducting and Blowers to be installed.



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-21-

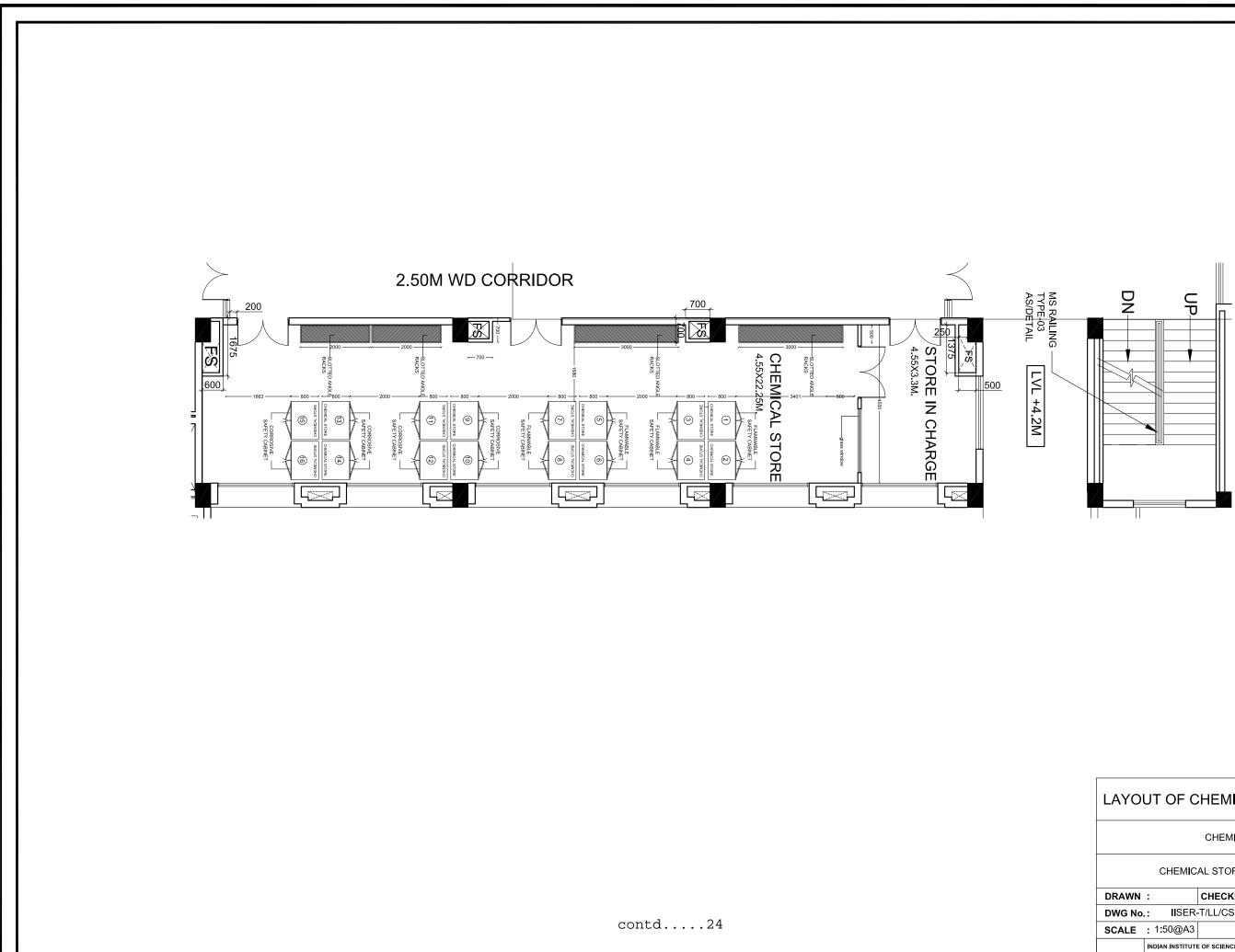
#### CHEMICAL SCIENCE DEPARTMENT

		TEACHING LAB	REVISION: R3	
DRAWN	•	CHECKED:	APPROVED:	
DWG No.: IISEF		-T/LL/CSD-B3&B4	<b>DATE :</b> 30/05/2014	
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#### **ITEMLIST FOR LAB- CHEMICAL STORE**

ltem No	Item	Reference No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			
10	Ducting*	1.9			REQUIRE
11	Inert gas (nitrogen/argon) purification unit	1.7			
12	Security belts for gas cylinder				
13	Under Fume Hood Cabinets for Storage of <b>Flammable Chemicals</b>	2.1			
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2			
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3	8		
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4	8		
17	Island table with reagent racks, Trespa top, 1.5 m depth	3			
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5			
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5			
20	Wall table, Trespa top, 0.75 m depth	4			
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for wall table, 0.5 m wide	4.4			
23	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide	4.4			
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5			
30	Overhead Cabinet 600×1000×500	6			
31	Safety Eyewasher	4.7			
32	Emergency safety shower	7			
33	Laboratory stools Student working table	8			

Note: Ducting and Blowers to be installed.

