INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH

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IISER/PUR/PT/01/14 8th May 2014

INVITATION FOR BIDS

Sealed and superscribed **Two-Part** bids are invited for supply of following Lab Equipments

I. THERMAL EVAPORATOR

SCHEDULE

1) TENDER NO.	**:**	**IISER/PUR/4173/14**
2) DUE DATE	**:**	**30th May 2014 [3 PM]**
3) COST OF TENDER #	**:**	**Rs. 500 + 4.04% VAT**
4) EMD [BID SECURITY] **	**:**	**Rs. 2,00,000/-**

SPECIFICATIONS:

A thermal evaporator for coating metals like Au, Al, Ag, Ca, Cr, Mg, Pd etc, alloys, and compounds like MoO_3, LiF, ZnO, TiO_2, etc. The thermal evaporator is based on turbo pump and dry pump in compliance with clean room 1000 standard. There should be provisions to control the coating at 0.1 nm level and data should be provided for an uniformity of coating of ± 3% over 150 mm diameter substrate. There should be provisions for co-deposition of two materials. The system should attain a base pressure of 5×10^{-7} mbar or better within 1 hour of operation. The system should show an operating vacuum of 5×10^{-5} mbar at the time of evaporation. [Note: All pressure measurement should be done in the chamber near to the substrate kept for evaporation and not at the mouth of the pumping system. If not possible please give reasons]. Please keep in mind that this is a facility running 24 × 7 and your system should be capable of continuous running. The manufacturer/vendor should show the system performance after installation at IISER TVM as per the technical documents.

Detailed System Configuration:

1. Clean room compatible class 1000.
2. Enclosed system framework: Fully enclosed system cabinet with leveling pad with lockable caster wheels designed to support 20% extra weight of the system.
3. Compatible High Vacuum Pumping system.

4. The chamber size should be not less than 14” wide x 14” deep x 24” height (internal dimensions)

Contd...2

5. two pairs of electrodes for metals and two pairs of electrode for crucible based coating of compounds and associated power supplies.

6. Capable of co evaporation of two materials or sequential evaporation of material either manually or automatically.

7. Substrate holder with rotation system and associated control system.

8. Substrate heating and cooling system with control systems.

9. Vacuum valves, measuring gauges with associated modules.

10. Digital thickness monitoring sensors and associated module.

11. Operation in auto, semiauto or manual mode

12. Safety Interlocks like water, high voltage, vacuum.

13. Utility module for connection to utilities like water with water distribution manifold, compressed air and power etc.

14. Graphical user Interface; to provide ease of use such as recipe creation, automated recipe running and monitoring.

15. Compatible boats, baskets, filaments for metals and crucible with crucible holder for compounds

Detailed Specifications:

1. Vacuum Chamber:

1.1 A Vacuum Chamber fabricated out of non-magnetic stainless steel, SS 304 or equivalent having approximate dimensions of 14" (W) x 14"(D) x 24" (H), with large observation window/viewport. Recently it was observed that, people use Aluminum based vacuum chambers and we welcome participation of vendors who are making such chambers provided, the vendor/manufacturer give details of such chamber performance as a comparison statement with that of the performance of the stainless steel make. (for example, degassing rate, adsorption desorption data, corrosion, stability, vacuum stress analysis etc)

1.2 Box chamber with front loading type

1.3 The chamber also should have necessary ports to for electrodes, substrate holder, substrate heater, Vent valve and few blank ports with dummies.

1.4 2 set of 304L SS liners are required along with the chamber to avoid the coating in the chamber walls.

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1.5 Viewport shutter on process chamber

1.6 Suitable channels for water cooling on the chamber to be provided.

1.7 Adequate number/size of view ports should be provided for complete view of the substrates, Targets and sub-systems; arrangement to protect the coating material on view port glass to be provided.

1.8 Suitable protective shield against intense thermal loads at important locations such as high vacuum pump.

1.9 Inside the vacuum chamber there should not be any component/ port / material which are a source of out gassing, which affects the vacuum performance over continuous use.

1.10 O-ring sealed, hinged, front access door. The chamber door should be configured taking into account easy accessibility of all the internal systems for operation such as, electrodes, substrates, gas lines and cleaning material. The chamber door should be configured to open the door with reliable hinge mechanism. The door sealing leak rate should better the 10^{-8} mbar l/ sec.

1.11 The leak rate of the chamber should be better than $1x10^{-8}$ mbar l/sec, which should be demonstrated at the time of Installation.

1.12 Viton O-rings/gaskets to be used in the system (please provide technical details explaining advantages and disadvantages, also please note that the O - ring should withstand long evaporation time with slow evaporation rate as low as 0.1 nm)

1.13 The arrangements of the substrate holder, shutter and quarts crystal holder should be in such a way that, we can adjust the vertical height between the substrate and electrode from 20 to 30 cm.

2. High Vacuum Pumping System:

2.1 A Magnetically – Levitated turbo molecular pump having pumping speed of at least 680 ltrs/sec for N2 with necessary accessories like Turbo controller, connecting cables, Splinter shield, Purge/Vent valve etc.

2.2 Dry mechanical pump with appropriate pumping speed is required for roughing and also for backing of turbomolecular pump.

2.3 Note: All Vacuum Pumps, Gauges, Valves should be of reputed make (Preferably Pfeiffer make Turbo-molecular pump) from Original Equipment Manufacturers and have their own service facility with in India for supporting after sales.

Contd...4

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3. Vacuum Measurement:

(3.1) High pressure range (Atmospheric pressure to 10^{-3} mbar) using pirani gauge with accuracy better than 1% over the nominal value over the entire specified range.

(3.2) Low pressure range (10^{-2} – 10^{-10} mbar) hot cathode ionization gauge with accuracy better than 1% over the nominal value over the entire specified range. (2 gauges: One for high vacuum measurement in the chamber and another close to high vacuum pump port)

(3.3) Pressure measuring gauges like universal gauge to measure pressure right from the atmospheric pressure to 10 -10 mbar, confirming to the accuracy of better than 1% of the measured value is also acceptable. A combination of hot filament ionization, heat loss, and diaphragm sensors (of reputed make) for accurate long range pressure measurement is preferable.

(3.4) The gauges and the associated read-out modules to be of Digital display type.

(3.5) All the gauges are required to be calibrated using standard calibration method and the procedure and accuracy of the calibration to be mentioned.

(3.6) All the gauges should be interfaced and operated through centralized control system for display and automatic operation of the sputtering unit.

(3.7) Please provide the data sheet/application notes on gauges.

4. VACUUM VALVES

(1) Electro pneumatically operated high vacuum valve of suitable size for high vacuum operation.

(2) Electro pneumatically operated valve for roughing and backing operations to be provided.

(3) Electro pneumatically operated vent valve to vent the chamber as soon as the process is completed.

(4) Possibility of manually operated valves in the semi auto or manual mode operation.

5. Vacuum Requirements:

The vacuum system should be configured to achieve the following chamber pressure requirements.

1. Rough/backing vacuum : <5X10 2 mbar.

2 .High vacuum (clean and dry condition) : <3X10 7mbar.

