

3.

6.

# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

### CONTRACT SCHEDULE

Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021
Name & Address of Contractor: M/s. Wali Global. Kar

M/s. Wali Global, Karachi 7051/2021 Date 21-06-2021

Chairman, Civil Engg. Deptt.

Indenter's Name & Address: Indenter's Indent No & Date:

Contractor's Tender No.:

Particulars of stores:

As below.



| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store  | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|---|---------------|------------------|-----------------------|--------------|
| 01                 | WQL-36                 | TOC Analyzer Measurement Method: 680 °C combustion catalytic oxidation- Non dispersive infrared detection (NDIR) method Operation Method: PC-Controlled | Nos.          | 7,838,462.00     | 01                    | 7,838,462.00 |
|                    |                        | Measured items: TC, IC, TOC (=TC-IC), NPOC (TOC Measurement via acidification and sparging)   |               |                  |                       |              |
|                    |                        | Applicable Samples:<br>Aqueous (optional solid/ gas samples)  |               |                  |                       |              |
|                    |                        | Measurement Range: TC: 0 to 30,000 mg/L IC: o to 35,000 mg/L  |               |                  |                       |              |
|                    |                        | Detection Limit: TC, IC: 4 μg/L, TN: 5 μg/L<br>Reproducibility : TC, IC, NPOC: CV 1.5%  |               |                  |                       |              |
|                    |                        | max. or ±4 μg/L max  Measuring Time: TC: approx 3 min, IC; approx., 3 min.  |               |                  |                       |              |
|                    |                        | аругох., э ини.   |               |                  |                       | 7,838,462.00 |
|                    |                        | Add: GST 17%  |               |                  |                       | 1,332,538.54 |
|                    | Total (inclu           | sive all federal and provincial taxes and duties)   |               |                  |                       | 9,171,000.54 |

#### INSTRUCTIONS:

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

GRAND TOTAL (Value in Words) Nine Million One Hundred Seventy One Thousand Only

- Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please 7. immediately intimate to the procurement cell).
- Place of Delivery: NED University Campus/Consignee.
- Civil Engineering Department (Water Institute) 9. Name & Address of Consignee:
- Performance Security equivalent to 5% of 10. Contract Schedule is required at the earliest.
- 11. Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- Dispatch Instruction. 12.
- 13. Inspecting Officer.
- Place at which to be inspected. 14.
- 15. Payment.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

The consignee/ Indenting officer or his authorized representative. At firms premises/ Consignee's end.

- 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- % Payment in advance along with contract/and balance ii after complete delivery and in proof of consignee's receipt during the year 2021 - 2022.
- If the supply is not according to the specifications or iii. unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- If the firm fails to execute the contract/supply order as per iv. condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- In Case of late delivery L.D. charges @ 0.1% per day will be V. imposed. Part payment against part supply is/ not allowed.
- Valid Professional Tax Certificate is required for payment. vi.

#### NOTE

- 1. The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- 2. The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

Zaw Assistant Director Procurement-II

For & on behalf of Vice Chancellor NED University of Engg. Tech.



7.

# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

## CONTRACT SCHEDULE

Contract No: PC(WI)NED, Equip/W.Q.Lab./03/7051/2021

Name & Address of Contractor:

Contractor's Tender No.:

Indenter's Name & Address:

5. Indenter's Indent No & Date:

6. Particulars of stores:

M/s. PakFil Technologies, Lahore.

Nil, Date 16-06-2021

Chairman, Food Engg. Deptt.

14626/160321/FED, 16-03-2021

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store   | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value |
|--------------------|------------------------|--|---------------|------------------|-----------------------|-------------|
| 04                 | WQL-04                 | Ammonia Electrodes and pH-mV Meters + Extra Filling Solution and Electrode Membrane:  Model: STARA2146 Orion Star A214 pH/ISE Benchtop Meter Kit for Ammonia Supplier: Thermo Scientific Part of Thermo Fisher Scientific, USA  Specifications: Nonvolatile memory holds up to 2000 data points with time date stamp Option of AC power or four AA batteries A large backlit, graphic LCD shows measurement with temperature along with electrode status, time/date, sample ID, user ID, and calibration data. Up to five-point automatic calibration with USA/NIST and DIN buffers, auto-buffer recognition, and recalibration feature to fix calibration errors. Kit should Include: High- performance ammonia I pH electrode ATC probe, Star stirring probe, 475-mL each of 1000 ppm standard, and storage solution, swing-arm electrode holder, and universal power adapter. | Nos.          | 570,000.00       | 01                    | 570,000.00  |

| 24 | WQL-28 | Portable pH meter:   | Nos. | 226,496.00 | 01 | 226,496.00 |
|----|--------|--|------|------------|----|------------|
| 12 |        | Model: STARA2215 Orion Star A221 pH Portable Meter Standard Kit Supplier: Thermo Scientific Part of Thermo Fisher Scientific, USA  |      |            |    |            |
|    |        | Specifications:  AC Adapter Universal 50-60 Hz, 100-240 VAC power adapter Accuracy (mV) ±0.2 mV or ±0.05% of reading whichever is greater Accuracy (pH) ±0.002 Alarm Output High/low limit alarm, calibration due alarm Backlight Option Yes, selectable Battery Life 800 hr. Battery Type 4 x AA Calibration pH with calibration editing option, relative mV (RmV), ORP and temperature Calibration Points 1 to 5 Certifications/Compliance CE, TUV 3-1, FCC Class A Data Points 5000 with date and time stamp Dimensions (L x W x H) 24cm x 10cm x 6.5cm (9.5 in. x 3.9 in. x 2.6 in.) pH meter, ROSS Ultra gel-filled epoxy-body pH/ATC electrode with 3m cable, pH 4/7/10 buffer and rinse pouches, ROSS storage solution, protective meter armor, hard-sided carrying case, 4 AA batteries, computer cable InputsBNC (pH or ORP electrode), pin-tip (reference electrode), 8 pin MiniDIN (ATC temperature probe) Isopotential Point 7.000 pH Keypad Comprehensive with menu-specific function keys and dual purpose scroll/shortcut keys Languages English available with software update Log Function Type Automatic data logging with Auto-Read and Timed measure modes; manual data logging with Continuous m Memory Non-volatile memory |      |            |    |            |
|    |        | preserves data log, calibration log and meter settings   |      |            |    |            |