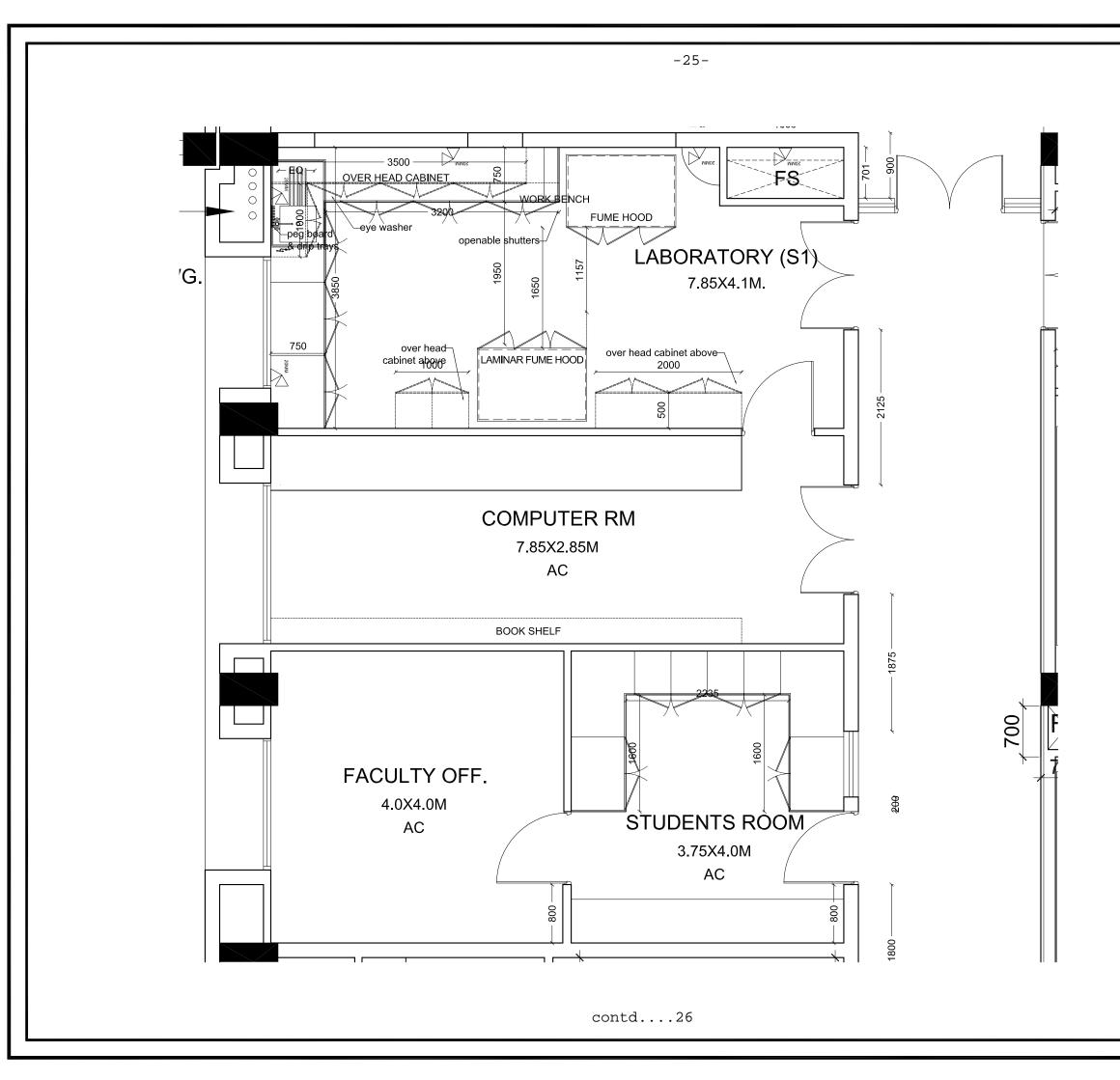


LAYOUT OF CHEMICAL STORE AT +1 LVL				
CHEMICAL STORE				
CHEMICAL STORE REVISION: R2				
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DWG No.: IISER-T/LL/CSD-B S3 & S4 DATE : 30/05/20				
SCALE : 1:50@A3	All Dimensions are in <b>mm</b>			
An Autonomous Institu	INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM An Autocomaa Institution ander Ministry of Human Rescurse Development, Sovennmert of India for Research and Teaching in Basic Sciences CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, NDIA, TEL : 0471 2597446, www.ilsertvm.ac.in			

### **ITEMLIST FOR LAB- S1**

Item No	Item	Reference No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1	1		1
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			C
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			REQUIRED
10	Ducting*	1.9			REQUIRED
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
12	Security belts for gas cylinder				
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1	1		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> Chemicals	2.2			
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3			
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5			
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5			
20	Wall table, Trespa top, 0.75 m depth	4		7	
21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table</b> cabinets and drawer combination for wall table, 0.5 m wide	4.4	0		
23	BWRP Under table cabinets and drawer combination for wall table, 1.0 m wide	4.4	10		1
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7	1		
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5	1		
30	Overhead Cabinet 600×1000×500	6	7		
31	Safety Eyewasher	4.7	1		
32 33	Emergency safety shower Laboratory stools	7 8	3		
	•		3		
34	Student working table Note: *Ducting and Blowers to be installed	9			

Note: \*Ducting and Blowers to be installed.



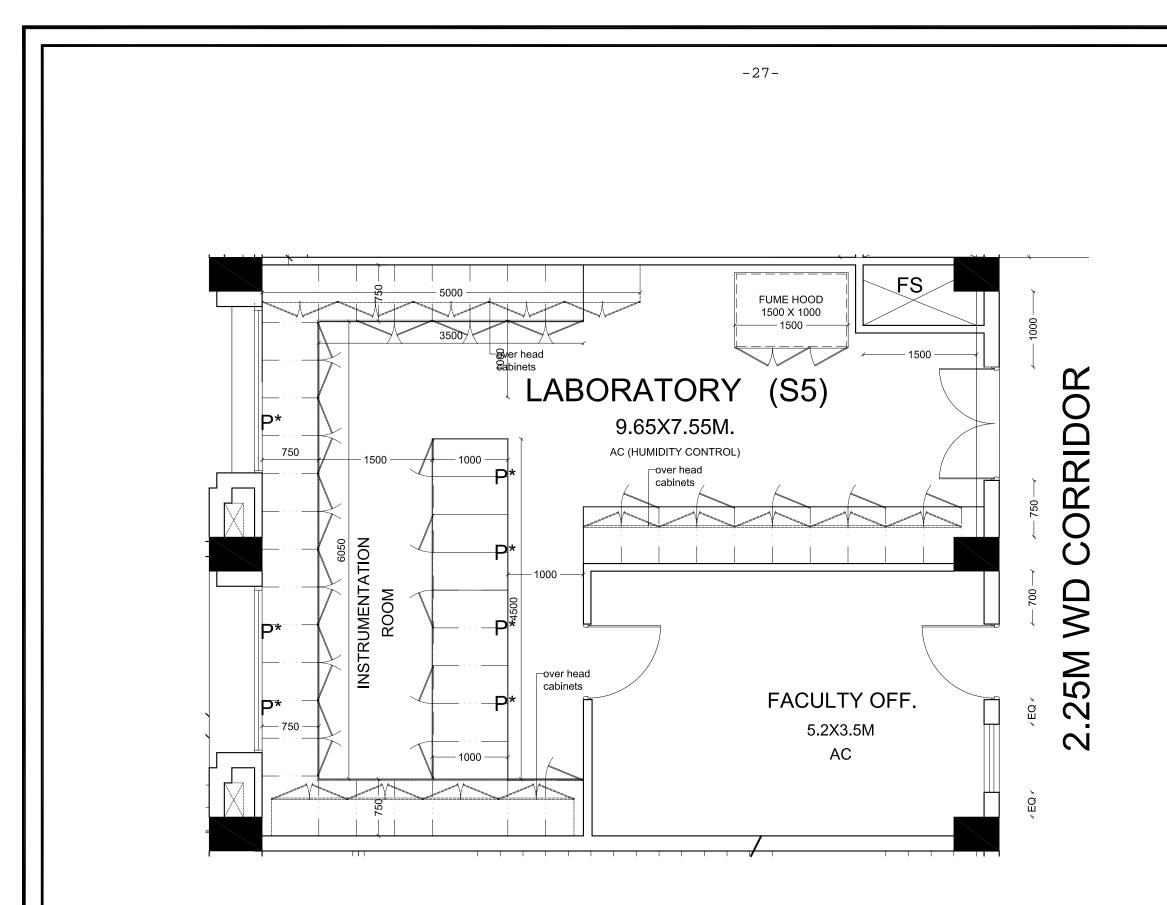
# CHEMICAL SCIENCE DEPARTMENT REVISION: R7 DRAWN : CHECKED: APPROVED: DWG No. : IISER-T/LLL/CSD-S1 DATE : 30/05/2014 SCALE : 1:50@A3 All Dimensions are in mm INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM An Advance Institution under Meding of Human Rescure Development, Generment of India for Research and Teaching in Bait: Science CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, INDIA, TEL : 0471 2597446, www.lisertyma.c.in