3. Pump down time to reach 5 X 10-2 mbar from atmospheric pressure

≤ 15 minutes

4. Pump down time to reach 1X 10-6 mbar: < 60 minutes.

5. turbo molecular pump (minimum 680L/Sec) with dry pump (minimum 8m3/hr) or whichever is best to attain the above conditions.

6. Vacuum Plumbing lines:

Necessary stainless steel vacuum plumbing line for roughing and backing to be provided.

7. Chamber Gadgetries:

(i) Substrate Holder and Equipment for substrate rotation and heating:

1 The substrate holder platform and associated fixtures should have scope for provision to accommodate 1 no of 6" /4" wafer or multiple no.s of 2"wafers, and small dies down to 1 cm x 1 cm.

2 It is preferable to have gas injection ring

Contd...5

3 Provision for cleaning the substrate using ionization or better method.
4 Pneumatically actuated/manual substrate shutter
5 Vertical motion assembly for source to target separation distance variation.
6 Rotary substrate heating unit,
Quartz lamp/resistive heater providing substrate temperature in the range 500°C-600°C for a single 6" diameter sample or smaller, PID closed-loop heater temperature control via system PLC, accuracy +/-1 °C. (please provide technical details, advantages, problems associated with both heating mechanism)

Rotary vacuum feed-through with computer controlled stepper motor for continuous substrate rotation, adjustable speed (0-30 rpm)

It should include all feed-through for power, cooling-water and sensors

Components used in rotational mechanism and associated fixtures shall be SS304L

(ii) Equipment for thermal evaporation:

1 adjustable electrode pairs to hold filaments/boats/baskets/crucible holder of length varying from 2" to 4".

2 geometry and the distance between the electrdes and substrate should be prior-optimized by the equipment manufacturer to provide uniform deposition ±3% over 150 mm substrate. Proper guidelines for angle and distance selection also need to be provided.

3 Water cooled electrodes for withstanding long duration of evaporation.

4. boats, filaments, baskets, crucibles, and crucible holder with specific rating should be supplied for the evaporation materials mentioned in the tender. Please provide a constant supplier of such products for future requirements.

(iii). Power supplies for thermal evaporator

1. controllable DC power supply : 2 kW or above – 2 No (10 V, 200 A)

(a) Suitable Power Selector switches are also to be provided for sequential and co deposition

(iv). Shutter:
An electro pneumatically operated shutters made of corrosion free stainless steel should be provided to each electrode pair to prevent cross contamination. In addition to this please provide shadow masks separating each pair electrodes from each other.

(v). Digital Thickness Monitor

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1 Quartz Crystal deposition monitor with 2 channels, with water cooled dual head adjustable sensor heads with quartz crystal sensors, feed through and necessary cables.

2 The quartz crystal sensor is required to be compatible for temperature variation in the chamber.

3 Monitoring thickness accuracy should be better than 1% of the nominal value of the deposited thickness and deposition rate better than 0.1nm/sec and simultaneous display of deposition rate and coating thickness.

4 The crystal placing in the system should be in such a way that we should be able to see the coating uniformity and then at an appropriate uniform coating rate, expose the substrate to which coating need to be done

5. In addition to the individual shutter for each pair of electrodes, there should be an additional shutter above the quartz crystal and below the substrate to operate both in auto and manual mode to operate for controlling coating.

6. at least two thickness monitoring crystals should be there and two position in side the chamber and its control and accessories to operate.

7. Coating control of 0.01Å/s Quartz crystal monitor with capability to monitor thickness of 0.1Å and above till few micron (extra quartz crystals should be provided). Digital thickness monitor cum controller: A reputed make quartz crystal deposition monitor cum controller which can control 50 programmable films, 1000 layers and 100 processes; dual sensors for sequential deposition and co deposition is desired.

8. Water Manifold including the following

(8.1) Manifold for water distribution to system components

(8.2) Shut off valves

(8.3) Interlocked flow switches to critical components

(8.4) Isolated flow sensors for the individual water circuits

(8.5) Please quote for suitable recirculating water chiller. Please provide the details of the footprint of the chiller too.

9. System control:

A. Basic System Control

(i) PC based control system with rack mounted PC with touch-screen flat panel monitor, keyboard and mouse.
(ii) Incase of any problems, the system should be able to run in the manual mode too
(iii) Software should be Windows based.

Contd...7

(iv) Screen layouts should follow the guidelines of SEMI E95-0200 (Specification for Human Interface for Semiconductor Manufacturing Equipment)

(v) PC provides computer control over the following system functions with necessary displays

1 Automatic evacuation cycle

2 Operational vacuum for evaporation (control of TMP speed)

3 Display of valve position , pump status and vacuum status

4 Automatic venting cycle

5 Substrate rotation control

6 Substrate Heater control (temperature and duration)

7 electrode pair selection

8 evaporation power / duration

9 The deposition status such as indication of shutter position, deposition source status

10 Water flow switch interlock status

11 Alarming, failure indication

12 Trending of main parameter

13 User administration

B. Process Recipe development and control features

(i) Should provide for fully automatic process control

(ii) Enable recipe creation & storage using Microsoft Access database

(iii) Allows selection of a “pre-written” recipe

(iv) Allows editing of existing recipes

(v) Copy function for existing recipes

(vi) Configurable Data logging function, exportable to Excel/compatible softwares

(vii) User log also exportable to Excel/compatible software

(viii) Multilevel of password protection with user assignable access to recipes

(ix) Manufacturer should develop and program recipe for deposition of Al, Au, Ag, Cr, Ca and compunds such as MoO_3, LiF, ZnO, before supplying the system. This should be demonstrated during installation.

(x) Provision for remote diagnostics and software upgradation

Contd...8

10. Power Distribution and Safety interlocks:

(i) The thermal evaporation unit should operate under the following power conditions.

a. Power: 3phase,415 V (phase to phase),Single phase 230 V (phase to neutral); 50 Hz

(ii) Voltage variation 10%, frequency variation 5%

(iii) In case of sudden power failures, suitable protective devices should be provided in all electrical/electronic systems to prevent damages to the critical / sensitive systems of the unit.

(iv) Component wiring is routed to a centralized power distribution panel

(v) EMO Protection

(vi) Isolation transformer to be provided for safe operation.

(vii) Appropriate safety interlocks. Necessary interlocks like vacuum switches, water cutoff switches, and high voltage safety inter locks to be incorporated.

11. General Requirements:

A. Documents required:

(i) All technical documents should be in English

(ii) Should contain all the details related to the thermal evaporation unit and associated subsystems

(iii) Should contain all the information related to essential mechanical, electronic and electrical layout drawings of the main system as well as all subsystems required for maintenance and service.

(iv) Operation and Troubleshooting manual

(v) QA/ QC documents

(vi) Site preparation and utilities to be provided by IISER TVM to be specified clearly.

(vii) Please provide the details of the overall dimensions of the system including utilities.

(viii) Technical bid should include the a) Drawing of the system with internal arrangements of sub-assemblies and b) The system dimensional details of the system/foot print along with the peripherals and utilities c) Worldwide references for such systems has to be attached along with the Quotation

B. Other Requirements

(i) Warranty of 3 years.