| Methods 10 per channel with          |         |               |           |   |
|--------------------------------------|---------|---------------|-----------|---|
| password protection                  |         |               |           |   |
| Model                                |         |               |           |   |
| pH/mV/RmV/ORP/Temperature            | s       |               |           |   |
| Portable Meter                       |         |               |           |   |
| Power Supply Universal AC            |         |               |           |   |
| adapter (included) or 4 AA batteries |         | The same of   |           | 0.239                                   |
| Probe Type pH electrode, ORP         |         | 1 1 1 1 1 1 1 | B. X 1    |   |
| electrode, reference half-cell       |         |               |           | 4 (4                                    |
| electrode, ATC temperature probe     |         |               |           |   |
| Range (ORP) ±2000.0 mV               | Valle   |               | 200 B     |   |
| Range (Relative mV)±2000.0 mV        |         | 4 1 - 27      | 1 325 2 4 |   |
| Relative Humidity Range 5 to 85%,    |         |               |           |   |
| non-condensing                       |         |               |           | * |
| Resolution (mV) 0.1mV                |         |               |           |   |
| Temperature Accuracy ±0.1°C          |         |               |           |   |
| Temperature Operating 41°F to        |         |               |           |   |
| 113°F (ambient)                      | 1       |               |           |   |
| Temperature Operating 5°C to         |         |               |           | 20 1                                    |
| 45°C (ambient)                       |         |               |           |   |
| Temperature Probe Calibration 1      |         |               |           |   |
| point temperature offset calibration |         |               |           |   |
| Temperature Range (English) 22.0°F   |         |               |           |   |
| to 221.0° F                          |         |               |           |   |
| Temperature Resolution 0.1°C,        |         |               |           |   |
| 0.1°F<br>Temperature Selection       |         |               |           |   |
| Weight (Metric) 0.5 kg               |         |               |           | 1 - 1                                   |
| Display Type LCD Graphic, Backlit    |         |               |           |   |
| Measurement Modes pH, mV,            |         |               |           |   |
| relative mV (RmV) or ORP with        |         |               |           | e Brallan                               |
| temperature                          |         |               |           |   |
| Outputs USB, RS-232                  |         |               |           |   |
| Range (mV) ±2000.0 mV                |         |               |           |   |
| Range (pH) -2 to 20                  |         |               |           |   |
| Resolution (pH) 0.1/0.01/0.001       | And and |               |           | in the second                           |
| Temperature Range (Metric) -         |         |               |           |   |
| 5.0°C to +105.0°C                    |         |               |           |   |

| 34 | WQL-39 | Spectrophotometer:  | Nos. | 900,000.00 | 01 | 900,000.00 |
|----|--------|---|------|------------|----|------------|
|    |        | Model: AQ8100 AquaMate 8100 UV-Visible Spectrophotometer Supplier: Thermo Scientific Part of Thermo Fisher Scientific, USA  | us.  |            |    |            |
|    |        | Specifications:  Double beam UV/Vis spectrophotometer covering 190-1100nm  Compact design, Colour Touch screen display with easy-to-use software built in USB connectivity for method and     |      |            |    |            |
|    |        | results storage plus connection to a PC Photometric system: Monitor double beam optics Monochromator: Weight Uses an aberration correcting concave  |      |            |    |            |
|    |        | holographic grating Wavelength range: 190.0 to 1100.0 nm Spectral bandwidth: 5 nm Detector: Silicon photodiode Light source: 20 W halogen lamp, Deuterium lamp                                |      |            |    |            |
|    |        | Output device: USB memory PC control: UV Probe control Nano Stick microliter cuvette: Designed for micro volume measurements; sample volume required should be atleast 2 µl with              |      |            |    |            |
|    |        | standard and buffer Environmental requirements: Temperature: 15 °C to 35 °C Humidity: 30 % to 80 % Humidity of 70 % or less at temperatures of 30 °C or higher Dimensions: W416 × D379 × H274 |      |            |    |            |
|    |        | mm Software mode: Photometric mode, Spectrum mode, Quantitation mode, Kinetics mode, Time scan mode, Multi-component quantitation mode, Biomethod mode  |      |            |    |            |
|    |        | Parameters: Residual Chlorine (Free), Free Cyanide, Total Cyanide, COD, Color, Chromium (Hexavalent), Total Chromium, Copper, Fluoride (Free), Iron, Iron                                     |      |            |    |            |

| Hydrogen F<br>Ammonium,<br>Nickel, Nitr<br>Nitrate-Nitrog<br>Phenol,<br>Phosphate, F<br>Sulfide (Hyd<br>Hardness,<br>Turbidity, Zir<br>Accessories: A<br>Multi-Sample<br>Analysis Prog<br>Core i5 11th<br>IV, 1TB hard<br>19", Keyboat<br>128bit GDE   | ge), Formaldehyde, Peroxide, Manganese, Ammonium-Nitrogen, rite, Nitrite-Nitrogen, gen, Nitrate, Lead, Phosphate-Phosphorus, drogen Sulfide), Total ac All necessary including Measurements, Water gram Software Generation, 8 GB DDR d disk, DVD RW, LCD and Mouse), 4GB DR6 Video Graphics er (HP LaserJet pro |      |      |              |
|--|--|------|------|--------------|
| The second secon | Add: GST 17%   |      | <br> | 288,404.00   |
| Total (inclusive all federal and pr  | ovincial taxes and duties)   | •••• | <br> | 1,984,900.00 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

# GRAND TOTAL (Value in Words) One Million Nine Hundred Eighty Four Thousand Nine Hundred Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee: Civil Engineering Department (Water Institute)
- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

13. Inspecting Officer.

The consignee/ Indenting officer or his authorized representative.

At firms premises/ Consignee's end.

- 14. Place at which to be inspected.
- 15. Payment.

- 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 2022.
- iii. If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- v. In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

#### NOTE

- The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.



# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

# CONTRACT SCHEDULE

Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021 2. Name & Address of Contractor:

M/s. Rastek Technologies, Karachi

3. Contractor's Tender No.: 4. Indenter's Name & Address:

7051/2021 Date 21-06-2021

5. Indenter's Indent No & Date: Chairman, Civil Engg. Deptt.

6. Particulars of stores:

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store  | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|---|---------------|------------------|-----------------------|--------------|
| 01                 | WQL-05                 | Anaerobic Digester Model: W8-A A benchtop anaerobic digester for waste water treatment studies  | Nos.          | 2,949,106.67     | 01                    | 2,949,106.67 |
|                    |                        | Equipped with two 5l packed bed, upward-flow reactors   |               |                  |                       |              |
|                    |                        | Each reactor has gas sampling & collection facilities   |               |                  |                       |              |
|                    |                        | Reactors may be operated in series or parallel flow arrangement, using variable-speed peristaltic pumps   |               |                  |                       |              |
|                    |                        | Feed flow rate to each reactor can be accurately & independently controlled to any temperature between ambient and 55°C, using 200W heating jackets |               |                  |                       |              |
|                    |                        | Thermostatic cut-out set to 110°C   |               |                  |                       |              |
|                    |                        | Operational manual with teaching exercises including details of a proven feedstock (synthetic waste water) included                                 |               |                  |                       |              |
|                    |                        | Technical Specifications:   |               |                  |                       |              |
|                    |                        | Reactors:   |               |                  |                       |              |
|                    |                        | Two identical reactors  |               |                  |                       |              |
|                    |                        | Nominal capacity: 5L  |               |                  |                       |              |
|                    |                        | Packed volume: 4L   |               |                  |                       |              |
|                    |                        | 150mm dia x 250mm high  |               |                  |                       |              |
|                    |                        | Reactor packing:  |               |                  | 1000                  |              |
|                    |                        | 25mm diameter Bio-balls   |               |                  |                       |              |
|                    |                        | Temperature control:  |               |                  |                       |              |
|                    |                        | For each reactor 200W heating jacket with PID control from a temperature sensor positioned inside the reactor,                                      |               |                  |                       |              |
|                    |                        | set point within range ambient to 55°C,   |               |                  |                       |              |
|                    |                        | the jacket is thermostatically protected by a cut-out set at 85°C   |               |                  |                       |              |
|                    |                        | Feed pumps:   |               |                  |                       |              |

|           | Two identical peristaltic pumps variable speed using 10 turn potentiometer to 4rpm supplied with three tube diameters, 1.6, 3.2 and 4.0mm, flow rates from 0.2 to 5.8 l/day Reactor vessel: 2 x 5L (4.3L packed sestion) Gas collecting vessel: 2 x 5L Heat jacket: 2 Temperature sensor: 2 Pump: 2 x 0-40mL, supplied with 4.0, 3.2 and 1.6mm tubes M/S. ARMFILED LTD., UK  |      |              |    |              |
|-----------|--|------|--------------|----|--------------|
| 02 WQL-21 | Model Sedimentation Tank Model # W7-MkIl-A The W7MkIl has been designed to demonstrate the hydraulic characteristics and settling efficiencies of a model settling basin. Although scale-up to industrial size sedimentation tanks is difficult, relevant deductions can be made as to how nonuniform flows occur and how these interact with the settling characteristics of particular suspensions. Sedimentation tank of 97L capacity 120L sump tank via a centrifugal pump. A flow sparge device in the sump tank keeps the slurry in suspension Both supplies are fitted with a flow meters. Mains water flow meter range is 0.5-5.0 L/min; slurry flow meter range is 0-2 L/min 1 X Burette mount 3 X 1L Imhoff cones 1 X Imhoff cones 1 X Imhoff cones rack 1 X 600ml sample vessel 2 X stiffener bar 1 X adjustable inlet weir 1 X 1L bottle, Armfield blue dye with COSHH sheet 25Kg precipitated Calcium Carbonate & safety data sheet Operational manual with teaching exercises Technical Specifications: Sedimentation tank: 97L Acrylic settling tank: 1.05m x 0.35m x 0.2m Feed tank capacity: 120L Sediment flowmeter range: 0 - 2 L/min Water flowmeter range: 0.5 - 5 L/min Pump flow rate: 60 L/min @ 15m head M/S. ARMFILED LTD., UK | Nos. | 3,996,586.67 | 01 | 3,996,586.67 |

| <b>A</b> |              | ACCESSORY Triple Beam Balance Model # INSTA059  M/S. ARMFILED LTD., UK   | Nos. | 92,800.00  | 01 | 92,800.00    |
|----------|--------------|--|------|------------|----|--------------|
| 03       | WQL-27       | Permeability / Fluidization Studies Apparatus Model FM 63 M/s. Sci-tech Uk   | Nos. | 699.999.00 | 01 | 699.999.00   |
| 04       | WQL-32       | Sedimentation studies  Sedimentation Studies Apparatus Model FM 62 M/sSci-tech Uk  Includes: Triple Beam Top Loading Balance: Capacity: 2610g  | Nos. | 721,000.00 | 01 | 721,000.00   |
|          |              | The state of the s |      |            |    | 8,459,493.00 |
|          |              | Add: GST 17%   |      |            |    | 1,438,113.81 |
|          | Total (inclu | sive all federal and provincial taxes and duties)  |      |            |    | 9,897,606.81 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment

Inspection Certificate may be issued by Indenting Department.

GRAND TOTAL (Value in Words) Nine Million Eight Hundred Ninety Seven Thousand Six Hundred and Six Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee: Civil Engineering Department (Water Institute)
- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- 11. Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act
- equivalent to rate as specified in Stamp Act.
  - Dispatch Instruction.
    - Inspecting Officer.

      The consignee/ Indenting officer or his authorized representative.

At firms premises/ Consignee's end.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

Place at which to be inspected.

i. 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.

15. Payment.

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- 5. Case File

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.



# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

## PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

# CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021 2. Name & Address of Contractor:

M/s. Rays Technology, Karachi 7051/2021 Date 21-06-2021

3. Contractor's Tender No.: 4. Indenter's Name & Address:

Chairman, Civil Engg. Deptt.

5. Indenter's Indent No & Date:

Particulars of stores:

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store   | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value |
|--------------------|------------------------|--|---------------|------------------|-----------------------|-------------|
| 01                 | WQL-42                 | Water Purification System Omnia Tap 6  Omnia Tap gives pure water and ultrapure water (ASTM I & II) for QC Labs, Analytical Labs in Universities, Pharma, Chemical Industrial & for Research & Development. It is compact unit and can be directly connected to the  | Nos.          | 850,000.00       | 01                    | 850,000.00  |
|                    |                        | Feed Water requirements: Drinking water according to DIN 2000, Feed water temperature +2°C to 35° Feed water pressure 1 to 6 bar, Managese and iron content < 0.05 mg/l Free chlorine content < 1 mg/l, Silt density index (SDI) max. 3  |               |                  |                       |             |
|                    |                        | $\begin{array}{lll} \textbf{Type 1 ultrapure water} \\ \textbf{Conductivity } \mu \textbf{S/cm} & 0.055 \\ \textbf{Resistance } M\Omega \textbf{ x cm} & 18.2 \\ \textbf{TOC-value * ppb} & 5-10 \\ \textbf{Dispensing performance 1/min.} & \textbf{up to 2} \\ \textbf{Particles **/ml} & <1 \\ \textbf{Bacteria ** CFU/ml} & <0.1 \\ \end{array}$ |               |                  |                       |             |
|                    |                        | Typical applications:- Life Sciences, Cell and tissue cultures, molecular biology and microbiology  Type II pure water  Pure water performance I/h at 15 °C 6  Conductivity $\mu$ S/cm 0.067 - 0.1  Resistance M $\Omega$ x cm 15-10  Pure water tank pressurized outlet yes   |               |                  |                       |             |
|                    |                        | With built in 10 litre Tank Operated on 220 Volts, Model Omnia Tap6 Stakpure Made in Germany   | 11 15 17      |                  |                       |             |

|                                     | e de la companya della companya della companya de la companya della companya dell |             | 850,000.00     |
|-------------------------------------|--|-------------|----------------|
| -3                                  | Add: GST 17%   | <br>- veres | <br>144,500.00 |
| Total (inclusive all federal and pr | ovincial taxes and duties)   | <br>        | <br>994,500.00 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
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#### NOTE

1 The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.

2. The Bill in duplicate along with inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

#### Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

(Zall)

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.