LAYOUT OF LABORATORY - S1

### **ITEMLIST FOR LAB- S5**

		<u>12 50</u>			
Item No	Item	Reference No.**	Quantity in No's	Quantity in meter	Toal Quantity
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1	1		
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	*Blower	1.9			REQUIRED
10	*Ducting	1.9			REQUIRED
11	Inert gas (nitrogen/argon) purification unit	1.7	1		
12	Security belts for gas cylinder		2		
13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> <b>Chemicals</b>	2.1	1		
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> Chemicals	2.2			
15	Stand-alone Cabinets for Storage of Flammable Chemicals	2.3			
16	Stand-alone Cabinets for Storage of Corrosive Chemicals	2.4			
17	Island table with reagent racks, Trespa top, 1.5 m depth	3			
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5	4		
19	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>1.0 m wide</b>	3.5			
20	Wall table, Trespa top, 0.75 m depth	4		14	1
21	Wall Table, Trespa top, 1.0 m depth	4		5	
22	<b>BWRP Under table</b> cabinets and drawer combination for <b>wall table</b> , <b>0.5 m wide</b>	4.4	12		1
23	<b>BWRP Under table cabinets</b> and drawer combination for <b>wall table</b> , <b>1.0 m wide</b>	4.4	9		
24	Chemical Stoneware sink with extended worktop having grooves (1500×750×350)	3.7			
25	Chemical Stoneware sink with extended worktop having grooves (1200×750×350)	3.7			
26	On Top Mounting Type Chemical Stoneware Sink (300×300×250)	4.6			
27	Polypropylene sink(500×500×350)				
28	Polypropylene cup sink	4.6			
29	Peg Board	5			
30	Overhead Cabinet 600×1000×500	6	14		1
31	Safety Eyewasher	4.7			
32	Emergency safety shower	7			
33	Laboratory stools	8	ļ		
34	Student working table	9		5	

Note: Ducting and Blowers to be installed.



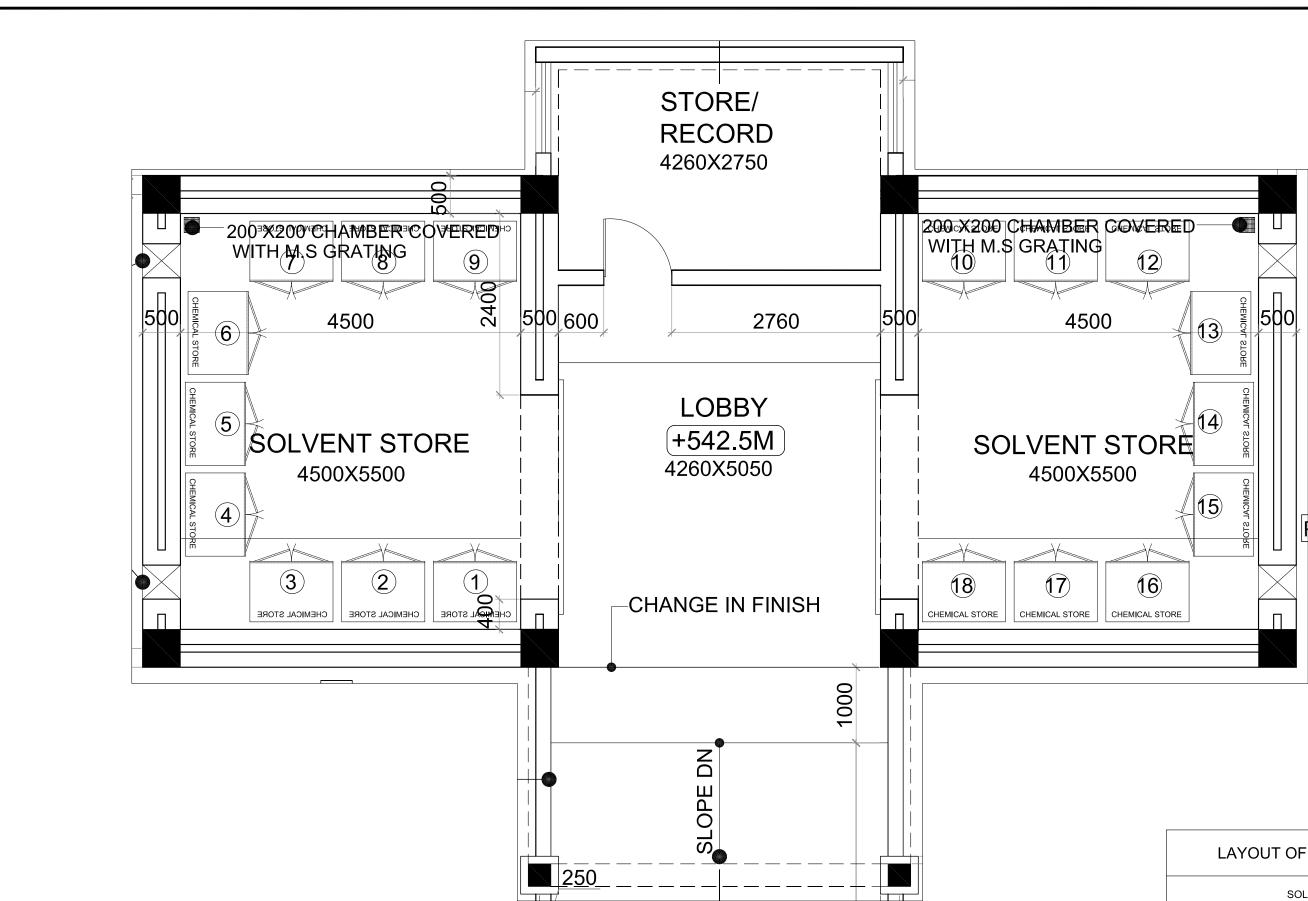
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CHEMICAL SCIENCE DEPARTMENT         REVISION: R6         DRAWN :       CHECKED:       APPROVED:         DWG No.:       IISER-T/LL/CSD-S5, R2       DATE : 09/06/2014         SCALE       : 1:50@A3       All Dimensions are in mm         INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM						
DRAWN :         CHECKED:         APPROVED:           DWG No.:         IISER-T/LL/CSD-S5, R2         DATE : 09/06/2014           SCALE :         1:50@A3         All Dimensions are in mm	CHEMICAL SCIENCE DEPARTMENT					
DWG No.:       IISER-T/LL/CSD-S5, R2       DATE : 09/06/2014         SCALE :       1:50@A3       All Dimensions are in mm	REVISION: R6					
SCALE : 1:50@A3     All Dimensions are in mm	DRAWN	:	CHECKED:	APPROVED:		
	DWG No.: IISER-T/LL/CSD-S5, R2 DATE : 09/06/2					
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM	SCALE	: 1:50@A3	All Dimensions are in <b>mm</b>			
An Autonomous Institution under Ministry of Human Resource Development, Givenment of India for Research and Teaching in Back Sciences CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, INDIA, TEL: 0471 2597446, www.lisertvm.ac.in	the form these from the strong	An Autonomous Institution under Ministry of Human Resource Development, Government of India for Research and Teaching in Basic Sciences				