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(ii) Indicate the cost of additional 2 years AMC contract beyond the warranty period. (itemize the cost)

(iii) Spares and Consumables: Recommended Spares for trouble free operation of the system for 5 years. Sufficient number of rapidly wearing and consumable parts is included to cover the guarantee period. Service Support: The vendor should guarantee service support with spare parts availability for a period of ten years and is essential. Please indicate the shortest turn around time for making the equipment operational from the time of reporting the breakdown. (Recommended Spares for trouble free operation of the system for 5 years to be quoted separately)

(iv) Vendor is required to install and commission the equipment at IISER TVM and demonstrate the performance of the equipment as per mutually agreed upon test/ evaluation protocol. Installation has to be carried out by the trained engineers of the Equipment manufacture.

(v) After installation of the system, the complete system has to leak tested and leak rate has to be demonstrated as per the commitment in the quotation. The claimed process capabilities of the system also have to be demonstrated. This has to be done at IISER TVM site.

(vi) Training on operation and trouble shooting of the system has to be provided during the installation.

(vii) The supplier should have their own trained engineers in India to support after sales.

(viii) Only reputed original equipment manufacturer (OEM) of international standard should only submit the tender.

(ix) Vendor shall provide list of customers (in India and abroad) along with email addresses, where the similar system has already been installed.

(x) Vendor shall quote along with above specification compliance details.

(xi) Detailed Catalogue/ Data Sheet of the quoted item.

(xii) Clientele List

(xiii) Performance Letter from the Clients.

(xiv) Detailed Compliance Sheets are to be attached along with Technical Bids for evaluation. Without detailed Compliance sheet, your offer shall summarily be rejected.

(xv) Vender should provide the following details in the quote. System foot print, Weight of the system, Infrastructure facilities required for operation of the system. Vender should supply gas and water connector fitting and non-corrosive stainless steel tubing. After sales support arrangements. Service and maintenance of the system (both preventive and breakdown) A list of essential spares/accessories that need to be kept in stock by IISER TVM. If in case of need, whether these spares/accessories are available in India with your agents/partners. If not, what is the minimum lead time required to supply them?

(xvi) The manufacturer should have supplied at least 3-5 similar units in India and should have exposed experience in operation and servicing of these tools for more than 3-5years in India

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Optional

1. In case the cleaning procedure for box type chamber is difficult as it is a multiuser facility, possibility of lifting beljar type chamber should be mentioned with its advantages and limitations .
2. Possibility or automatic and manual mode operation.
3. Possibility of aluminum chamber with necessary technical document explaining the advantages and drawbacks

II. DC & RF MAGNETRON SPUTTERING UNIT

SCHEDULE

1 TENDER NO.	**:**	**IISER/PUR/4177/14**
2 DUE DATE	**:**	**30th MAY 2014 [3 PM]**
3 COST OF TENDER #	**:**	**Rs. 500 + 4.04% VAT**
4 EMD [BID SECURITY] **	**:**	**Rs. 6,00,000/-**

SPECIFICATIONS:

Class 1000 Clean room compatible sputter system for deposition of metals/dielectrics using suitable diameter cathodes, for metals like Au, Ti, Ag, Ni, Cr, Cu, Pt, Al, Pd, Mo Niobium, Vanadium, Co and oxides like ZnO, ITO, TiO_2, Al_2O_3, SiO_2, Ta_2O_5, HfO_2, etc., These coatings are required to be deposited on glass, semiconductor wafers/substrates. The automatic-semiautomatic system should have provision for operation of DC. Pulse DC and RF sputtering, substrate heating, substrate rotation and compatible thickness monitoring and controlling facility. The sputter deposition system should be capable of simultaneous co-sputtering of various metal, non-metals and magnetic materials. The sputter deposition system should also be capable of performing reactive sputtering with necessary gas inlets. The system should maintain a vacuum of 1×10^{-3} mbar or better at the time of sputtering and a base pressure of 5×10^{-7} mbar (within 1 hour of operation) and this should be demonstrated at IISER TVM while installation. The uniformity of the coating over 150 mm diameter of the substrate should be mentioned with data. Please keep in mind that this is a facility running 24 × 7 and your system should be capable of continuous running

Detailed System Configuration:

1. Clean room compatible class 1000.
2. Enclosed system framework: Fully enclosed system cabinet with leveling pad with lockable caster wheels designed to support 20% extra weight of the system.
3. Compatible High Vacuum Pumping system.
4. The chamber size should be not less than 14” wide x 14” deep x 24” height (internal dimensions)

5. Sputtering System with sputter magnetrons – 4 numbers in confocal arrangement, (DC & Pulse DC,RF Magnetron system) and associated power supplies.
6. Capable of DC, RF, Pulse DC, Reactive and Co-Sputtering

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7. RF bias cleaning
8. Substrate holder with rotation system and associated control system.
9. Substrate heating system with control systems.
10. Vacuum valves, measuring gauges with associated modules.
11. Digital thickness monitoring sensors and associated module.
12. Gas inlet manifold and controller for N_2, O_2 and Ar and optional – 1 No.
13. Centralized computer control system interfacing all the sub systems and their related
14. Safety Interlocks like water, high voltage, vacuum.
15. Utility module for connection to utilities like water with water distribution manifold, compressed air and power etc.
16. Graphical user Interface; to provide ease of use such as recipe creation, automated recipe running and monitoring.
17. Compatible target: Cr, Au, Pt, Ti, ZnO, ITO, SiO2, HfO2, Al2O3, Pd, Tio2

Detailed Specifications:

1. Vacuum Chamber:

1.1 A Vacuum Chamber fabricated out of non-magnetic stainless steel, SS 304 or equivalent having approximate dimensions of 14" (W) x 14"(D) x 24" (H), with large observation window/viewport.

1.2 Box chamber with front loading type

1.3 The chamber also should have necessary ports to for Magnetron sources, substrate holder, substrate heater, Vent valve and few blank ports with dummies.

1.4 2 set of 304L SS liners are required along with the chamber to avoid the coating in the chamber walls.

1.5 Viewport shutter on process chamber

1.6 Suitable channels for water cooling on the chamber to be provided.

1.7 Adequate number/size of view ports should be provided for complete view of the substrates, Targets and sub-systems; arrangement to protect the sputtered coating material on view port glass to be provided.

1.8 Suitable protective shield against intense thermal loads at important locations such as high vacuum pump.

1.9 Inside the vacuum chamber there should not be any component/ port / material which are a source of out gassing, which affects the vacuum performance over continuous use.

1.10 O-ring sealed, hinged, front access door. The chamber door should be configured taking into account easy accessibility of all the internal systems for operation such as, Targets, substrates, gas lines and cleaning material. The chamber door should be configured to open the door with reliable hinge mechanism. The door sealing leak rate should better the 10^{-8} mbar l/ sec.

1.11 The leak rate of the chamber should be better than $1x10^{-8}$ mbar l/sec, which should be demonstrated at the time of Installation.

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1.12 Viton O-rings/gaskets to be used in the system (please provide technical details explaining advantages and disadvantages)

2. High Vacuum Pumping System:

2.1 A Magnetically – Levitated turbo molecular pump having pumping speed of at least 680 ltrs/sec for N2 with necessary accessories like Turbo controller, connecting cables, Splinter shield, Purge/Vent valve etc.

2.2 Dry mechanical pump with appropriate pumping speed is required for roughing and also for backing of turbomolecular pump.

