College Road, Nadiad. Pin : 387001, Gujarat, India.

### FOUNDRY LABORATORY EQUIPMENTS/TOOLS REQUIREMENT FOR YEAR 2015-16 REF. TENDER NOTICE NO :

| SR NO | EQUIPMENT NAME   | EQUIPMENT SPECIFICATION  | EQUIPMENT TO USE FOR   | REQ. QTY. |
|-------|--|--|--|-----------|
| 1     | Aluminium Alloy Melting Furnace  | 5 kg Capacity (Scooping Type), 4KW   | Melting of Aluminium metal   | 1         |
| 2     | Oil Fired Lift out type Crucible Furnace with LAP type<br>Burner, Blower, Electric Starter-2 Nos., Graphite Crucible and<br>20 Ltrs Oil Tank | For Melting 8 Kg. Aluminum Metal   | Melting of Aluminium metal   | 1         |
| 3     | Moulding Sand Sampler  | As per foundry Standard requirement  | It is use to collect the representative sand sample                        | 1         |
| 4     | Sand Splitter  | Split housing with container suitable for preparation of AFS<br>or DIN cylindrical specimen  | It is use to collect the representative sand sample<br>with proper mixing. | 1         |
| 5     | Sand Washer (Clay Content Tester)  | Motor - 1/20 Hp Single Phase, Cycles – 50, Speed<br>Regulator,<br>Timer, Glass Jar, Syphon, Wash Bottle, Sieve - 53 Micron<br>Dia. 100 mm.           | It is use to find out clay % of raw sand                                   | 1         |
| 6     | Methylene Blue Clay Tester   | Stirrer - Magnetic Type, Titration Stand, Burette -50 ml.<br>Methylene Blue Bottle,conical flask.  | It is use to find out active clay % of sand.                               | 1         |
| 7     | Sand Siever with Sieve Set as per ISS No 53, 75, 106, 150, 212, 300, 425, 600, 850, 1700 Micron. Dia. 200 mm,Timer 0-15 Min                  | Motor - 1/8 Hp Single Phase, Cycles – 50   | It is use to find out AFS [Fineness No.] of sand                           | 1         |
| 8     | Rapid sand Drier   | Infra Red Lamp, 275 Watts, Drying Chamber Drying Pan   | It is use to drying the sand sample  | 1         |
| 9     | Liquid Limit   | Includes Rubber Base, Sliding Carriage, Metallic Bowl,<br>Gauge Block And Grooving Tool  | It is use to find out liquid limit of Bentonite                            | 1         |
| 10    | Sand Muller (5 kg)   | Capacity - 5 Kg [Batch], Motor with Gear Box 1/2 HP<br>Single Phase/Three Phase, Scraper, Roller - 2 Nos. two<br>ploughs, water<br>sprinkling system | It is use to mixing mulling purpose of Green Sand                          | 1         |
| 11    | Sand Mixer (5 kg)  | Capacity - 5 Kg [Batch], Motor with Gear Box1/4 HP Single<br>Phase/ Three Phase, Scraper - 2 Nos.  | It is use to mixing for co2 sand, two parts No-bake sand.                  | 1         |
| 12    | Rapid Moisture Tester  | Capacity 10 % Moisture<br>With Single Pan Balance, Absorbent Compound And<br>Carrying Case   | It is use to determine moisture % in Raw sand and Green sand               | 1         |
| 13    | Infrared Moisture Tester / Torsion Balance Moisture Tester   | Capacity 10 gm<br>Moisture With Single Pan Balance, Infrared lamp 250 w,<br>Dimmer switch, Thermometer, On off switch, sample pan,<br>reading window | It is use to determine moisture % in sand with dry and wet method          | 1         |
| 14    | Sand Rammer  | With Sliding Weight, Lifting And Ramming Cam, Specimen<br>Tube, Pedestal Cup And Stripper  | It is use to prepare standard sand specimen for further test.              | 1         |