## LAYOUT OF LABORATORY - S5

	ITEMLIST FOR LAB- SOLY	VENT STORE	<u> </u>		
tem No	Item	Reference No.**	Quantity in No's	Quantity in meter	
1	Constant Air Volume (CAV) – By-Pass Hood, 1.5 m width	1			
2	Constant Air Volume (CAV) – By-Pass Hood, 2.0 m width	1			
3	Variable Air Velocity (VAV) Hood, 1.5 m width	1			
4	Variable Air Velocity (VAV) Hood, 2.0 m width	1			
5	Low Floor Solvent Distillation Fume Hood (CAV) 1.5 m width				
6	Low Floor Solvent Distillation Fume Hood (CAV) 2.0 m width				
7	Low Floor Solvent Distillation Fume Hood (VAV) 1.5 m width				
8	Low Floor Solvent Distillation Fume Hood (VAV) 2.0 m width				
9	Blower*	1.9			
10	Ducting*	1.9			REQUIRE
11	Inert gas (nitrogen/argon) purification unit	1.7			
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13	Under Fume Hood Cabinets for Storage of <b>Flammable</b> Chemicals	2.1			
14	Under Fume Hood Cabinets for Storage of <b>Corrosive</b> <b>Chemicals</b>	2.2			
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17	Island table with reagent racks, Trespa top, 1.5 m depth	3			
18	<b>BWRP Under table cabinet</b> and drawer combination for island table, <b>0.5 m wide</b>	3.5			
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21	Wall Table, Trespa top, 1.0 m depth	4			
22	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>0.5 m wide</b>	4.4			
23	<b>BWRP Under table cabinets</b> and drawer combination for wall table, <b>1.0 m wide</b>	4.4			
24	<b>Chemical Stoneware sink</b> with extended worktop having grooves (1500×750×350)	3.7			
25	<b>Chemical Stoneware sink</b> with extended worktop having grooves ( <b>1200×750×350</b> )	3.7			
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30	Overhead Cabinet 600×1000×500	6			
31	Safety Eyewasher	4.7			
32	Emergency safety shower	7			
33	Laboratory stools	8			
34	Student working table	9			

Note: \*Ducting and Blowers to be installed.



DR [F&A] ADDL. CHARGE [P&S]

LAYOUT OF SOLVENT STORE				
SOLVENT STORE				
REVISION: RO				
DRAWN : CHECKED:			APPROVED:	
DWG No.: IISER-T/LL/CSD-B S3 & S4 DATE : 02/06			DATE : 02/06/2014	
SCALE	1:50@A3	All Dimensions are in <b>mm</b>		
and and the state of the state of the	INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM An Autonomous Institution under Ministry of Human Rescurse Development, Government of India for Research and Teaching in Basic Solumnes CET CAMPUS, THIRUVANANTHAPURAM - 695 016, KERALA, NDIA, TEL : 0471 2597446, www.Jisertvm.ac.In			

### **INSTRUCTIONS** TO BIDDER

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### **Introduction**

### **1.1. ELIGIBLE BIDDERS.**

- 1.1.1 This Invitation for Bids is open to all suppliers.
- 1.1.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

### 1.2. Cost of Bidding

1.2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

### **1.3. FRAUD AND CORRUPTION:**

1.3.1 The purchaser requires that the bidders suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

"corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;

"fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;

"collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, noncompetitive levels; and "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

1.3.2 The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

The Bidding Documents

### **1.4.** Cost of Bidding Documents

1.4.1 Interested eligible bidders may purchase the bidding documents on payment of the cost of bidding documents as indicated in the invitation for bids/NIT or alternatively, the bidding documents can be downloaded from our Website as indicated in the Invitation for Bids/NIT free of cost.

### **1.5. CONTENT OF BIDDING DOCUMENTS**

1.5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction. The bidding documents, apart from the invitation for bids have been divided into 8 chapters as under:

Chapter 1: Instructions to Bidder (ITB)

Chapter 2: General Conditions of Contract (GCC) and Special Conditions of Contract (SCC)

1.5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

### **1.6.** CLARIFICATION OF BIDDING DOCUMENTS

1.6.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC). The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all those who have acquired the Bidding Documents directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under clause relating to amendment of Bidding documents and Clause relating to Deadline for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the other prospective bidders.

### **1.7. Amendment of Bidding Documents**

- 1.7.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 1.7.2 All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by cable or by fax, or by e mail and will be binding on them. The same would also be hosted on the website of the purchaser and all prospective bidders are expected to surf the website before submitting their bids to take cognizance of the amendments.
- 1.7.3 In order to allow prospective bidders reasonable time to take the amendment into account, while in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids and host the changes on the website of the purchaser.

### PREPARATION OF BIDS

### **1.8.** LANGUAGE OF BID

1.8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical.

However of GOI makes it mandatory under Rajbhasha Abhniyam in that case views of Rajbasha unit of IISER-TVM may be sought.

1.8.2 The Supplier shall bear all costs of translation, if any, to the English language and all risks of the accuracy of such translation, for documents provided by the Supplier.

### **1.9. DOCUMENTS COMPRISING THE BID**

- 1.9.1 The bid prepared by the Bidder shall include:
  - a) Bidder Information Form
  - b) Bid security as specified in the Invitation to Bids.
  - c) Service support details form;
  - d) Deviation Statement Form;
  - e) Performance Statement Form;
  - f) Manufacturer's Authorization Form.
  - g) Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
  - h) Bid form.
  - i) Documents establishing goods eligibility and conformity to bidding documents.
  - j) Applicable Price Schedule Form.

k) DGS&D Registration certificate in case the items under procurement falls under the restricted category of the current export-import policy of the Govt. of India.

### **1.10. BID FORM AND PRICE SCHEDULE**

1.10.1 The bidder shall complete the Bid Form and the appropriate price schedule form furnished in the bidding documents. These forms must be completed without any alterations to its format and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

### 1.11. BID PRICES

- 1.11.1 The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the goods it proposes to supply under the contract.
- 1.11.2 Prices indicated on the price-schedule form shall be entered separately in the following manner:

(a) For Goods manufactured within India

(i) The price of the goods quoted Ex-works including taxes already paid.

(ii) VAT and other taxes like excise duty etc. which will be payable on the goods if the contract is awarded.

a. The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.

b. The installation, commissioning and training charges including any incidental services, if any.

(b) For Goods manufactured abroad

(i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form.

(ii) The charges for insurance and transportation of the goods to the port/place of destination.

(iii) The agency commission charges, if any.

(iv) The installation, commissioning and training charges including any incidental services, if any

- 1.11.3 The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the In coterms published by the International Chambers of Commerce, Paris.
- 1.11.4 Where there is no mention of packing, forwarding, freight, insurance changes, taxes etc. such offer shall be rejected as incomplete.
- 1.11.5 The price quoted shall remain fixed during the contract period and shall not vary on any account
- 1.11.6 All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.
- 1.11.7 The purchases made by the purchaser for scientific purpose are exempt from excise duty and Custom Duty at a concessional rate is leviable.

### 1.12. BID CURRENCIES

1.12.1 Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.

### 1.13. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS

- 1.13.1 The bidder shall furnish, as part of its bid, documents establishing the bidders' eligibility to bid and its qualification to perform the contract if its bid is accepted.
- 1.13.2 The documentary evidence of the bidders qualification to perform the

contract if the bid is accepted shall establish to the purchasers satisfaction that;

(a) The bidder meets the qualification criteria listed in bidding documents, if any.

(b) Bidder that doesn't manufacture the goods it offers to supply shall submit to Manufacturers' Authorization Form (MAF) using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and/or supply the goods.

(c) In case a bidder not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period.

1.13.3 Conditional tenders shall not be accepted

### 1.14. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

- 1.14.1 To establish the goods' eligibility, the documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.
- 1.14.2 To establish the conformity of the goods and services to the specifications and schedule of requirements of the bidding document, the documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:

(a) A detailed description of the essential technical and performance characteristics of the goods;

(b) A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period following commencement of the use of the goods by the Purchaser in the Pricedbid; and

(c) An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

1.14.3 For purposes of the commentary to be furnished pursuant to above, the Bidder shall note that standards for workmanship, material and equipment, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute these in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

### 1.15. BID SECURITY

- 1.15.1 The Bidder shall furnish, as part of its bid, a bid security (BS) for an amount as specified in the Invitation for Bids. In the case of foreign bidders, the BS shall be submitted either by the principal or by the Indian agent and in the case of indigenous bidders; the BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.
- 1.15.2 The bid security is required to protect the Purchaser against the risk of

Bidder's conduct, which would warrant the security's forfeiture.