2.3 Note: All Vacuum Pumps, Gauges, Valves should be of reputed make (Preferably Pfeiffer make Turbo-molecular pump) from Original Equipment Manufacturers and have their own service facility with in India for supporting after sales.

3. **Vacuum Measurement:**

(3.1) High pressure range (Atmospheric pressure to 10 -3 mbar) using pirani gauge with accuracy better than 1% over the nominal value over the entire specified range.

(3.2) MKS Baratron gauge (to monitor the sputtering process)

(3.3) Low pressure range (10 -2 – 10 -10 mbar) hot cathode ionization gauge with accuracy better than 1% over the nominal value over the entire specified range. (2 gauges: One for high vacuum measurement in the chamber and another close to high vacuum pump port)

(3.4) Pressure measuring gauges like universal gauge to measure pressure right from the atmospheric pressure to 10 -10 mbar, confirming to the accuracy of better than 1% of the measured value is also acceptable. A combination of hot filament ionization, heat loss, and diaphragm sensors (of reputed make) for accurate long range pressure measurement is preferable.

(3.5) The gauges and the associated read-out modules to be of Digital display type.

(3.6) All the gauges are required to be calibrated using standard calibration method and the procedure and accuracy of the calibration to be mentioned.

(3.7) All the gauges should be interfaced and operated through centralized control system for display and automatic operation of the sputtering unit.

(3.8) Please provide the data sheet/application notes on gauges.

4. **VACUUM VALVES**

(1) Electro pneumatically operated high vacuum valve of suitable size for high vacuum operation

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(2) Electro pneumatically operated valve for roughing and backing operations to be provided.
(3) Electro pneumatically operated vent valve to vent the chamber as soon as the process is completed.

5. **Vacuum Requirements:**

The vacuum system should be configured to achieve the following chamber pressure requirements.
1. Rough/backing vacuum : <5X10 -2 mbar.
2 .High vacuum (clean and dry condition) : <3X10 -7mbar.
3. Pump down time to reach 5 X 10-2 mbar from atmospheric pressure ≤ 15 minutes
4. Pump down time to reach 1X 10-6 mbar: < 60 minutes.
5. turbo molecular pump (minimum 680L/Sec) with dry pump (minimum 8m3/hr) or whichever is best to attain the above conditions.

6. **Vacuum Plumbing lines:**

Necessary stainless steel vacuum plumbing line for roughing and backing to be provided.

7. **Chamber Gadgetries:**

(i) Substrate Holder and Equipment for substrate rotation and heating:

1) The substrate holder platform and associated fixtures should have scope for provision to accommodate 1 no of 6" /4" wafer or multiple no.s of 2"wafers, and small dies down to 1 cm x 1 cm.

2) It is preferable to have gas injection ring

3) Provision for RF bias cleaning with 100 W/300 W RF source.

4) Pneumatically actuated substrate shutter

5) Vertical motion assembly for source to target separation distance variation.

6) Rotary substrate heating unit,
Quartz lamp/resistive heater providing substrate temperature in the range 500°C- 600°C for a single 6" diameter sample or smaller, PID closed-loop heater temperature control via system PLC, accuracy +/-1 °C. (please provide technical details, advantages, problems associated with both heating mechanism)

Rotary vacuum feed-through with computer controlled stepper motor for continuous substrate rotation, adjustable speed (0-30 rpm)

It should include all feed-through for power, cooling-water and sensors

Contd...14

Components used in rotational mechanism and associated fixtures shall be SS304L

(ii) Equipment for RF / DC sputtering:

A. Magnetron sputtering electrodes and Targets

1. Confocal geometry for "sputter up" configuration incorporating 4 magnetron sputtering electrodes accepting 2"/3" diameter targets.
2. The angle of the sputter electrodes with suitable diameter in the confocal geometry and the distance between the sputter and substrate electrodes should be prior-optimized by the equipment manufacturer to provide uniform deposition ±3% over 150 mm substrate. Proper guidelines for angle and distance selection also need to be provided.
3. Water cooled magnetron sources supported on the base plates.
4. The Magnetron Sources are compatible for both RF & DC Power Supply.
5. Gas injection ring to be provided with one of the target electrodes.
6. Please mention the method of target changing.
7. 2" and 3" targets of appropriate thickness for the following materials to be quoted along with the system : Cr, Au, Ti, Pd, Pt, ZnO, ITO, HfO2 and SiO2

B. Power supplies for the magnetron sources

1. DC power supply : 1.5-2 kW - 1 No

2. Pulse DC power supply : 5 kW - 1 No

3. RF POWER SUPPLY : 600 W - 2 No.

(i) RF Power Generators are of nominal frequency of 13.56 MHz with auto matching network to be provided in the unit to feed the RF Power to the Magnetron Source to carry out the RF Sputtering Operation.

(ii) Suitable Power Selector switches are also to be provided

C. Target Shutter:
An electro pneumatically operated target shutters made of corrosion free stainless steel should be provided to each target to prevent cross contamination.

D. Digital Thickness Monitor

1) Quartz Crystal deposition monitor with 2 channels, with water cooled dual head adjustable sensor heads with quartz crystal sensors, feed through and necessary cables.

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2) The quartz crystal sensor is required to be compatible for RF/ DC discharge in the sputtering chamber.

3) Monitoring thickness accuracy should be better than 1% of the nominal value of the deposited thickness and deposition rate better than 0.1nm/sec and simultaneous display of deposition rate and coating thickness.

4) The crystal placing in the system should be in such a way that we should be able to see the coating uniformity and then at an appropriate uniform coating rate, expose the susbstrate to which coating need to be done

8. Process gas inlet:

(8.1) 1No. of Mass flow controller, 100 sccm full scale Ar

(8.2) 1No. of Mass flow controller, 100 sccm full scale N2

(8.3) 1 No. of Mass flow controller, 20 sccm full scale O2

(8.4) This coating system should be suitable for inert gases like Ar or N2as well as O2 gas mixtures with an O2 concentration of max. 21%.

(8.5) Mass flow controllers should be of MKS make and to be supplied with all cables, and upstream pressure control electronics

(8.6) Baratron pressure transducer

(8.7) VCR fittings for the gas connections

9. Water Manifold including the following

(9.1) Manifold for water distribution to system components

(9.2) Shut off valves

(9.3) Interlocked flow switches to critical components

(9.4) Isolated flow sensors for the individual water circuits

(9.5) Please quote for suitable recirculating water chiller. Please provide the details of the footprint of the chiller too.

10. System control:

A. Basic System Control

(i) PC based control system with rack mounted PC with touch-screen flat panel monitor, keyboard and mouse.

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(ii) Software should be Windows based.