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|-------|--|---|---|-----------|
| 15    | Attachment to Sand Rammer (15a to 15j)                           |   |   |           |
| 15a   | Base Block   |   |   | 1         |
| 15b   | Tube Filler  |   |   | 1         |
| 15c   | Tensile Core Box   |   |   | 1         |
| 15d   | Transverse Core Box  | Compatible with Sand Rammer   |   | 1         |
| 15e   | Split Specimen Tube  |   |   | 1         |
| 15f   | Compatibility Tester   |   |   | 1         |
| 15g   | Flow Ability Tester  |   |   | 1         |
| 15h   | Co2 Gassing Accessory For Compression Specimen                   | Compression Specimen Holder With Gas Sealing Facility   | It is a accessory to passing the co2 gas In Standard  | 1         |
| 15i   | Co2 Gassing Accessory For Tensile Specimen                       | Tensile Specimen Holder With Gas Sealing Facility   | It is used to prepare the standard specimen for   | 1         |
| 15j   | Co2 Gassing Accessory For Transverse Specimen                    | Transverse Specimen Holder With Gas Sealing Facility  | It is a accessory to passing the co2 gas In   | 1         |
| 16    | Gang Core Box For Compressin Specimen                            | Core Box to prepare 5 compression specimen at a time  | It is used to prepare the standard specimen for   | 1         |
| 17    | Gang Core Box For Tensile Specimen                               | Core Box to prepare 5 tensile specimen one time   | It is used to prepare the standard specimen for   | 1         |
| 18    | Gang Core Box for Transverse Specimen                            | Core Box to prepare 5 transverse specimen at a time   | it is used to prepare the standard specimen for   | 1         |
| 19    | Permiability Tester  | With Air Tank, Water Tank, Manometer Unit, Permeability<br>Chart,<br>2 Orifices And Syphon Unit   | It is use to determine porosity in Raw sand, Green,<br>Nobake sand                                      | 1         |
| 20    | Universal Strength Machine (Hudraulic)                           | Suitable For Compression Strength, Tensile Strength,<br>Transverse Strength With The Help Of Attachment,<br>Capacity: For High Gauge 13 Kg/Cm2 OnCompression<br>Scale, For Low Gauge 1600 Gms/Cm2 On Compression<br>Scale With Compression Pads | It is use to determine Compression Shear, Tensile<br>strength of Green sand and No-bake sand ,co2 sand. | 1         |
| 21    | Attachments To Strength Machine (21a to 21g)                     |   |   |           |
| 21a   | High Dry Strength Attachments (For Hydraulic) Range 0-150 Kg/Cm2 |   |   | 1         |
| 21b   | Shear Sterngth Attachments                                       |   |   | 1         |
| 21c   | Tensile Sterngth Attachments                                     |   |   | 1         |
| 21d   | Transverse Sterngth Attachments                                  | Compatible with Universal Strength Machine (Hydraulic)  |   | 1         |
| 21e   | Splitting Strength Attachments                                   |   |   | 1         |
| 21f   | Twin Transverse Strength Attachments                             |   |   | 1         |
| 21g   | Deformation Attachments (Hydraulic)                              |   |   | 1         |
| 22    | Mould Strength Tester  | With Dial Indicator with Special Tip to Measure<br>Compression Strength on direct Mould. Capacity 2 Kg/cm2  | It is use to determine compression strength of Mould.   | 1         |
| 23    | Mould Hardness Tester ("B" Scale)                                | Dial Indicator To Measure Hardness of Mould 0 – 100 No  | It is use to determine surface hardness of Green<br>Mould   | 1         |
| 24    | Mould Hardness Tester ("C" Scale)                                | Dial Indicator To Measure Hardness of Mould 0 - 100 No.   | It is use to determine surface hardness of Green<br>Mould   | 1         |
| 25    | Core Hardness Tester   | Harden Tip to Measure Hardness of Cores 0 To 100 No.  | It is use to determine surface hardness of Core<br>Mould.   | 1         |
| 26    | Mouldability Tester  | Sieve Drum, Timer, Infra Red Lamp, Pan & 9.5mm Sieve  | It is use to determine the mouldability index of green sand.  | 1         |