1.15.3 The bid security shall be in Indian Rupees for offers received for supply within India and denominated in the currency of the bid or in any freely convertible foreign exchange in the case of offers received for supplies from foreign countries in equivalent Indian Rupees. The bid security shall be in one of the following forms at the bidders' option:

(a) A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank operating in India in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalised/Scheduled Indian bank; or

(b) Fixed Deposit receipt pledged in favour of the IISER-TVM.

(c) A Banker's cheque or demand draft in favour of the purchaser issued by any Nationalised/Scheduled Indian bank.

- 1.15.4 The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the ITB clause 15.11 are invoked.
- 1.15.5 The bid security should be submitted in its original form. Copies shall not be accepted.
- 1.15.6 While Bid security (EMD) is a requirement, the Director IISER-TVM may grant exemption of Bid security to some specific parties having sound credentials and are of national/international repute.
- 1.15.7 The bid security of unsuccessful bidder will be discharged /returned as promptly as possible positively within a period of 15 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.
- 1.15.8 The successful Bidder's bid security will be discharged upon the Bidder furnishing the performance security, without any interest. Alternatively, the BS could also be adjusted against PS, if it is paid through DD/BC.
- 1.15.9 The firms registered with DGS&D, NSIC, Govt. Public Undertakings, and Central Autonomous Bodies and with the IISER-TVM, if any, are exempted from payment of bid security (BS) provided such registration includes the item they are offering which are manufactured by them and not for selling products manufactured by other companies.
- 1.15.10 In case a bidder intimates at the time of tender opening in writing that the bid security is kept inside the financial bid, then in such cases, the technical bid of the party would be accepted provisionally till opening of the financial bids with which the party has attached the bid security.
- 1.15.11 The bid security may be forfeited:
  (a) If a Bidder withdraws or amends or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; or
  (b) In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 15 days of the order or fails to sign the contract and/or fails to furnish Performance Security within 21 days from the date of contract/ order.

### **1.16. PERIOD OF VALIDITY OF BIDS**

- 1.16.1 Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 1.16.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable, telex, fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may

refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

1.16.3 Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

### 1.17. FORMAT AND SIGNING OF BID

- 1.17.1 The bids may be submitted in single envelop or in two parts as specified in the Invitation for Bids.
- 1.17.2 In case the bids are invited on single envelop basis, then the Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate. In the event of any discrepancy between them, the original shall govern.
- 1.17.3 In case the bids are invited on two-bid system, the Bidder shall submit the bids in two separate parts. One part shall contain Technical bid comprising all documents listed under clause relating to Documents Comprising the Bid excepting bid form and price schedules. The other part shall contain the priced-bid comprising bid form and price schedules. The Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate.
- 1.17.4 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialled by the person or persons signing the bid.
- 1.17.5 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the persons or persons signing the bid.

### 1.18. SUBMISSION, SEALING AND MARKING OF BIDS

- 1.18.1 The bidders may submit their duly sealed bids generally by post or by hand.
- 1.18.2 In the case of bids invited on single envelop basis, the Bidders shall seal the original and each copy of the bid in separate inner envelopes, duly marking the envelopes as "original" and "copy". The envelopes shall then be sealed in an outer envelope.
- 1.18.3 In the case of bids invited on two part basis, the Bidder shall seal the unpriced commercial and technical bid comprising the documents as listed in ITB 1.9.1 excepting for h & j and the priced bid in two separate envelops duly marked as "Technical bid" and "priced bid". Both the envelopes shall then be sealed in one outer envelope.
- 1.18.4 (a) The inner and outer envelopes shall be addressed to the Purchaser indicated in the SCC.
  (b) Bear the name and address of the bidder, Tender No., due date and a warning "Do not open before \_\_\_\_\_" to be completed with the time and date as specified in the invitation for bids.
- 1.18.5 If the outer envelope is not sealed and marked as required above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening. In such cases, bids received in open condition within the due date and time will be accepted at the risk of the bidder if the same is presented to the Stores & Purchase Officer before expiry of the due date and time of opening of the bids.
- 1.18.6 Firms submitting bids in a single envelope against the requirement of twobid system would be considered for further evaluation at the risk & responsibility of the bidder. However, the opened priced bid would be sealed immediately by the TOC without disclosing the price.

### **1.19. DEADLINE FOR SUBMISSION OF BIDS**

- 1.19.1 Bids must be received by the Purchaser at the address specified in Invitation for bids not later than the time and date specified therein. In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received up to the appointed time on the next working day.
- 1.19.2 The Purchaser may, at its discretion, extend the deadline for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

### 1.20. LATE BIDS

- 1.20.1 Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser will be rejected.
- 1.20.2 Such tenders shall be marked as late and not considered for further evaluation. They shall not be opened at all and be returned to the bidders in their original envelope without opening.

### 1.21. WITHDRAWAL, SUBSTITUTION AND MODIFICATION OF BIDS

1.21.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice in accordance with ITB Clause 18 duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB Sub- Clause 17.4 (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice.

All notices must be:

(a) submitted in accordance with ITB Clauses 17 and 18 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION;" and (b) Received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB Clause 19.

1.21.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 21.1 shall be returned unopened to the Bidders. No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof. Opening and Evaluation of Bids

### 1.22. OPENING OF BIDS BY THE PURCHASER

1.22.1 The Purchaser will open all bids one at a time in the presence of Bidders' authorized representatives who choose to attend, as per the schedule given in invitation for bids. The Bidders' representatives who are present shall sign the quotation opening sheet evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened at the appointed time and location on the next working day. In two-part bidding, the financial bid shall be opened after technical evaluation. 1.22.2 First, envelopes onlv marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution

notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further.

- 1.22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bid(s). The contents of the bid forms and price schedules would however be announced only at the time of opening of Priced-bids in the case of two-bid system.
- 1.22.2.1 Bids that are received late shall not be considered further for evaluation, irrespective of the circumstances.
- 1.22.2.2 Bidders interested in participating in the bid opening process, should depute their representatives along with an authority letter to be submitted to the purchaser at the time of bid opening.

### **1.23. CONFIDENTIALITY**

- 1.23.1 Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 1.23.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.

### **1.24.** CLARIFICATION OF BIDS

1.24.1 To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no negotiation shall be held except with the lowest bidder, at the discretion of the purchaser. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered.

### **1.25. PRELIMINARY EXAMINATION**

- 1.25.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 1.9 have been provided, and to determine the completeness of each document submitted.
- 1.25.2 The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.

(a) Bid Form and Price Schedule, in accordance with ITB Sub-Clause 1.10;

(b) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the tender enquiry document. The tenders, who do not meet the basic requirements, are to be treated as unresponsive and ignored. The following are some of

the important points, for which a tender may be declared as unresponsive and to be ignored, during the initial scrutiny:

(i) The Bid is unsigned.

(ii) The Bidder is not eligible.

(iii) The Bid validity is shorter than the required period.

(iv) The Bidder has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer.

(v) Bidder has not agreed to give the required performance security.

(vi) The goods quoted are sub-standard, not meeting the required specification etc.