(iii) Screen layouts should follow the guidelines of SEMI E95-0200 (Specification for Human Interface for Semiconductor Manufacturing Equipment)

(iv) PC provides computer control over the following system functions with necessary displays

1 Automatic evacuation cycle

2 Operational vacuum for sputtering (control of TMP speed)

3 Display of valve position , pump status and vacuum status

4 Automatic venting cycle

5 Display of gas valve status,

6 MFC control and pressure control settings and values

7 Substrate rotation control

8 Substrate Heater control (temperature and duration)

9 Sputtering source selection

10 Sputtering power / duration

11 The deposition status such as indication of shutter position, deposition source status

12 Water flow switch interlock status

13 Alarming, failure indication

14 Trending of main parameter

15 User administration

16 It is preferable to have Source material (target) life log

B. Process Recipe development and control features

(i) Should provide for fully automatic process control

(ii) Enable recipe creation & storage using Microsoft Access database

(iii) Allows selection of a “pre-written” recipe

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(iv) Allows editing of existing recipes

(v) Copy function for existing recipes

(vi) Configurable Data logging function, exportable to Excel/compatible softwares

(vii) User log also exportable to Excel/compatible software

(viii) Multilevel of password protection with user assignable access to recipes

(ix) Manufacturer should develop and program recipe for deposition of Gold, Titanium, and oxides such as ZnO, ITO before supplying the system. This should be demonstrated during installation.

(x) Provision for remote diagnostics and software upgradation

11. Power Distribution and Safety interlocks:

(i) The sputtering unit should operate under the following power conditions.

a. Power: 3phase,415 V (phase to phase),Single phase 230 V (phase to neutral); 50 Hz

(ii) Voltage variation 10%, frequency variation 5%

(iii) In case of sudden power failures, suitable protective devices should be provided in all electrical/electronic systems to prevent damages to the critical / sensitive systems of the sputtering plant.

(iv) Component wiring is routed to a centralized power distribution panel

(v) EMO Protection

(vi) Isolation transformer to be provided for safe operation.

(vii) Appropriate safety interlocks. Necessary interlocks like vacuum switches, water cutoff switches, and high voltage safety inter locks to be incorporated.

12. General Requirements:

A. Documents required:

(i) All technical documents should be in English

(ii) Should contain all the details related to the sputtering unit and associated subsystems

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(iii) Should contain all the information related to essential mechanical, electronic and electrical layout drawings of the main system as well as all subsystems required for maintenance and service.

(iv) Operation and Troubleshooting manual

(v) QA/ QC documents

(vi) Site preparation and utilities to be provided by IISER TVM to be specified clearly.

(vii) Please provide the details of the overall dimensions of the system including utilities.

(viii) Technical bid should include the a) Drawing of the system with internal arrangements of sub-assemblies and b) The system dimensional details of the system/foot print along with the peripherals and utilities c) Worldwide references for such systems has to be attached along with the Quotation

B. Other Requirements

(i) Warranty of 3 years.

(ii) Indicate the cost of additional 2 years AMC contract beyond the warranty period. (itemize the cost)

(iii) Spares and Consumables: Recommended Spares for trouble free operation of the system for 5 years. Sufficient number of rapidly wearing and consumable parts is included to cover the guarantee period. Service Support: The vendor should guarantee service support with spare parts availability for a period of ten years and is essential. Please indicate the shortest turn around time for making the equipment operational from the time of reporting the breakdown. (Recommended Spares for trouble free operation of the system for 5 years to be quoted separately)

(iv) Vendor is required to install and commission the equipment at IISER TVM and demonstrate the performance of the equipment as per mutually agreed upon test/ evaluation protocol. Installation has to be carried out by the trained engineers of the Equipment manufacture.

(v) After installation of the system, the complete system has to leak tested and leak rate has to be demonstrated as per the commitment in the quotation. The claimed process capabilities of the system also have to be demonstrated. This has to be done at IISER TVM site

(vi) Training on operation and trouble shooting of the system has to be provided during the installation.

(vii) The supplier should have their own trained engineers in India to support after sales.

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(viii) Only reputed original equipment manufacturer (OEM) of international standard should only submit the tender.

(ix) Vendor shall provide list of customers (in India and abroad) along with email addresses, where the similar system has already been installed.

(x) Vendor shall quote along with above specification compliance details.

(xi) Detailed Catalogue/ Data Sheet of the quoted item.

(xii) Clientele List

(xiii) Performance Letter from the Clients.

(xiv) Detailed Compliance Sheets are to be attached along with Technical Bids for evaluation. Without detailed Compliance sheet, your offer shall summarily be rejected.

(xv) Vender should provide the following details in the quote. System foot print, Weight of the system, Infrastructure facilities required for operation of the system. Vender should supply gas and water connector fitting and non-corrosive stainless steel tubing. After sales support arrangements. Service and maintenance of the system (both preventive and breakdown) A list of essential spares/accessories that need to be kept in stock by IISER TVM. If in case of need, whether these spares/accessories are available in India with your agents/partners. If not, what is the minimum lead time required to supply them?

(xvi) The manufacturer should have supplied at least 3-5 similar units in India and should have exposed experience in operation and servicing of these tools for more than 3-5years in India

Optional

1. In case the contamination of target is an issue, possibility of splitting the targets into two chambers with independent operation and loading the sample through a load lock chamber without breaking the vacuum and transferring the sample from one chamber to other without showing air for in situ coating. The possibility of two groups coating at the same time without one waiting for another.

2. Possibility or automatic and manual mode operation.

3. Possibility of aluminum chamber with necessary technical document explaining the advantages and drawbacks

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III. PROFILOMETER

SCHEDULE

1. TENDER NO.	:	IISER/PUR/4179/14
2. DUE DATE	:	30th MAY 2014 [3 PM]
3. COST OF TENDER #	:	Rs. 500 + 4.04% VAT
4. EMD [BID SECURITY] **	:	Rs. 2,00,000/-

SPECIFICATIONS:

A stylus-based computerized, bench-top, high-sensitivity surface Profilometer is required, that can measure roughness and step height for variety of materials/films. It should feature the ability to measure precision step heights from ~0.5 nm to ~ 400 microns. The profiler should incorporate low force low inertia stylus assembly. It should be capable of measuring soft films and substrates without much surface damage.

Primary Uses

- Parameters to be extracted: Thin film thickness, Step height, Surface profile
- Substrate used: Silicon, Glass, and sometimes plastic substrates pasted on glass
- Sample size: minimum 1cm × 1cm, maximum 6 inch diameter wafer
- Film Thickness: Minimum 0.5 nm, maximum 1 mm

Technical Details

- **Substrate Thickness**: 1nm to 30 mm
- **Lateral Resolution**: ~ 100 nm
- **Vertical Resolution**: ~ 1 Å
- **Vertical Range**: 500 micron to 1.2 mm
- **Scan speed** : 10µm/s to 400µm/sec or better
- **Step height repeatability :** <5A° or 0.1% (1σ)
- **Step height accuracy** : <0.5% relative error
- **Stylus Force Range**: ~0.03 - 10mg (programmable)
- **Vertical Field of view (FOV)** : 0.275 mm to 2.2 mm or the best with detailed technical report on measurement performance
- **Sampling rate** : 2000 Hz
- **Sample Stage Diameter**: 6" or equivalent