Dated:



# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

## PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

## CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021

2. Name & Address of Contractor: 3. Contractor's Tender No.:

4. Indenter's Name & Address:

5. Indenter's Indent No & Date:

6. Particulars of stores:

M/s. Marium & Co., Karachi. Nil, Date 22-06-2021

Chairman, Civil Engineering Department

\_, 16-03-2021

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store  | Acct.<br>Unit | Price per A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|---|---------------|---------------|-----------------------|--------------|
| 17                 | WQL-20                 | LIBELIUM-E-BERRY SMART AGRICULTURE SOLUTION KIT OR EQUIVALENT IOT KIT:  Specifications:   | Nos.          | 773,000.00    | 05                    | 3,865,000.00 |
|                    |                        | Libelium-e-Berry smart Agriculture Solution Kit IoT Kit External Temperature, Humidity and Pressure Probes, Soil moisture 1.5 m Probe, Soil moisture 4.5 m Probe, Leaf wetness probe, anemometer, wind vane and pluviometer probe. 1.5 m probe extender, Outdoor USB Cable, International adapter, External solar panel 7V – 500mA (power accessory) along with PC software and data transfer platform. Libelium-e-Berry Smart Agriculture Solution Kit  Make: LIBELIUM-E-BERRY |               |               |                       |              |

| 30 | WQL-35 | TEMPERATURE CHAMBER:   | Nos. | 2,744,000.00     | 01 | 2,744,000.00 |
|----|--------|--|------|------------------|----|--------------|
|    | 10/13  | Temperature Test Chamber<br>Model: T-230C  |      |                  |    |              |
|    |        | Specifications:  |      | A 50 0 0 0 0 8 7 |    | -            |
|    |        | Temperature Chamber can realize both high and low temperature test.  Yes.  - 73°C to +175°C - Yes.  T-230C can perform the high and low temperature cycle in the range of -73°C to +175°C. If perform the test at 73°C, standard type T-230C cannot achieve. It needs to reinforce the cooling power,  Temperature Range (opt. to +205°C)  - T-230C temperature range is -73°C to +180°C.  7 Cu Workspace, 24 W x 21 H x 24 D (198 Liters) - Yes. Chamber T-230C has a bigger space than the customer needs. It is 26" W*22" H *26"D (232 Liters).  Programmable Temperature Controller - Yes  RS-232 Interface (Opt. GPIB and Ethernet)  The interface of our chamber is Ethernet and USB. RS232 already be replaced.  High/Low Limit Control and Alarm - Yes.  Viewing Window & Interior Light - Yes.  4" Access Ports on Left & Right Side - Yes. A 4" access ports on the left side of the chamber  Non-CFC Cascade Refrigeration - Yes. |      |                  |    |              |
|    |        | Make: LIB Environment Industry<br>China.   |      |                  |    | 9.           |

|         | *            |  |  |                   |    |              |
|---------|--------------|--|--|-------------------|----|--------------|
| 33*     | WQL-38       | ULTRACENTE FUGE<br>(REFRIGRATED):<br>Model: D1524R   | Nos.                                     | 924,000.00        | 01 | 924,000.00   |
|         |              | Refrigerated centrifuge that can handle Yes sample tubes (multiple rotor) with a capacity of 20ml, 15ml and 50ml. Max Yes Rotation speed 14000 RPM, Temperature: - 20 or +20°C Yes, -20°C-40°C   |  |                   |    |              |
|         |              | Make: AELAB Guangzhou Co. (UK<br>Base Company)   | 20 120 120 120 120 120 120 120 120 120 1 |                   |    |              |
|         |              | Total  |  |                   |    | 7,533,000.00 |
| Add: GS | ST 17%       | to accept the second se |  | Server and Server |    | 1,280,610.00 |
| Total   | (inclusive a | ll federal and provincial taxes and duties)  |  |                   |    | 8,813,610.00 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

GRAND TOTAL (Value in Words, Eight Million Eight Hundred Thirteen Thousand Six Hundred Ten Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee:

Civil Engineering Department (Water Institute)

- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

Inspecting Officer.

The consignee/ Indenting officer or his authorized representative.

At firms premises/ Consignee's end.

- 14. Place at which to be inspected.
- i. 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.

15. Payment.

- ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 – 2022.
- iii. If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- v. In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

#### NOTE

- 1. The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

Copy to

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- 4. Master File
- 5. Case File

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.



7.

# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

## CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021

2. Name & Address of Contractor:

3. Contractor's Tender No.:

4. Indenter's Name & Address:

5. Indenter's Indent No & Date:

6. Particulars of stores:

M/s. Deneb Corp., Karachi. Nil, Date 16-06-2021

Chairman, Civil Engg. Deptt. (Water Institute)