(vii) Against the schedule of Requirement (incorporated in the tender enquiry), the tenderer has not quoted for the entire requirement as specified in that schedule.

(viii) The tenderer has not agreed to some essential condition(s) incorporated in the tender enquiry.

### **1.26. RESPONSIVENESS OF BIDS**

1.26.1 Prior to the detailed evaluation, the purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of this clause, a substantive responsive bid is one, which conforms to all terms and condition of the bidding documents without material deviations, reservations or omissions. A material deviation, reservation or omission is one that:

(a) affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or

(b) limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or (c) if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

- 1.26.2 The purchasers' determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 1.26.3 If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

### 1.27. NON-CONFORMITY, ERROR AND OMISSION

- 1.27.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformity or omissions in the Bid that do not constitute a material deviation.
- 1.27.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

1.27.3 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

(a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal

point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;

(b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

1.27.4 Provided that a bid is substantially responsive, the purchaser may request that a bidder may confirm the correctness of arithmetic errors as done by the purchaser within a target date. In case, no reply is received then the bid submitted shall be ignored and its Bid Security may be forfeited.

### 1.28. EXAMINATION OF TERMS & CONDITIONS, TECHNICAL EVALUATION

- 1.28.1 The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.
- 1.28.2 The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 14, to confirm that all requirements specified in Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation.
- 1.28.3 If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB Clause 26, it shall reject the Bid.

### 1.29. CONVERSION TO SINGLE CURRENCY

1.29.1 To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India as notified in the Newspapers on the date of bid opening in the case of single part bidding and the rates prevalent on the date of opening of the Priced bids in the case of two-part bidding. For this purpose, exchange rate notified in www.xe.com or www.rbi.org or any other website could also be used by the purchaser.

### **1.30.** EVALUATION AND COMPARISON OF BIDS

- 1.30.1 The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive
- 1.30.2 To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology shall be permitted.
- 1.30.3 The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

For goods manufactured in India

(i) The price of the goods quoted ex-works including all taxes already paid.

(ii) VAT and other taxes like excise duty etc. which will be payable on the goods if the contract is awarded.

(iii) Charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination.

(iv) The installation, commissioning and training charges including incidental services, if any.

For goods manufactured abroad

(i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the bidding document.

(ii) The charges for insurance and transportation of the goods to the port/place of destination.

(iii) The agency commission etc., if any.

(iv) The installation, commissioning and training charges including incidental services, if any.

1.30.4 The comparison between the indigenous and the foreign offers shall be made on FOR destination basis and CIF/CIP basis respectively. However, the CIF/CIP prices quoted by any foreign bidder shall be loaded further as under:

a) Towards customs duty and other statutory levies–as per applicable rates. a) Towards custom clearance, inland transportation etc. - 2% of the CIF/CIP value.

Note: Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offers shall be rejected as incomplete.

1.30.5 In the case of Purchase of many items against one tender, which are not

inter- dependent or, where compatibility is not a problem, normally the comparison would be made on ex-works, (in case of indigenous items) and on FOB / FCA (in the case of imports) prices quoted by the firms for identifying the lowest quoting firm for each item.

- 1.30.6 Orders for imported stores need not necessarily be on FOB/FCA basis rather it can be on the basis of any of the incoterm specified in ICC Incoterms 2000 as may be amended from time to time by the ICC or any other designated authority and favourable to IISER-TVM.
- 1.30.7 Wherever the price quoted on FOB/FCA and CIF/CIP basis are the same, the Contract would be made on CIF / CIP basis only.
- 1.30.8 The GCC and the SCC shall specify the mode of transport i.e whether by air/ocean/road/rail.
- 1.31. THE PURCHASER SHALL COMPARE ALL SUBSTANTIALLY RESPONSIVE BIDS TO DETERMINE THE LOWEST EVALUATED BID, IN ACCORDANCE WITH ITB CLAUSE 1.30

### **1.32. CONTACTING THE PURCHASER**

- 1.32.1 Subject to ITB Clause 1.24, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- 1.32.2 Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

### **1.33. POST QUALIFICATION**

- 1.33.1 In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.
- 1.33.2 The determination will take into account the eligibility criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.
- 1.33.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder.

A negative determination will result in rejection of the Bidder's bid.

### Award OF CONTRACT

### **1.34. NEGOTIATIONS**

There shall not be any negotiation normally. Negotiations, if at all, shall be an exception and only in the case of items with limited source of supply. Negotiations shall be held with the lowest evaluated responsive bidder. Counter offers tantamount to negotiations and shall be treated at par with negotiations in the case of one time purchases.

### 1.35. Award Criteria

Subject to ITB Clause 37 the Purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

### 1.36. PURCHASER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD

The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. Further, at the discretion of the purchaser, the quantities in the contract may be enhanced by 30% within the delivery period.

### 1.37. PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.

### **1.38.** NOTIFICATION OF AWARD

- 1.38.1 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by cable or telex or fax or e mail that the bid has been accepted and a separate purchase order shall follow through post.
- 1.38.2 Until a formal contract is prepared and executed, the notification of award should constitute a binding contract.
- 1.38.3 Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to ITB Clause 1.41, the purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security.

### **1.39.** SIGNING OF CONTRACT

- 1.39.1 Promptly after notification, the Purchaser shall send the successful Bidder the Agreement/PO.
- 1.39.2 Within twenty-one (21) days of date of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.

### **1.40. ORDER ACCEPTANCE**

- 1.40.1 The successful bidder should submit Order acceptance within 15 days from the date of issue, failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited pursuant to clause 15.9 of ITB.
- 1.40.2 The order confirmation must be received within 15 days. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled and limited tenders irrespective of the value shall be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable, provided there is no change in specifications. In such cases the defaulting firm shall not be considered again for re-tendering in the particular case.

### **1.41. PERFORMANCE SECURITY**

- 1.41.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.
- 1.41.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 1.41.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign

countries.

- 1.41.4 In the case of imports, the PS may be submitted either by the principal or by the Indian Agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.
- 1.41.5 The Performance security shall be in one of the following forms:
  (a) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/Scheduled bank located
  in India or a foreign bank with preferably its operating branch in India in the form provided in the bidding documents. Or
  (b) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or
  (c) A Fixed Deposit Receipt pledged in favour of the Purchaser.
- 1.41.6 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.
- 1.41.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- 1.41.8 The order confirmation should be received within 15 days from the date of notification of award. However, the purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for retendering in the particular case.

DEPUTY REGISTRAR [F&A] Additional Charge [P&S] IISERTVM

### GENERAL TERMS & CONDITIONS OF THE CONTRACT

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### 2.1 **DEFINITIONS**

- 2.1.1 The following words and expressions shall have the meanings hereby assigned to them:
  - a) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
  - b) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.
  - c) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.
  - d) "Day" means calendar day.
  - e) "Completion" means the fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
  - f) "GCC" means the General Conditions of Contract.
  - g) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
  - h) "Related Services" means the services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
  - i) "SCC" means the Special Conditions of Contract.
  - j) "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
  - k) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
  - Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM) means a society registered under the Travancore Cochin Literary Scientific and Charitable Societies' Registration Act, 1995 (12 of 1955) on 20.02.2008 at Kerala at no. T.342/08.
  - m) "The final destination," where applicable, means the place named in the SCC.