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- **Scan Length Range**: 50 mm standard to 200 mm with scan stitching capability
- **Manual as well as Motorized stage** : Motorized Z –stage : 10 mm Z height capability
- **Motorized XY stage** -150 mm travel
- **Sample Viewing** : Digital magnification (please specify the technical detailes of the camera used and its advantages)
- **Standard Magnification**: 40-160 X
- **Stylus Tip** 2.5 µm radius, 45 degree cone angle standard (optional styli should be available from 25 µm radius to 50 nm radius. High Aspect Ratio with 2µm, 10 µm and 20 µm and 200 µm styli should also be available depending on application). Also, quote other types of styli we will chose according to our applications (Please provide technical data sheet mentioning the error in measurements or limitations in measurements using different diameter tips)
- **Stage Rotation**: Manual operation, 360° in X-Y plane and tilt for slope correction
- **Step Detection**: Should automatically measures up to 30 steps in a single scan
- **Computer:** Pentium 4 (minimum configuration: 3.4 GHz, 4 GB RAM, HD 1TB, DVD R/RW, Mouse, Keyboard, 22 inch LCD and color Printer, Windows 7 (32 bit) operating system, Intel i3 Processor or higher version,
- **Main features of the software: Analysis parameter:** The system should includes advanced analysis software which includes advanced parameters of Histogram, Ra, Rq, Rp, Rv, Rt ,Rz, MaxRa, Maxdev, Skew, Wa, Wq, Wp, Wv, Wt, Wmaxdev, ASH, Avg-Ht, Peak, Valley, P-V, HSC, Pc, Area, Slope, Volume, Radius, Perim, Tp, Sm, tir (with programmable cut-off filters) and multi-region analysis
- **Database Software:** Should be able to compare with the results from up to 200 scans (should provide mean and standard deviation with real-time plotting of results)
- **3D Scanning:** Should enable 3D mapping of sample area with 1 micron minimum spacing between scan lines (with up to 200 3D map locations per program) and should include the analysis software.
- **Stress Measurement:** Includes 3-point suspension stage to calculate thin film stress as either tensile of compressive (measured in Mpa).
- Able to analyze step height, roughness and waviness parameters

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- Provision should be available for extraction of raw measurement data for analysis by other means/ software.
- Desirable additional Software Features: 1. Optical Viewing of Sample, 2. Overlay of two different Images 3. File Import/ Export data from/ to other instruments/ other models of same kind or third party profilers. 4. Copy/ paste function of image to presentation programmes & for generating reports 5. Templates for repetitive work 6. Data Stitching in XY 7. Data Stitching in Z 8. High Resolution Zoom 9. Leveling & Rotation 10. Inverted & Mirror Images 11. Form & Defect removal 12. Profile Extraction 13. Roughness (2D& 3D) & Waviness Parameters 14. Material ratio (2D & 3D) 15. Step Height analysis 16. Flatness Measurement 17. Dimensional measurements in X,Y & Z axes 18. Area & Volume Parameters 19. Radius of Curvature
- **Step Height Standards**: To supply minimum two step height standards in the range of 1nm to 100µm made of Si/Quartz with NIST certificate
- Vibration Isolation System/tables as required by the system for the best performance
- Power requirement as per Indian standards
- Clean room 1000 compatibility
- Compressed Air : Specify

Essential General requirements

- Manuals : Installation, Operation & Maintenance Manuals (with all Circuit diagrams) in English (1 hard copy + 1 soft copy on CD ROM)
- Spares and Consumables: Recommended Spares for trouble free operation of the system for 5 years. Sufficient number of rapidly wearing and consumable parts is included to cover the guarantee period.
- Service Support: The vendor should guarantee service support with spare parts availability for a period of ten years and is essential. Please indicate the shortest turn around time for making the equipment operational from the time of reporting the breakdown.
- Training: Training on operation, programming, application and maintenance of the machine to be provided for 2 engineers and 2 research scholar for minimum of 15 days at IISER TVM
- After installation of the equipment at IISER TVM, following tests should be demonstrated: All measurement accuracies such as step height repeatability, scan length, etc. as mentioned in the technical specifications.
- Performance Warranty: For 36 months from the date of successful installation at IISER TVM

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- The supplier should have their own trained engineers in India to support after sales.
- Vender should provide the following details in the quote. System foot print Weight of the system Infrastructure facilities required for operation of the system. Vender should supply gas and water connector fitting and non-corrosive stainless steel tubing. After sales support arrangements. Service and maintenance of the system (both preventive and breakdown) A list of essential spares/accessories that need to be kept in stock by IISER TVM. If in case of need, whether these spares/accessories are available in India with your agents/partners. If not, what is the minimum lead time required to supply them?
- Only reputed original equipment manufacturer (OEM) of international standard should only submit the tender.
- The manufacturer should have supplied at least 3-5 Stylus profilers in India and should have exposed experience in operation and servicing of these tools for more than 3-5years
- Vendor shall provide list of customers (in India and abroad) along with email addresses, where the similar system has already been installed. Detailed Catalogue/ Data Sheet of the quoted item.
- Performance Letter from the Clients.
- Detailed Compliance Sheets are to be attached along with Technical Bids for evaluation. Without detailed Compliance sheet, your offer shall summarily be rejected

Optional

- Stylus: Submicron radius .2 micron (+/- .1 micron)
- Stylus: Submicron radius .5 micron (+/- .4 micron)
- Stylus: 2.0/2.5 micron radius
- Stylus: 5.0 micron radius
- Possibility of saftey lock mechanism for avoiding damages to the tip.

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IV. INTEGRATED DLS (DYNAMIC LIGHT SCATTERING) AND MALS (MULTI-ANGLE STATIC LIGHT SCATTERING) WITH DIFFERENTIAL REFRACTOMETER.

SCHEDULE

1.	TENDER NO.	:	IISER/PUR/4149/13
2.	DUE DATE	:	30th MAY 2014 [3 PM]
3.	COST OF TENDER #	:	Rs. 500 + 4.04% VAT
4.	EMD [BID SECURITY] **	:	Rs. 5,00,000/-

SPECIFICATIONS:

1. The system should be integrated to do Dynamic Light Scattering System (DLS) and Multi Angle Static Light Scattering (MALS) with Differential refractometer (Refractive Index - RI) detector.

2. The system should be compatible with SEC/GPC columns on any commercially available HPLC (High Performance Liquid Chromatography) and FPLC (Fast Protein Liquid Chromatography) systems.

3. The system should be capable of measuring hydrodynamic radius/molecular sizes and size distributions, absolute molecular weights (absolute molar mass) and RMS radius Rg in solution, under both on-line and batch modes.

4. Both DLS and MALS with RI detector shall be offered together as an integrated system with following specifications:

5. DLS System should have the following specifications:

a) Should be fully integrated with the MALS System for both online and off-line (batch) measurements of the molecular size information as a simultaneous measurement system (DLS+MALS) under the same software control.

b) Also users should be able to operate DLS individually without switching on MALS. DLS should be independently operated with common or individual software.

c) The system should be able to determine translational diffusion coefficient directly.

d) **Size Range:** 1 nm to 2000 nm or better with capability to determine the size distributions.

e) **Sample volume:** minimum sample volume of 2 µL or less with possibilities for higher volumes equal to or greater than 10 µL.

f) **Laser Power:** 50 mW or better, continuously programmable with capability to carryout auto attenuation of laser power for high scattering samples.

g) **Laser Wavelength:** Monochromatic wavelength within 600 nm to 830 nm.