\_\_\_\_, 16-03-2021

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store   | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|--|---------------|------------------|-----------------------|--------------|
| 06                 | WQL-06                 | ASHING OVENS (MUFFLE FURNACES) + SHELF:  Ashing Oven Model: WQL-06  Specifications:  • ThermoScientific™: Thermolyne™ Atmosphere Controlled Ashing Furnaces Digital Programmable"  • Cat. No. F6020C-33-60  • Capacity 14L(0.5 cu.ft.)  • Maximum Temp. 975°C  • Holds 24(30mL) porcelain or 38 (10mL) quartz crucibles  • Interior Dimensions (D x W x H) | Nos.          | 2,182,870.00     | 01                    | 2,182,870.00 |
|                    |                        | 51 x 49 53cm (20 x 19.1 x 21in.)  Control: Digital single setpoint with ramp and dwell (B1)  Electrical 240V, 18.3A 4400w  Manufacturer: THERMO Scientific   |               |                  |                       |              |
| 08                 | WQL-09                 | BLOCK DIGESTERS:  Block Digesters - Q Block 50 mL 56 Position HDPE Base, With Keypad Controller  Model: QW-100-251  With Features:   | Nos.          | 1,430,000.00     | 01                    | 1,430,000.00 |
|                    |                        | <ul> <li>Heating block has 7x8 matrix of 56 vials.</li> <li>Well depth 65mm with flat bottom, Well ID 31mm</li> <li>Physical dimensions HDPE base</li> </ul>   |               |                  |                       |              |

|      |                | 39 x 43 cm.  |      |            |    |              |
|------|----------------|--|------|------------|----|--------------|
|      |                | • Usable up to 230°C for high temperature digestions.                                |      |            |    |              |
|      |                | • Maximum temperature variation 1% throughout the block.                             | 41   |            |    |              |
|      |                | Questron Teflon coated Graphite block.   |      |            |    |              |
|      | e.             | HDPE non-corrosive and acid resistant base.  |      |            |    |              |
|      |                | • 5-sided high efficiency thermal shield to conserve energy.                         |      |            |    |              |
|      |                | <ul> <li>Sample carrying Teflon-coated tray<br/>and tray holder included.</li> </ul> |      |            |    |              |
|      |                | • Includes Interface with Keypad QW-101-111 as Unit controller.                      |      |            |    |              |
|      |                | Manufacturer: QUESTRON Canada  |      |            |    |              |
| 09   | WQL-11         | DESICATOR  | Nos. | 662,780.00 | 01 | 662,780.00   |
|      |                | Model : H420561003   |      |            |    |              |
|      |                | Bel-Art Dry: Keeper PVC Vertical Auto-Desiccator cabinet; 2 cu. Ft."                 |      |            |    |              |
|      | nta , g        | Manufacturer: BELART Scientific  |      | ×1         |    |              |
| 10   | WQL-12         | DISSOLVED OXYGEN METER (DO)  | Nos. | 275,000.00 | 01 | 275,000.00   |
|      |                | Model: HI-9146N  |      |            |    |              |
|      |                | HANNA INSTRUMENTS: Waterproof DO meter with altitude and salinity comp               |      |            |    |              |
|      |                | Manufacturer: Hanna Instruments  |      |            |    |              |
|      |                |  |      |            |    | 4,550,650.00 |
|      | -              | Add: GST 17%   |      |            |    | 773,610.00   |
| Tota | 1 (inclusive a | all federal and provincial taxes and duties)   |      |            |    | 5,324,260.00 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

# GRAND TOTAL (Value in Words) Five Million Three Hundred Twenty Four Thousand Two Hundred Sixty Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee: Civil Engineering Department (Water Institute)
- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.
- 13. Inspecting Officer.
- 14. Place at which to be inspected.
- Payment.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

The consignee/ Indenting officer or his authorized representative.
At firms premises/ Consignee's end.

- i. 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 – 2022.
- If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

NOTE

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- 3. Manager Central Store
- 4. Master File
- 5. Case File

Assistant Director Procurement-II
For & on behalf of Vice Chancellor
NED University of Engg. Tech.



# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

# CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021 92 Dated: 4/2 Dated: 4/

3. Contractor's Tender No.: 786/GWI/NEDUET/21062021, Date 21-06-2021 4. Indenter's Name & Address: Chairman, Civil Engg. Deptt.

Particulars of stores: As below.

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store  | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|---|---------------|------------------|-----------------------|--------------|
| 37                 | WQL-43                 | WATER QUALITY ANALYZER (WATER LOGGER):  | Nos.          | 1,102,190.00     | 01                    | 1,102,190.00 |
|                    |                        | Global Water WQMS Water Quality Monitoring System with the                              |               |                  |                       |              |
|                    |                        | following Configuration:  1. FQ0000K - GL500-7-2,7 GL500  Multichannel Data logger.     |               |                  |                       | #<br>5       |
|                    |                        | 2. FE0850 - GL450-7-1 Weatherproof Environment Enclosure.                               |               |                  |                       |              |
|                    |                        | 3. DA0000 - WQ101 Temperature Sensor, 251 Cable   |               |                  |                       |              |
| * s                |                        | 4. DB0000 – WQ201 pH Sensor 5. DCA500 – WQ-Cond-1 Conductivity Sensor, 0-200uS          |               |                  |                       |              |
|                    |                        | 6. DE0000 – WQ600 ORP Sensor<br>7. AIC050 – WL400-030-050 Water<br>Lvl Snsr, 0-30', 50' |               |                  |                       |              |
|                    |                        | All sensors come with cable connected to the data logger with                           |               | 1                |                       |              |
|                    |                        | following Cales: 2 x 25 ft 1 x 250 ft   |               |                  |                       |              |
|                    |                        | 1 x 500 ft  1. WQ-Cond-1 Conductivity   |               |                  |                       |              |
|                    |                        | Sensor:<br>Includes 25 ft cable. Specify  |               |                  |                       |              |
|                    |                        | sensor range:<br>a. WQ-Cond-1 0-200 μS (PN#<br>DCA500)                                  |               |                  |                       |              |
|                    |                        | b. WQ-Cond-2 200-2,000 μS (PN# DCB500)  |               |                  |                       |              |
|                    |                        | c. WQ-Cond-3 2-20 mS (PN# DCC500)   |               |                  |                       |              |

|                  | d. WQ-Cond-4 20-200 mS (PN# DCD500) e. WQ-Cond-5 200-2,000 mS (PN# DCE500)  2. WL400 Water Level Sensor: Pressure transducer level ranges of 0-3, 0-15, 0-30, 0-60, 0-120, 0-250, and 0-500 feet are available. The 0-3 ft low -level range is ideal for measuring shallow flows or small water level changes like those encountered in sewers, storm drains, weirs, and flumes. The 0-3 ft water monitoring sensor accurately measures small changes in water, even when the water's depth is only a few inches deep.  Based on the tendered specification quoted tge Dell Latitude 5420 Rugged Laptop which meets and exceeds the software requirements for the data logger software for data collection. |      |            |    |              |
|------------------|---|------|------------|----|--------------|
|                  | data logger software for data   | Nos. | 900,000.00 | 01 | 900,000.00   |
|                  | Make: LIBELIUM-E-BERRY  |      |            |    |              |
|                  | Total   |      |            |    | 2,002,190.00 |
|                  | Add: GST 17%  |      | ••••       |    | 340,372.00   |
| Total (inclusive | ve all federal and provincial taxes and duties)   | •••• |            |    | 2.342.562.00 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

GRAND TOTAL (Value in Words) Two Million Three Hundred Forty Two Thousand Five Hundred Sixty Two Only

- 7. Date of Delivery: On or before 06 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee: Mr. Shahid Alam, Sr. Store Keeper, Food Engg. Deptt.

i.

- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- 11. Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- Dispatch Instruction.
- 13. Inspecting Officer.
- 14. Place at which to be inspected.
- 15. Payment.

- Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.
- The consignee/ Indenting officer or his authorized representative.
- At firms premises/ Consignee's end.
- 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- \_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 – 2022.
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Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.



7.

# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

## PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

## CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021

Dated: M/s. Paktech instrument Company

2. Name & Address of Contractor: 3. Contractor's Tender No.:

7051/2021 Date 21-06-2021

4. Indenter's Name & Address:

Chairman, Civil Engg. Deptt.

5. Indenter's Indent No & Date:

6. Particulars of stores:

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store   | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|--|---------------|------------------|-----------------------|--------------|
| 0.1                | WQL-01                 | Computer Controlled Aeration Unit  | Nos.          | 3,736,205.00     | 01                    | 3,736,205.00 |
|                    |                        | Model: PEAIC   |               |                  | 1969-6                | > 1          |
|                    |                        | Make: Edibon   |               |                  |                       |              |
|                    |                        | Unit to study in the stirred tank for mixing and gas exchange.  Open tank, capacity: 28 1.  Computer controlled stirrer with variable speed control.  Agitators: They are the elements in charge of the agitation of the fluid, and they can be of different shapes and sizes:  Two blades agitators, diameters: 100 mm and 50 mm.  Two propeller agitators, diameters: 100 mm and 50 mm.  Two turbine agitators, diameters: 100 mm and 50 mm.  The propeller agitators are used for mixing with viscosity higher than 2000 cp.  Air pump, computer controlled.  Airflow sensor.  Three type of diffusers to sparge a gas: sparger tube, disk airstone and single airstone.  Oxygen sensor and oxygen probe, length: 300 mm.  Temperature sensor to obtain the tank temperature. |               |                  |                       |              |

| 02   | WQL-02   | Computer Controlled Aerobic Digester  | Nos.          | 3,588.923.00 | 01     | 3,588.923.00. |
|------|----------|---|---------------|--------------|--------|---------------|
|      |          | Model: PDAC   |               |              |        |               |
| 1.   | 1.       | Make: Edibon  |               |              |        |               |
| -1   | 1116     | T 2 70 2  |               |              |        |               |
|      |          | 20 I reactor vessel with a tubular membrane inside.                           |               | A.           |        |               |
|      |          | Lid for the reactor with a manual valve and the                               |               |              | -      |               |
|      |          | respective holes.   |               |              |        |               |
|      |          | Heating or cooling coil.  |               |              |        |               |
| Ja . |          | Thermostatic bath (up to 60 °C), computer controlled                          |               |              |        |               |
|      |          | (PID control): 6 l capacity.  |               |              |        |               |
|      |          | Power: 600 W.   |               |              |        |               |
| 8.   |          | Temperature sensor "J" type to obtain the temperature                         |               |              |        |               |
|      |          | in the thermostatic bath.   |               |              |        |               |
|      |          | Pump for hot water circulation of the thermostatic bath, computer controlled. |               |              |        |               |
|      |          | Air compressor, range: 0 – 5 1/min, computer                                  |               |              | Ex 5   |               |
|      |          | controlled.   |               |              |        |               |
|      | -        | Diffusion plate for the air inlet.  |               |              |        |               |
|      |          | Air flow meter, range: $0.4 - 5$ 1/min.                                       |               |              |        |               |
|      |          | Peristaltic pump, range: 0 – 0.05 1/min, computer                             |               |              | 1      |               |
|      |          | controlled.   |               |              |        |               |
|      |          | Water flow meter, range: 0.004 – 0.05 1/min.<br>Membrane, muds separation.    |               |              |        | 196           |
|      |          | Overflow for the outlet of filtered water.                                    |               |              |        |               |
|      |          | Valve on the bottom for mud extraction.                                       |               |              |        |               |
|      |          | To monitor the digestion:   |               |              |        | 7.            |
|      |          | Temperature sensor.   |               |              |        |               |
|      |          | pH sensor.  |               |              |        |               |
|      |          | Dissolved oxygen sensor.  |               |              |        |               |
|      | 11101 12 |   | <b>&gt;</b> 1 | 2 202 040 00 | 0.1    | 2 202 040 00  |
| 03   | WQL-13   | Filterability Index Unit  | Nos.          | 2,202,940.00 | 01     | 2,202,940.00  |
|      |          | Model: PEIF   |               |              |        |               |
|      |          | Make: Edibon  |               | ,            |        |               |
|      |          |   |               |              |        |               |
|      |          | Filtration unit, with porous bed filter, removable:                           |               |              |        |               |
|      |          | Height of the filter: 70 mm.  |               | 12 12        |        |               |
|      |          | Test filter cell diameter: 44 mm.   |               |              |        |               |
|      |          | The filter unit can be dismounted to change the                               |               | 8            |        |               |
|      |          | sand.   |               |              | 1 0 16 |               |
|      |          | A regulation valve controls the flow, which is observed on a flow meter.      |               |              |        |               |
|      |          | Water flow meter, range: 0.07 - 0.55 1/min.                                   |               | B 8          |        |               |
|      |          | Differential manometer of 500 mm, to measure the                              |               | 12           |        |               |
|      |          | head loss.  |               |              |        |               |
|      |          | Corrosion-resistant materials are used.                                       |               |              |        |               |
|      |          | The elements and tubing connections of this unit are                          |               |              |        |               |
|      |          | transparent so that the operation can be observed                             |               |              |        |               |
|      |          | and air bubbles avoided.  |               |              |        |               |
|      |          | Accessories included with the unit:   |               |              |        |               |
|      |          | Thermometer, with range from -10° C to 110° C. Stopwatch.                     |               |              | 185    |               |
|      |          | 1 l graduated test tube.  |               |              |        |               |
|      |          |   |               | 13           |        |               |
|      | 1        | 0.6 I glass beaker to collect illuate.  | 1             |              |        |               |
|      |          | 0.6 l glass beaker to collect filtrate.  Air pump for purging the manometer.  |               |              |        |               |
|      |          |   |               |              |        |               |