### 2.2 CONTRACT DOCUMENTS

2.2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

### 2.3 FRAUD AND CORRUPTION

- 2.3.1 The purchaser requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,
  - a) The terms set forth below are defined as follows:
    - i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;

- ii) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- iii) "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, noncompetitive levels; and
- iv) "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- b) the purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

### 2.4 JOINT VENTURE, CONSORTIUM OR ASSOCIATION

2.4.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfilment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

### 2.5 SCOPE OF SUPPLY

2.5.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

### 2.6 SUPPLIERS' RESPONSIBILITIES

2.6.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Scope of Supply Clause of the GCC, and the Delivery and Completion Schedule, as per GCC Clause relating to delivery and document.

### 2.7 **CONTRACT PRICE**

2.7.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.

### 2.8 COPYRIGHT

2.8.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

### 2.9 APPLICATION

2.9.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

### 2.10 STANDARDS

2.10.1 The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

### 2.11 Use of Contract Documents and Information

2.11.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information, furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract.

Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.

- 2.11.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.
- 2.11.3 Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.

### 2.12 PATENT INDEMNITY

- 2.12.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 12.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:
  - (a) the installation of the Goods by the Supplier or the use of the Goods in India; and
  - (b) the sale in any country of the products produced by the Goods.
- 2.12.2 If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.

### 2.13 **PERFORMANCE SECURITY**

- 2.13.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.
- 2.13.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

- 2.13.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
- 2.13.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.
- 2.13.5 The Performance security shall be in one of the following forms:
  - (a) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. Or,
  - (b) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or,
  - (c) A Fixed Deposit Receipt pledged in favour of the Purchaser.
- 2.13.6 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.
- 2.13.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- 2.13.8 The order confirmation should be received within 15 days from the date of notification of award. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.

### 2.14. INSPECTIONS AND TESTS

- 2.14.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC or as discussed and agreed to during the course of finalization of contract.
- 2.14.2 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. The Technical Specifications and SCC shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes
- 2.14.3 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data shall be furnished to the inspectors at no charge to the Purchaser.

- 2.14.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection
- 2.14.5 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- 2.14.6 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- 2.14.7 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 2.14.8 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.

### 2.15 PACKING

- 2.15.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 2.15.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser

### 2.16 DELIVERY AND DOCUMENTS

- 2.16.1 Delivery of the Goods and completion and related services shall be made by the Supplier in accordance with the terms specified by the Purchaser in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.
- 2.16.2 The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.
- 2.16.3 The mode of transportation shall be as specified in SCC

### 2.17 INSURANCE

- 2.17.1 Should the purchaser elect to buy on CIF/CIP basis, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.
- 2.17.2 Where delivery of the goods is required by the purchaser on CIF or CIP basis the supplier shall arrange and pay for Cargo Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.
- 2.17.3 Where delivery is on FOB or FCA basis, insurance would be the responsibility of the purchaser.
- 2.17.4 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.

### 2.18 TRANSPORTATION

- 2.18.1 Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price.
- 2.18.2 Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 2.18.3 In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.

### 2.19 INCIDENTAL SERVICES

2.19.1 The supplier may be required to provide any or all of the services, if any, specified in SCC

### 2.20 SPARE PARTS

2.20.1 The Supplier shall be required to provide any or all of the following materials, notifications,

and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) In the event of termination of production of the spare parts:
  - (i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and

(ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

### 2.21 WARRANTY

- 2.21.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 2.21.2 The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
- 2.21.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 2.21.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect

The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

- 2.21.5 Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 2.21.6 If having been notified, the Supplier fails to remedy the defect within the reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- 2.21.7 Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.

### 2.22 TERMS OF PAYMENT

- 2.22.1 The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.
- 2.22.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfillment of other obligations stipulated in the contract.
- 2.22.3 Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the invoice or claim by the Supplier.
- 2.22.4 Payment shall be made in currency as indicated in the contract.

### 2.23. CHANGE ORDERS AND CONTRACT AMENDMENTS.

- 2.23.1 The Purchaser may at any time, by written order given to the Supplier pursuant to Clause on Notices of the GCC make changes within the general scope of the Contract in any one or more of the following:
  - (a) Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
  - (b) The method of shipping or packing;
  - (c) The place of delivery; and/or
  - (d) The Services to be provided by the Supplier.
  - (e) The delivery schedule.
- 2.23.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or

both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.

2.23.3 No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.

### 2.24. Assignment

2.24.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

### 2.25. SUBCONTRACTS

2.25.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or duties or obligation under the Contract.

### 2.26 EXTENSION OF TIME.

- 2.26.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.
- 2.26.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, it's likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 2.26.3 Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.

### 2.27 PENALTY CLAUSE

2.27.1 Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC. Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable

### 2.28. TERMINATION FOR DEFAULT

- 2.28.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part
  - (a) If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause on Extension of Time; or
  - (b) If the Supplier fails to perform any other obligation(s) under the Contract.
  - (c) If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices as defined in GCC Clause on Fraud or Corruption in competing for or in executing the Contract.
- 2.28.2 In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:

- (a) The Performance Security is to be forfeited;
- (b) The purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
- (c) However, the supplier shall continue to perform the contract to the extent not terminated.

### 2.29 FORCE MAJEURE

- 2.29.1 Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 2.29.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 2.29.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 2.29.4 If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of force majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

### 2.30 TERMINATION FOR INSOLVENCY

2.30.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.

### 2.31 TERMINATION FOR CONVENIENCE

- 2.31.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 2.31.2 The Goods those are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
  - (a) To have any portion completed and delivered at the Contract terms and prices; and/or
  - (b) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

### 2.32 SETTLEMENT OF DISPUTES

2.32.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

- 2.32.2 If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.
- 2.32.3 The dispute settlement mechanism/arbitration proceedings shall be concluded as under:
  - (a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Chairman, Board of Governors of IISER TVM and if he is unable or unwilling to act, to the sole arbitrator. The award of the arbitrator so appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
  - (b) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration In accordance with provision of subclause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
- 2.32.4 The venue of the arbitration shall be the place from where the purchase order or contract is issued.
- 2.32.5 Notwithstanding any reference to arbitration herein,
  - (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
  - (b) the Purchaser shall pay the Supplier any monies due the Supplier.

### 2.33 GOVERNING LANGUAGE

2.33.1 The contract shall be written in English language which shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the English language only.

### 2.34 APPLICABLE LAW

2.34.1 The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in SCC.

### 2.35 NOTICES

- 2.35.1 Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX, e-mail or and confirmed in writing to the other party's address specified in the SCC.
- 2.35.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

### 2.36 TAXES AND DUTIES

- 2.36.1 For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.
- 2.36.2 For goods Manufactured within India, the Supplier shall be entirely responsible

for all taxes, duties, license fees, etc., incurred till its final manufacture/ production.

2.36.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall make its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

### 2.37 RIGHT TO USE DEFECTIVE GOODS

2.37.1 If after delivery, acceptance and installation and within the guarantee and warranty period,

the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

### 2.38 PROTECTION AGAINST DAMAGE

- 2.38.1 The system shall not be prone to damage during power failures and trip outs. The normal voltage and frequency conditions available at site as under:
  - (a) Voltage 230 volts Single phase/ 415 V 3 phase (+\_ 10%)
  - (b) Frequency 50 Hz.

### 2.39. SITE PREPARATION AND INSTALLATION

The Purchaser is solely responsible for the construction of the equipment sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The supplier shall inform the purchaser about the site preparation, if any, needed for installation, of the goods at the purchasers' site immediately after notification of award/contract.