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h) **Detector:** Photon-counting avalanche photodiode or better detector at any of the angular position between 90 to 110 Degrees of the MALS, equipped with an optical fibre that should integrate with the read head of the Multi Angle Static Light Scattering system.

i) **Correlator**: Built-in 500 or more channels autocorrelator with multi-tau distribution and a minimum delay/sampling time of 100 nsec or below.

j) **Temperature control range:** 4 °C to 90 °C or better, with stability better than +/- 0.1 °C over entire range**.** When operating below 20 °C (ambient temperature) there should be a provision for connecting a nitrogen gas/dry air supply to protect the optics from condensation.

k) **Measurement requirement:** Online – Mode (Chromatography) using the same Flow cell used for MALS and Batch Mode (with volumes from 2 µL or less). Separate quartz cuvettes 2 number each of < 2 µL and ~ 10 to ~ 50 µL should be quoted. Disposable cuvettes of good quality should also be quoted (1000 numbers).

l) **Software** The software should be able to collect, report and analyze data from DLS and SLS/MALS.. Should be capable of doing regularization analysis of unfractionated DLS data to retrieve underlying hydrodynamic radius distributions. The Software should also support cumulant mode of data fitting routine besides regularization. The software should give size and size distributions, %polydispersity or polydispersity index, cumulative distribution and absolute molecular weights. Export facility for sending results to ASCII files for processing in spreadsheet formats should be provided.

6. **<u>SLS/MALS System with differential refractometer for absolute molar mass determination</u>**

<u>SLS/MALS System:</u>

a) The system should be able to determine absolute molar mass, dn/dc, RMS radius Rg in solution.
b) **Light Source** Monochromatic Laser in range 650 - 680 nm and Laser with energy of 100-120 mW power.
c) **Detectors** Minimum 15 angles or more, spanning ~ 10 – 160 Degrees with simultaneous DLS and MALS measurement capability using low noise photodiodes or equivalent for MALS. There shall be a dedicated 90 Degree Static Light Scattering diode included in this system as one of the angles. The detectors shall have dedicated In-situ cleaning system to minimize particulate adhesion in the flow path. One of the angles should be allocated for DLS measurements.
d) **Detector Resolution** 24 bit or better
e) **Scattering Volume** 0.1 microlitres or less
f) **Operating Temperatures** Ambient / 4 °C
g) **Temperature Control** Peltier-driven temperature regulation for the read head that permits control of the cell in the range 4 °C to 90 °C or better.
h) **Molar Mass Range** $<10^4$ to 10^9 g/mole (Daltons) or more.
i) **Molecular Size Range (RMS radius)** 10 – 500 nm or more
j) **Measurement requirements:** Should be able to measure in Online – Mode (Chromatography) and Batch Mode (with volumes from 10 microlitres – 2ml). Separate assemblies (cuvettes/vials/flow cells) should be provided to measure small volumes such as 10 microlitres. 2 quartz cuvette with necessary accessories for

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batch mode should be quoted. Separate cell / flow cell should be quoted for online Mode measurement.

k) **Integration with other detectors:** Should have hardware for receiving digital signal from at least three external devices such as RI detector, UV detector and viscometry(VI) detector. Online and/or Batch mode MALS measurements must be capable of reading signal from RI detector to determine the second virial coefficient (A_2), useful in assessing the likelihood of protein crystallisation in a given solvent.

l) **Software:** Should report number, weight, Z-average molecular weights, second virial coefficient A_2 and root mean square sizes and their distributions. Shall be able to report the standard deviations of the measurements. Software should correct for the band broadening effects arising from interfacing light scattering detectors to FPLC/HPLC systems. The software should integrate with the HPLC/FPLC system for automated data acquisition. The software should also be capable of collecting and processing the UV detection from the chromatography system.

Differential refractometer (Refractive Index - RI) detector:

a) Differential refractormeter (RI detector) capable of integration with the MALS system should be provided.

b) In-line with the MALS, the RI detector should be capable to measure concentration, refractive index increment (dn/dc) and absolute refractive index. The absolute refractive index of a solvent measured by RI detector, should be read as input parameter in light scattering measurements for determining the absolute molecular mass of molecules (M_W determination) in solution, and thus should be completely independent of chromatographic elution position.

c) **Refractive Index Range:** optimized to measure required mass range measurements.

d) **Light Source**: Monochromatic Light Source with wavelength within 600 nm to 880 nm range. For differential refractive index increment dn/dc measurements, this light source must also provide same wavelength as that of the light scattering measurement MALS (for absolute molar mass determination via light scattering).

e) **Sample Temperature Control:** 4 to 40 °C or better. When operating below 20 °C (ambient temperature) there should be a provision for connecting a nitrogen gas/dry air supply to protect the optics from condensation.

f) **Fluid flow cell volume:** < 10 µL

g) **Accessories:** Necessary connectors and cables to interface with MALS – DLS integrated system should be provided. Necessary connectors, gauge for nitrogen purging at low temperatures are to be provided.

h) **Software:** Software should integrate with MALS software for providing dn/dc value measured using RI detector. It should be software that Integrates light scattering (MALS and DLS), RI, UV for absolute molar mass quantification and should be capable of later expansion to integrate viscometry (VI) measurements.

7. **UPS:** Should quote for at least 5 kVA / suitable UPS for running the instruments, computer and the printer. Should give a minimum backup time of 45 minutes for Power requirements: 230v, 50 Hz.

8. **Consumables:** Necessary consumables and spare parts, at least one set or pack as extra (including flow cells, mico cuvettes and macro cuvettes, syringe pumps, filter kits, operation and maintenance manuals, relevant publications, cleaning kits and other items to make the system fully functional for at least one year) should come with the instrument.

9. **Computer and printer**: Should come with suitable state of the art desktop computer for running the DLS, MALS and RI detector instruments for data acquisition, analysis and printing.

10. **Warranty:** 3 years comprehensive manufacturer warranty including parts, spares, labor etc. after installation must be provided on all components of instruments (DLS, MALS and RI detector) including computer and all other parts including UPS

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system from the date of Installation. Two years of AMC after the expiry of warranty should be quoted.

11. **Technical compliance Statement:** All specification details should be reflected in the company catalogue/brochure provided, as well as company website. Reference should be given to the catalogue/brochure or web page when providing specifications. Point wise technical compliance statement should be attached mentioning the page no. of the Catalogue or company website and the page no. of the Quotations.

V. SURFACE PLASMON RESONANCE

SCHEDULE

1. TENDER NO.	**:**	**IISER/PUR/4148/13**
2. DUE DATE	**:**	**30th MAY 2014 [3 PM]**
3. COST OF TENDER #	**:**	**Rs. 500 + 4.04% VAT**
4. EMD [BID SECURITY] **	**:**	**Rs. 10,00,000/-**

Surface Plasmon Resonance (SPR) based biosensor for studying Biomolecular Interactions: A flexible and automated system that provides high quality and real time kinetic data for biomolecular interactions and recovers interacting partners for further analyses is needed.

The system should be capable ofevaluating interactions of (I) Proteins with a) small molecules, b) proteins, c) DNA/RNA, d) Lipid monolayers & bilayers, and e) Virus & Cell, (2) Lipid monolayer with small molecules and (3) Lipid bilayer with small molecules with high sensitivity and superior performance.

The system should come with all associated accessories and user-friendly software(s) for operation and comprehensive analyses of the data. Ability to provide a trained application specialist and service engineer onsite should be specified.