|    | 3       |   |       |              |           |              |
|----|---------|---|-------|--------------|-----------|--------------|
| 04 | WQL-14  | Computer Controlled Flocculation Test   | Nos.  | 5,931,077.00 | 01        | 5,931,077.00 |
|    |         | Unit  |       |              |           |              |
|    | 1       | Model: PEFC   |       |              |           |              |
|    |         | Make: Edibon  |       |              |           | =            |
|    |         |   |       |              |           |              |
|    |         | Flocculation test unit illuminated in the base or back                                |       | 4 455.       |           |              |
|    |         | Six stirrers with stainless steel paddles. Agitation                                  |       |              |           | - 1          |
|    |         | speed   | h     |              | 3 m = 1 m |              |
|    |         | regulation: 25 – 250 rpm.   |       |              |           |              |
|    |         | Six flocculating graduated vessels. Sample volume of each vessel: 1 1.                |       | 9 11 1       |           |              |
|    |         | Control panel:  |       |              |           |              |
|    |         | Timer, range: 0 – 60 min approx.  |       | Table 1      |           |              |
|    |         | Lamp switch.  Rpm regulator and rpm display.  |       |              |           |              |
|    |         | Instrumentation:  |       |              |           |              |
|    |         | pH sensor.  |       |              |           | 2            |
|    |         | Conductivity sensor, range: 0 – 1.99 mS.<br>Temperature sensor, "J" type.             |       | * =          |           |              |
|    |         | Total dissolved solids sensor, range: 0 – 2000 ppm                                    | 011   |              |           | -            |
|    |         | TDS.  |       | 1            |           |              |
|    |         | 1   | 2 -01 |              |           |              |
| 05 | WQL-14  | Ion Exchange Unit   | Nos.  | 2,445,385.00 | 01        | 2,445,385.00 |
|    |         | Model: EII  |       |              |           |              |
|    |         | Make: Edibon  |       |              |           |              |
|    |         |   |       |              | 2         | ш            |
|    |         | Two transparent vertical columns for the anionic and cationic resins, volume: 0.16 l. |       |              |           |              |
|    |         | One spare column.   | 25 24 |              |           | V 0          |
|    |         | Four tanks made of PMMA (treated water,   |       |              |           |              |
|    |         | demineralized water, hydrochloric acid and sodium                                     |       |              |           |              |
|    |         | hydroxide). Diaphragm pump. Maximum flow; 5 l/h. Maximum                              | -     |              |           |              |
|    |         | height: 70 m.   |       |              |           |              |
|    |         | Hydrochloric acid reistant flow meter. Range: 0 - 10                                  |       |              |           |              |
|    |         | Valves and pipes circuit.   |       |              |           |              |
|    |         | Conductivity meter (with conductivity cell):  |       |              |           |              |
|    |         | Scale: 0 = 10 mS.   |       |              | 1,200     |              |
|    |         | Operating temperature: 0 - 50 °C.<br>Accuracy +/-2 %.                                 |       |              |           |              |
|    |         | Typical commercial anionic and cationic resins.                                       |       |              |           |              |
|    |         | Control board.  |       |              |           |              |
|    |         | Cables and Accessories, for normal operation.   |       |              |           |              |
|    |         |   | 21    |              |           |              |
| 06 | WQL-33  | Computor Co. t. II 1 Cl.  | 1     | 2 200 (15 00 |           |              |
| 00 | W (C-33 | Computer Controlled Chemical  | Nos.  | 2,200,615.00 | 01        | 2,200,615.00 |
|    |         | Reactors QRC  |       |              |           |              |
|    |         | Service Unit for QRC  | = 11  |              |           | = -          |
|    |         | Model: QUSC   |       |              |           |              |
|    |         | Make: Edibon  |       |              |           |              |
|    |         | This unit is common for the assets 2.3  |       |              |           |              |
|    |         | This unit is common for the required elements (at least one)                          | - 1   |              |           |              |
|    |         | Accommodation and exchange system of the reactors,                                    |       |              |           |              |
|    |         | quick and easy to handle.   |       |              |           |              |
|    |         | It supplies all the services for the operation of each reactor.                       |       |              |           |              |
|    |         | Safety, easy and quick connections.   |       |              |           |              |
|    |         | All elements of this unit are chemically resistant.                                   |       |              |           |              |
|    |         | The "QUSC" unit mainly consists of: Two computer controlled peristaltic dosing pumps, |       | 200          | 7 12 14   |              |
|    |         | two computer controlled peristallic dosing pumps,                                     |       |              |           |              |

with variable speed. Flow rate up to 3 l/h (unit standard disposition). With another disposition, they could reach a flow rate up to 10 l/h.

Computer controlled thermostatic bath, capacity: 6 1. Temperature PID control of the thermostatic bath

Pump of 3 l/min, to impel the thermostatization water from the bath to the reactor.

Flow sensor, range: 0.25 - 6.5 l/min.

Two tanks for the reagents, capacity: 1 I each one, made of Pyrex glass.

The control of the reaction is carried out by a conductivity sensor, which allows the reaction evolution

parameterization in real time.

Three "J" type temperature sensors, one to know the thermostatic bath temperature in a continuous way and two sensors to know the water temperature of the thermostatic bath water inlet and outlet. Quick connectors with shutoff valve that enable an easy coupling of the Service Unit to the chosen reactor.

#### Control Interface Box:

This control interface is common for the required elements (at least one) (Not included).

Control interface box with process diagram in the front panel and with the same distribution that the different elements located in the unit, for an easy understanding by the student.

All sensors with their respective signals, are properly

All sensors, with their respective signals, are properly manipulated from -10V. to +10V. computer output.

Sensors connectors in the interface have different pines numbers (from 2 to 16), to avoid connection errors.

Single cable between the control interface box and computer.

#### Data Acquisition Board:

Common for the required elements (at least one) PCI Express Data acquisition board (National Instruments) to be placed in a computer slot. Bus PCI Express.

#### Analog input:

Number of channels= 16 single-ended or 8 differential. Resolution=16 bits, 1 in 65536.

Sampling rate up to: 250 KS/s (kilo samples per second).

Input range (V)=±10 V. Data transfers=DMA, interrupts, programmed I/0. DMA channels=6.

#### Analog output:

Number of channels=2. Resolution=16 bits, 1 in 65536.

Maximum output rate up to: 900 KS/s. Output range (V)=±10 V. Data transfers=DMA, interrupts, programmed I/0.

