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**Tender Notice No.JNTUK/DIC/Equipment/2017/1 Dt:26.03.2017**

**TENDER SCHEDULE**

 **GENERAL CONDITIONS:**

1. Please quote your lowest rates for each item described. The quotations shall reach the Registrar’s office **on or before 10.04.2017 by 4:30 PM.**Sealed covers shall be submitted for the items super scribing**“Tender No.”, “Date of opening”, and “Item Number(s)”.** The sealed covers shall be sent by the Registered Post or to be dropped in the sealed box provided in the office of the Registrar. The tender will be **opened on 11.04.2017at 10:30a.m.** by the undersigned/his nominee in the presence of the committee members and available tenderers’ or their representatives. The tenderers who submit the quotations along with a DD for **Rs. 1,000**drawn in favor of **The Registrar, JNTUK Kakinada payable at Kakinada** are only eligible to participate in the tender.
2. **EMD:** The tender documents shall be submitted along with earnest money deposit (EMD) of **Rs. 15,000/-** (Rupees Fifteen thousand only) in the form of Demand Draft in favor of **The Registrar, JNTUK Kakinada payable at Kakinada**. The Demand Draft pertaining to the E.M.D. of unsuccessful party will be returned.
3. **PRICES:** The price shall be quoted in **Indian Rupees only** and F.O.R. destination inclusive of taxes, packing & forwarding charges, freight and delivery chargers. Items on rate contract, if any together with the terms and conditions may please be furnished.
4. **PAYMENT:** 100% payment will be made within a reasonable time only after the receipt of all items in good condition and installation as per given specifications and after testing for satisfactory working and on receipt of the company’s invoice with all supporting vouchers such as copy of A.P. Sales Tax or VAT Registration certificate etc. **No advance will be paid in any case either in part or in full.**
5. JNTUK, Kakinada has been registered with DSIR, GOI and exempted from customs and central excise.
6. **ACCEPTANCE:** It is not binding on the university/ institution to accept the lowest of the tenders. The university/ institution reserves the right to place orders for individual items with different tenderers.
7. **SPECIFICATIONS:** Full specifications along with the description and MAKE shall be mentioned in the tender.
8. **Warranty/Guaranty:** Warranty/Guaranty period shall be mentioned by the tenderer.

 11. **DELIVERY:** The period of delivery at destination from date of placing orders is6WEEKS.

12. **VALIDITY:** The quotations shall be valid for at least 180 days.

13. The Institution reserves the right to cancel the tender without assigning any reason.

14. This University being Government educational institution is exempted from payment of Central/State Excise Duty.

15. Since the college is Government institution whatever conditions are applicable to any Government institute shall be applicable even if not specified.

16. Any tender that is received after due date will not be accepted. The university is notresponsible for any postal delay.

17. Attach the List of Major Customers along with the tender.

18. Any specific queries, communications, and references shall be made only to, The Registrar, JNTUK, Kakinada.

Sd/-

**Registrar**

 Encl: Equipment Details.

**Design Innovation Centre**

**Jawaharlal Nehru Technological University Kakinada**

**List of Equipment & Specifications**

**For Hub-JNTUK**

**Item No 1.Hydraulic Press- 1 number**

Pressing Capacity : 40 Tons.

Max. Stroke : 25 mm

Working capacity : 20 to 25 Tons

Pressing area : Min. dia 70mm

De-Compression from die : Gentle and slow

Digital display of set and actual Load

Speed of compaction: Up : 2.9mm/sec & Down : 4.7 mm/sec

Electrical Motor Capacity: 2 HP

It shall be suitable to compact the tungsten carbide and the ceramic powders and suitable for making the following standard cutting tool inserts:

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**Item No 2. Muffle Furnace with Inert gas atmosphere & Vacuum attachments**

Muffle furnace with vacuum attachment and argon gas attachment for inlet and outlet

Capacity – 5liters

Operation Temperature range – 100 ° C to 1100 ° C

Shall be suitable for heat treating, reacting studies, ignition tests, and gravimetric analysis

Ceramic fiber insulation for fast heat-up

Program shall allow to ramp temperature at controlled rates

Safety interlock

**Satellite Institute 1 – ANU, Guntur**

**Item No3. Humidity chamber - 1 number**

Temp and humidity microprocessor based controller

Power 230V AC

Stability test at 40degC humidity at 75%RH

Capacity 170 ltr

Inner size in cm 50x42x83

Inner body 304 SS material

Outer body MS powder coated

Unit has Chamber circulating fan

Door provided with centre glass

Steam controlled by solenoid valve

**Item No4.Incubator- 1 number**

Capacity Min 400 L

Temperature range -10 to 60 degree Celsius

Exterior Dimensions WXDXH in mm 800X800X1800

Certifications ISO 9001, 13485 & 14001 certified

Material Exterior finish of Galvanised steel with baked-onfinish and Interior finish of Stainless steel.

Door reversible doors, Galvanised steel with baked-on

finish, triple-pane glass

Insulation Foamed-in-place rigid polyurethane

Voltage 230V/50Hz

Compressor Hermetic

Circulation Forced air

Shelves 5 Nos. Polyethylene coated steel wire, adjustable

Defrosting Manual / Automatic

Temperature control Microprocessor PID system

Temperature sensor Thermistor

**Item No5.Vertical Autoclave - 1 number**

Capacity 100 ltr

Size in inches 16x28

Power 230 AC

Auto pressure control, operating pressure 15 to 18 PSI

Programmable temp controller with auto cutoff

Working temp 121deg C

Chamber made of 304 grade S.S material

Lid opening pedal lifting device.