The system must have the following minimum specifications: Advanced versions that meet the minimum specifications may also be quoted. The institute reserves the right to order a model that fits the budget.

1) The instrument must be based on established SPR technology with, laser-based detection system and three-dimensional or two-dimensional substratebased chips appropriate to study diverse interactions as mentioned above, including provisions to use a naked gold chip and to develop one's own surface chemistries.
2) Chips for immobilization of biotinylated and HIS-tagged ligands must be available. Separate chips for immobilizing lipid mono-layers and bi-layers must be available. Separate gold plated chips that enable the users to create their own chips for use in analysis must be available. These must be supplied with the necessary equipment to assemble the chips.
3) The system should provide answers about the speed, strength and specificity ofbinding, resulting in accurate measurement of association and dissociation rate constants.
4) All covalent binding chemistries, capture reagents, buffers and various chips for multiple bio-interaction studies must be available directly from the supplier.
5) Sample capacity -volume up to 2 ml.
6) Injection volume' -10-400 µl
7) Sample handling -Should be automated sample loading and injection
8) Flow rate: 10 - 100 µl/min or better
9) Sample refractive index range -1.33-1.36 refractive index units (RIU) ~

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10) In-line reference subtraction Automatic
11) Sample recovery Automatic
12) Data presentation Real time monitoring of interactions
13) Analysis temperature 15 – 37°C
14) Molecular weight detection >200 Da
15) Data acquisition rate -1Hz. Option for variable rate of data collection for binding and kinetic analysis: the lower rate for screening, and higher rate for detailed characterization experiments is desirable.
16) The system noise must be lower than 0.3 RU or better.
17) The baseline drift must be <0.5 RU or better.
18) The instrument must have a minimum dynamic response range from 0 to 50,000 RU.
19) The system should be able to work on flow rate as low as l0ul/min.
20) The system should be having the capability to directly determine the ana1yte concentration without the need for calibrants-based strategy.
21) A system should be able to integrate with MALDIIMS systems from multiple vendors and enable this feature by allowing for sample recovery and elution.
22) The Vendor should have installed the functional systems in premier institutions in India and should be able to provide on site services (List of Institutions served must be included)
23) Software: The system should come with user-friendly, comprehensive analysis software for evaluation of data produced with such high infoffi1ation content. The evaluation software must provide a dedicated analysis tool for screening, immunogenicity, thermodynamics analysis and tools for co-evaluation of multiple runs, automated normalization with molecular weight and capture levels.
24) Accessories: All necessary accessories, cables, connectors should be provided.
25) Consumables: Necessary consumables and spare parts, (including chips and buffers, operation and maintenance manuals, relevant publications, cleaning kits and other items to make the system fully functional for at least one year) should be quoted. All specification details should be reflected in the company brochure provided, as well as company website.
26) Computer: Should come with suitable good computer with latest operating system, with monitor for data acquisition, analysis and printing. A laser color printer for printing is to be provided.
27) UPS: Should come with at least 5 kVa or suitable UPS for running the instruments, computer and the printer for 45 min.
28) Warranty: 3 years comprehensive manufacturer warranty including parts, spares, labor etc. after the date of installation must be provided on all components of instruments including computer, monitor and UPS. Two years of comprehensive AMC after initial 3 years warranty should be optionally quoted.
29) Relocation: The vendor has to stand guarantee for relocation of the instruments once the permanent campus of IISER-TVM gets ready at VITHURA, (40 Kms from Thiruvananthapuram) in 2-3 years. They must be in a position to dismantle the setup in the present campus, transport and re-install them at the new campus.
30) Technical compliance Statement: Point wise technical compliance statement to be attached mentioning the page number of Catalogue and Quotation.

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TERMS & CONDITIONS

[APPLICABLE TO ALL THE ABOVE TENDERS]:

1) **Separate Bid with Tender No. & Item Name shall be separately sent for each Tender**
2) Instruction to Bidder [Annexure I] shall be followed.
3) General conditions of the Contract are as per Annexure II.
4) Integrity Pact **(for items 3, 4 & 5)** [Annexure III] shall be completed, signed, sealed and **sent alongwith Technical Bid.**
5) **#**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 I and shall also be sent alongwith Technical bid. Incase the Bid security is provided by Bank Guarantee, specimen for the same is at Annexure IV.
7) Clause 1.10[Bid Form] of Annexure I is **not** applicable for this Tender.
8) ***Tenders without Tender Cost, Bid Security and duly signed 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 **2nd June 2014 at 11 AM**. Authorized representatives of the bidders may attend the Tender Opening.

TWO – PART TENDER

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.

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

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.

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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.

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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

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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

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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

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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 un-priced 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 two-bid 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.

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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 only after technical evaluation. 1.22.2 First, envelopes 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

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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.

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(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

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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

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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.

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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

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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.

l) 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;

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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

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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.

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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.

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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

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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

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(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 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

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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 sub-contractor(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:

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(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.

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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 arbitration of some other person 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 sub-clause (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

Continued....12

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

Annexure III

IISER/PUR/4179/14
IISER/PUR/4149/13
IISER/PUR/4148/13

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 intends to award, under laid down organizational procedures, contract/s for **----------.** The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidder(s) and/or Contractor(s).

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.

Section 1 – Commitments of the Principal / Purchaser / Employer:

(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.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

(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

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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 Suppliers/ Contract Agencies" 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.

Section 3 – Disqualification from tender process and exclusion from future contracts.

(1) A transgression is considered to have occurred, if the Principal after due consideration of the available evidence, concludes that reasonable doubt is possible.

Contd....3

(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 of the transgression. The severity will be determined by 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.

Section 4 – Compensation for Damages

(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.

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Section 5 – Previous transgression

(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."

Section 6 – Equal treatment of all Bidders / Contractors/ Subcontractors.

(1) The Bidder(s)/Contractor(s) undertake(s) to demand from all his Sub-contractors 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.

Section 7 – Criminal charges against violating Bidders / Contractors/ Subcontractors.

If the Principal obtains knowledge of conduct of a Bidder, Contractor, Sub-contractor 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.

Section 8 – Independent External Monitor (s) (IEMs)

(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

Contd....5

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.

Section 9 – Pact Duration

(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.

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(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.

Section 10 – Other 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)	(Office Seal)
Place……	Place……
Date……	Date……
Witness 1:	Witness 1:
(Name & Address):	(Name & Address):
_____	_____
_____	_____
_____	_____
Witness 2:	Witness 2:
(Name & Address):	(Name & Address):
_____	_____

IISER/PUR/4173/14
IISER/PUR/4177/14
IISER/PUR/4179/14
IISER/PUR/4149/13
IISER/PUR/4148/13

Annexure IV

MODEL BANK GUARANTEE FORMAT FOR FURNISHING BID SECURITY (BS)

Whereas ..... (hereinafter called the "tenderer") has submitted their offer dated.....for the supply of..... ..... (hereinafter called the "tender") against the Purchaser's tender enquiry No..... .....KNOW ALL MEN by these presents that WE..... .....of ..... having our registered office at..... .....are bound unto .....(hereinafter called the "Purchaser) in the sum of ....for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this..... day of .....20.....

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.