> DEPUTY REGISTRAR [F&A] Additional Charge [P&S] IISERTVM

### IISER/PUR/4506/14 INTEGRITY PACT

Between

Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM) hereinafter referred to as "The Principal". And

\_\_\_\_\_

herein referred to as "The Bidder/ Contractor."

### Preamble

The Principal will nominate an Independent External Monitor (IEM) by name at the tender stage/will appoint in case of receipt of any reference, from the panel of IEMs, for monitoring the tender process and/or the execution of the contract in order to ensure compliance with the Integrity Pact by all the parties concerned.

### <u>Section 1 – Commitments of the Principal / Purchaser / Employer:</u>

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
  - a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, takes a promise for or accepts, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - b) The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - c) The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer of IISER-TVM and in addition can initiate disciplinary action.

### <u>Section 2 – Commitments of the Bidder(s)/Contractor(s)</u>

- (1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:
  - a. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's

employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract or to vitiate the Principal's tender process or contract execution.

- b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process or to vitiate the Principal's tender process or execution of the contract.
- c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)//Contractors(s) of Indian Nationality shall furnish the name and address of the foreign supplier / contract agency, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" / Contract Agencies", shall be disclosed by the Bidder(s)/Contractor(s) wherever applicable. Further, as mentioned in the Guidelines all the payments made to the Indian agent (s)/representative (s) have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign" is annexed and marked as Annexure A.
- e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

# <u>Section 3 – Disqualification from tender process and exclusion from future contracts.</u>

- (1) A transgression is considered to have occurred, if the Principal after due consideration of the available evidence, concludes that reasonable doubt is possible.
- (2) If the Bidder(s)/Contractor(s), before award of contract or after award of

Contract or during execution has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the Contract, if already awarded or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings". Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annexure - B

- (3) If the Bidder (s) / Contractor (s) has committed transgression through a violation of any of the terms under Section 2 above or in any other form such as to put his reliability or credibility into question, the Principal is entitled also to exclude the bidder/contractor from future tenders/contract award processes. The imposition and duration of the exclusion will be determined by the Principal keeping in view the severity transgression. The severity will be determined of the bv the circumstances of the case, in particular the number of transgression, the position of the transgressors within the company hierarchy of the bidder/contractor and the amount of the damage.
- (4) If it is observed after payment of final bill but before the expiry of validity of Integrity Pact that the contractor has committed a transgression through a violation of any of the terms under Section 2 above during the execution of contract, the Principal is entitled to exclude the contractor from future tenders / contract award processes.
- (5) The exclusion will be imposed for a minimum period of six (6) months and a maximum period of 3 (three) years.
- (6) If the Bidder/Contractor can prove that he has restored/recouped the damage to the Principal caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion before the expiry of the period of such exclusion.

### <u>Section 4 – Compensation for Damages</u>

- (1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award in accordance with Section 3 above, the Earnest Money Deposit (EMD)/Bid Security furnished, if any, along with the offer as per the terms of the Invitation to Tender (ITT) shall be forfeited. This is apart from the disqualification of the Bidder as may be imposed by the Principal as brought out at Section 3 above.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to forfeit the Security Deposit/Performance Bank Guarantee furnished by the Bidder/Contractor or to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee. This is apart from the disqualification of the Bidder as may be imposed by the Principal as brought out at Section 3 above.

### <u>Section 5 – Previous transgression</u>

- (1) The Bidder/Contractor declares that no previous transgressions occurred in the last 3 years with any other Company in any country conforming to the anti-corruption approach or with Government/any other Public Sector Enterprise in India that could justify his exclusion from the tender process /contract.
- (2) If the Bidder/Contractor makes incorrect statement on this subject, he can be disqualified from the tender process /contract either it can be terminated for such reason or action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings."

### <u>Section 6 – Equal treatment of all Bidders / Contractors/ Subcontractors.</u>

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all his Subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before seeking permission for such sub-contract signing.
- (2) The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

### <u>Section 7 – Criminal charges against violating Bidders / Contractors/</u> <u>Subcontractors.</u>

If the Principal obtains knowledge of conduct of a Bidder, Contractor, Subcontractor or of any employee or a representative or an associate of a Bidder/Contractor/Sub-contractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to Chief Vigilance Officer.

### <u>Section 8 – Independent External Monitor (s) (IEMs)</u>

- (1) The Principal appoints competent and credible Independent External Monitor (s) (IEMs) with clearance from Central Vigilance Commission. IEMs reviews independently, the cases referred to him/them to assess whether and to what extent the parties concerned comply with the obligations under this Integrity Pact.
- (2) In case of non-compliance of the provisions of the Integrity Pact, the complaint/non-compliance is to be lodged by the aggrieved party with the Nodal Officer only appointed by Director, IISER-TVM. The Nodal Officer shall refer the complaint/non-compliance so received by him to the IEM, already appointed or to be appointed for that case.
- (3) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports

to the Director, IISER-TVM.

- (4) The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction, to all tender/contract documentation of the Principal including that provided by the Bidder/Contractor. The Bidder/Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his tender/contract documentation. The same is applicable to Sub-contractors also. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Sub-contractor(s) with confidentiality.
- (5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the tender/contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (6) As soon as the Monitor notice, or believes to notice, a violation of this Integrity Pact, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (7) The Monitor will submit a written report to the Director, IISER-TVM within 8 to 10 weeks from the date of reference or intimation to him by the Principal and should the occasion arise, submit proposals for correcting problematic situations for the violations or the breaches of the provisions of the agreement noticed by the Monitor.
- (8) Monitor shall be entitled to compensation on the same terms as being extended to/provided to Director IISER-TVM.
- (9) If the Monitor has reported to the Director, IISER-TVM, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director, IISER-TVM has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (10) The word 'Monitor' means Independent External Monitor and would include both singular and plural.

### <u>Section 9 – Pact Duration</u>

- (1) This Pact begins when both parties have legally singed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other unsuccessful Bidders 6 months after the contract has been awarded.
- (2) If any claim is made/lodged during the valid period of the Integrity Pact,

the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Director, IISER-TVM.

### <u>Section</u> <u>10</u> – <u>Other</u> provisions

- (1) This agreement is subject to Indian Law. Place of performance and Jurisdiction is Thiruvananthapuram, Kerala.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements to this Integrity Pact have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members or their Authorised Representative (s) by duly furnishing Authorisation to sign Integrity Pact.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remaining part of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (5) Wherever he or his is indicated in the above sections, the same may be read as he/she or his/her, as the case may be.

(For & On behalf of the Principal)

(For & On behalf of Bidder/Contractor)

(Office Seal)

Place.....

Date..... Witness 1: (Name & Address): Place..... Date..... (Office Seal)

Witness 1: (Name & Address):

Witness 2: (Name & Address): Witness 2: (Name & Address):

### MODEL BANK GUARANTEE FORMAT FOR FURNISHING BID SECURITY (BS)

### THE CONDITIONS OF THIS OBLIGATION ARE:

- 1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
  - a) If the tenderer fails to furnish the performance security for the due performance of the contract.
  - b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the purchaser (IISER-TVM) having to substantiate its demand, provided that in its demand the purchaser will note that the amount claimed by it is due to it owing the occurrence of one or both the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the bank not later than the above date.

Signature of the authorized officer of the bank

Name and designation of the officer

Seal, name and address of the Bank and address of the Branch.