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|-------|---|-------------------------|----------------------|-----------|
|       | FOUNDRY TOOLS   |                         |                      |           |
| 27    | Cast Iron Moulding Box - 12" x 12" x 4"                 |                         |                      | 4         |
| 28    | Cast Iron Moulding Box - 14" x 15" x 4"                 |                         |                      | 4         |
| 29    | Cast Iron Moulding Box Rundle Type - 350 x 380 x 100 mm |                         |                      | 4         |
| 30    | Wooden Mouldiing Board                                  |                         |                      | 2         |
| 31    | Strike off Bar  |                         |                      | 2         |
| 32    | Runner Pin  |                         |                      | 2         |
| 33    | Riser Pin   |                         |                      | 2         |
| 34    | Gate Cutter   |                         |                      | 2         |
| 35    | Smoother  |                         |                      | 2         |
| 36    | Trowels   |                         |                      | 2         |
| 37    | Hand Rammer   |                         |                      | 2         |
| 38    | Spirit Level  |                         |                      | 2         |
| 39    | Lifter  |                         |                      | 2         |
| 40    | Heart and Square  |                         |                      | 2         |
| 41    | Hand Riddle   |                         |                      | 2         |
| 42    | Bucket  |                         |                      | 2         |
| 43    | Draw Spike  |                         |                      | 2         |
| 44    | Galvanized vent wire                                    |                         |                      | 2         |
| 45    | 2" Brush  |                         |                      | 2         |
| 46    | Draw Screws and lifting plate                           |                         |                      | 2         |
| 47    | Electronic Weighing Balance (10 kg Capacity, 0.5 gm)    |                         |                      | 2         |
| 48    | Shovel  |                         |                      | 2         |
| 49    | Bellows   |                         |                      | 2         |
| 50    | Wooden Mallet   |                         |                      | 2         |
| 51    | Moulding Tool Kit Set of 29 Nos.                        |                         |                      | 1         |
| 52    | Medium weight rowing head with handle                   |                         |                      | 2         |
| 53    | Light weight rammed head                                |                         |                      | 2         |
| 54    | Sieve for sand of different sizes of mesh 3 sieves      |                         |                      | 2         |
| 55    | Plastic Mug   |                         |                      | 2         |
| 56    | Graphite Crucible no. 3                                 |                         |                      | 2         |

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|-------|---|-------------------------|----------------------|-----------|
|       | PATTERNS  |                         | ·                    |           |
| 57    | Flange Model (Aluminium)                              |                         |                      | 2         |
| 58    | Gland Model (Aluminium)                               |                         |                      | 2         |
| 59    | Bush Model (Wooden)                                   |                         |                      | 2         |
| 60    | Gear Pattern (Aluminium)                              |                         |                      | 2         |
| 61    | Straight Pipe With Core Box ( Split Type - Wooden )   |                         |                      | 1         |
| 62    | Bend Pipe with Core Box ( Split Type -Aluminium )     |                         |                      | 1         |
| 63    | Cube Pattern (Wooden)                                 |                         |                      | 1         |
|       | CONSUMABLES ITEMS                                     |                         |                      |           |
| 64    | Bentonite Powder                                      |                         |                      | 50 Kg.    |
| 65    | Coal Powder   |                         |                      | 50 Kg.    |
| 66    | Fire Clay Powder                                      |                         |                      | 50 Kg.    |
| 67    | Core Oil (Linseed Oil)                                |                         |                      | 20 Litre  |
| 68    | Foundry Moulding Sand                                 |                         |                      | 10 tons   |
|       | SAFETY EQUIPMENTS                                     |                         |                      |           |
| 69    | Fire Extingusher , CO <sub>2</sub> Capacity - 02 Kgs. |                         |                      | 02 Nos.   |

#### **TERMS & CONDITIONS :**

- **1** Partly supplied quotations will not be considered.(Quotation for all above requirement is mandatory)
- 2 Supplied quotation should be included with all relevent taxes, Installation charges, Transfortation Charges and any aditional charges if applicable, F.O.R, DDU, Nadiad.
- **3** Payment terms and conditions should be as per university norms.
- 4 Delivery date for the required equipments should be clearely mentioned in the quotation.
- 5 Sealed quotation should be addressed to "The Vice Chancellor, Dharmsinh Desai University, College Road, Nadiad, Pin: 387001, Gujarat"
- 6 Quotation should reach on or before <u>04.11.2015</u> to above said address.Late received quotation will not be considered.