Unit supplied safety valve, mechanical spring loaded valve,steam releasing valve.

**Item No6.High Temperature Oven- 1 number**

Oven, Temp. Range 5 to 300 Degrees C,

Temp. Accuracy +/-1.8 Degrees C,

Inside Usable Dimensions 18.9 In.H x 22 In.W x 15.8 In.D,

Overall Dimensions 34.1 In.H x 29.3 In.W x 23 In.D, Volume 3.8 cu. ft.,

Number of Doors 1,

Power Requirement 230V, 50/60 Hz,

Standards VDE, GS, CE,

Thermostat PT 100 Sensor

**For Satellite Institute 2 – IIIT, Nuzivid**

**Item No7. Probe Sonicator- 1 number**

Microprocessor based Programmable Probe Sonicator with control over probe intensity and suitable for nano-particle dispersion and creating emulsion.

Generator Power: Generator power output within 700 Watt to 750 Watt, Frequency 20 KHz.

Temperature: Temperature sensor to read up to 100°C.

Necessary tool kits, sound abating enclosure and laboratory Jack

**Item No8. FTIR spectroscopy - 1 number**

To record the spectrum of a sample in the wavelength region of 400-4000 cm-1

The spectral resolution shall be better than 0.1 cm-1

Replaceable helium-neon laser reference source

 Computer generated output

**Item No 9. Wire bonding machine- 1 number**

Ultrasonic (U/S) System: PLL self tuning (60±2.5KHz))

U/S Power Range: 0~4 watt

Bond Time Range: 0 to 0.1 sec.

Bond Force Range: 10~ 250gr.

Bondable Wire/Ribbon Materials: Ti/ Al/ Ni/ Pt/ Au/ Cr etc

Bond head movement: Motorized (servo)

Z Travel/Vertical Bonding Window: 0.7 ~ 0.750in./ 0.7~0.740 in.

Input Power Requirements: 110 - 260V AC 50/60Hz @ 10A max.

**Item No 10. Dicing Saw- 1 number**

Length of Y-table travel, Inches :9-10

Length of X-table travel, Inches :5-5.5

Z-Spindle: Standard Feature

Spindle Arbor Size, Inches : 0.4-0.5

Standard Blade Sizes (inches): 3, 4, 5, 6

Maximum Cutting Torque, 1(lowest) to 5(highest): 5

Maximum Blade Speed (RPM): 6,000

Footprint – length x depth, inches : ~27 x ~25

Height, Inches : ~21

**Item No 11. RF Sputtering unit- 1 number**

The instrument shall be able to deposit any combination of semiconductors, insulators on semiconductor/glass/metal/alloy substrates in a single run. The instrument shall have two magnetron sputtering sources.Two RF power supplies of 300 Watt each at frequency of 13~14 MHz (or preferably 13.56 MHz)with auto matching network (reputed make, such as, SEREN/ Advanced energy/ Comdel or equivalent for both the RF generator and RF Matchbox) shall be connected to each of the sources. The instrument shall have provision for substrate heating up to 600°C with temperature uniformity over the 2”Х2” substrate being ≤ ±5%.The instrument shall be able to achieve vacuum better than 2Х10-6Torr in less than 30 minutes of pumping time from atmosphere. The instrument shall be able to achieve ultimate vacuum in the range of 10-7Torr in a clean and dry atmosphere.

**Item No 12. Silanization set-up - 1 number**

Silanization Set-up Silanization is a chemical process widely used to bind or immobilize bio-receptors on to sensor surfaces. Specifications of the system Organic functional groups can be introduced on to glass and silicon oxide surfaces using different organo-silanes for covalent binding with antibodies. The home-made set-up for silanization is a glove box with built-in vacuum cum heating chamber to facilitate dehydration of samples and necessary inert ambience for chemical reaction. The temperature of heater is fully controlled using a PI controller and a thermocouple. Process Capabilities: Substrate used: SiO2, SU-8, Oxynitride, HSQ, Spin-on- glass (SOG), Glass cover slips and silica optical fibers. Substrate size: Up to 2 inch wafer Substrate temperature: up to 200°C Materialsthat can be deposited/grown: Silane (For ex. Aminosilane, Organosilane) Gasses used: Ar (Argon) Chamber base vacuum: Up to 10-3torr.

**For Satellite Institute 3 – IIIT, RK valley**

**Item No 13. Briquetting machine**

Capacity: 500 – 650kgs. / Hr.

Size of the Briquette: Cylindrical 40-50mm

Length of the briquette: 50mm to 150mm

30 HP electric motor (1440 RPM)

Complete lubrication system & 2HP electric motor

Raw material in feed size: from Granulated size to 10 mm size

Moisture content in finished Briquette: 1-5%

**Note:** The vendors shall deliver the equipment up to lab at the respective institutes. Payment shall be made by JNTUK upon receiving the satisfactory report of installation and commissioning of the equipment from the respective satellite institutes.

Sd/-

**Registrar**