#### Digital Input/Output:

Number of channels=24 inputs/outputs. D0 or DI Sample Clock frequency: 0 to 100 MHz. Timing: Number of Counter/timers=4. Resolution: Counter/timers: 32 bits.

| • | Computer Controlled Stirred Tank<br>Reactors in Series for QRC<br>Model: QRSC<br>Make: Edibon   | Nos. | 2,803,965.00 | 01 | 2,803,965.00 |
|---|---|------|--------------|----|--------------|
|   | All elements of this unit are chemically resistant.  These stirred reactors in series are used to increase the reagents conversion referred to an only reactor and so obtain product with higher purity.  Three computer controlled continuous stirred tank reactors connected in series.  The three reactors have different height to let product from the first reactor go to the second one and so on. |      |              |    |              |
|   | Reactors body made of pyrex glass, volume: 2 l. Adjustable volume, range: 0.4 – 1.5 l. Each reactor is fitted with a conductivity cell. Measurement range up to 20 mS. Each reactor has a computer controlled stirrer with variable speed. The two reagent vessels and the two variable speed dosing pumps (at the Service Unit for QRC, "QUSC") feed reagents into                                       |      |              |    |              |
|   | the first reactor in line. A dead-time residence coil can also be attached to the exit of the last reactor in the series. Three temperature sensors "J" type, one in each reactor. Quick connectors with shutoff valve that enable an easy coupling of the reactor to the Service Unit for QRC, "QUSC".   |      |              |    |              |
|   | Computer Controlled Plug Flow<br>Reactor for QRC  | Nos. | 1,355,213.00 | 01 | 1,355,213.00 |
|   | Model: QRPC   |      |              | 4  | - 1          |
|   | All elements of this unit are chemically resistant. Designed to demonstrate the flow pattern characterisation and the steady state conversion in a tubular reactor with axial dispersion. Working volume: 1 l. Plug reactor constituted by a glass column of 1 l and 1100 mm long, packed   |      |              |    |              |
|   | with 3 mm diameter glass balls. At the bottom of the column a premixer provides a complete mixing of the reagents entering the reactor and improves the flow distribution. The unit uses a six ways injection valve, which allows   |      |              |    |              |
|   | cither the feeding of reagents in a continuous way or the possibility to carry out pulse and step changes to characterization of the flow pattern.  Temperature sensor "J" type.  Conductivity cell to control the reaction.  |      |              |    |              |
|   | Measurement range up to 20 mS.  Quick connectors with shutoff valve that enable an easy coupling of the reactor to the Service Unit for QRC, "QUSC".  |      |              |    |              |

| 07 | WQL-37       | Computer Controlled Continuous and   | Nos. | 5,439,863.00 | 01 | 5.439.863.00  |
|----|--------------|--|------|--------------|----|---------------|
|    |              | Batch Filtration Unit Model: TFUC Make: Edibon   |      |              |    |               |
|    |              | This filtration unit demonstrates the principles of continuous and batch filtration.  Double tank (capacity: 9 1), made of methacrylate.  Level switch in the tank.  Stirrer, computer controlled.  Centrifugal pump max. 4 bar, computer controlled.  Constant pressure and constant flow control.  Heating element, computer controlled, power: 500 W.  Vertical plates filter, composed of 4 nylon plates of 5 microns diameter, allowing us to filter the CaCO suspension of known concentration.  Cartridge filter will filter and "clean" a water sample with small pieces of paper.  Two temperature sensors, " J " type.  Two pressure sensors, range: 0 – 6 bar.  Flow sensor, range: 0.1 – 25 1/min.  Water and calcium carbonate are the recommended working materials for reasons of safety and ease to use. |      |              |    |               |
|    | -            |  |      |              |    | 29,704,186.00 |
|    |              | Add: GST 17%   |      |              |    | 5,049,711.62  |
|    | Total (inclu | usive all federal and provincial taxes and duties)   |      |              |    | 34,753,897.62 |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

**GRAND TOTAL (Value in Words)** Twenty Nine Million Seven Hundred Four Thousand One Hundred Ninety Seven Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee: Civil Engineering Department (Water Institute)
- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

13. Inspecting Officer.
The consignee/ Indenting officer or his authorized representative.
At firms premises/ Consignee's end.

Page 6 of 7

- 14. Place at which to be inspected.
- Payment.

- . 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 2022.
- iii. If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- v. In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

#### NOTE

- 1. The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

#### Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.

Dated:



7.

# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

#### CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021

2. Name & Address of Contractor: M/s. Siff, Karachi.

3. Contractor's Tender No.: Nil Date 22-06-2021

Indenter's Name & Address: Chairman, Civil Engg. Deptt.Indenter's Indent No & Date:

6. Particulars of stores:

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store   | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|------------------------|--|---------------|------------------|-----------------------|--------------|
| 26                 | WQL-30                 | PURE AIR GENERATOR:  | Nos.          | 1,311,114.00     | 01                    | 1,311,114.00 |
|                    | Constant               | Zero Air Generator   |               |                  |                       |              |
|                    | Money CA               | Model: LZA6000   | 1,-17         |                  |                       |              |
|                    |                        | Flow-Rtes up to 6000 cc/min<br>Outlet Pressure up to 6, 5 bar                |               |                  |                       |              |
|                    |                        | Total Hydrocarbon Content<br><0.05ppm<br>Compact Dimensions                  |               |                  |                       |              |
|                    |                        | Plug & Play Solution   |               |                  |                       |              |
|                    |                        | Main Applications: THA   |               |                  |                       |              |
|                    |                        | <ul><li>Flame photometric detector (FPD)</li><li>NPD</li></ul>               |               |                  |                       |              |
|                    |                        | • Flame ionization detector (FID) for feed gas                               |               |                  |                       | 20           |
|                    |                        | <ul> <li>Pulsed flame photometric detector (PFPD)</li> </ul>                 |               |                  |                       |              |
|                    |                        | General Data  Max. Flow Rate (cc/min): 6000                                  |               | -                | -                     |              |
|                    |                        | Min outlet pressure (bar): Intel<br>Pressure – 0.5 (8psi) at<br>maximum flow |               |                  | 1000 100              |              |
|                    | 2                      | • Max. outlet pressure (bar): 6.5 (94psi)                                    |               |                  |                       |              |
|                    |                        | • Total hydrocarbon content (ppm): <0.05                                     |               | , ,              |                       |              |
|                    |                        | • Dimensions (LxWxH cm): 51x44.5x10  |               |                  |                       |              |
|                    |                        | • Net weight (kg): 13  | 5 20          |                  |                       |              |

|  | A. T. L. D.  |              |  |           |  |
|--|--|--------------|--|-----------|--|
| 1  | Air Inlet Equipments   | 9            |  |           |  |
| 10/0/1   | • Max. Inlet hydrocarbon content: 50ppm  |              |  | 100       |  |
| The Part of the Pa | • Supply pressure (bar): 3 to 10   |              |  |           |  |
|  | (43psi to 145psi)  |              |  |           |  |
|  | • Dew-point (°C): <-20   |              |  |           |  |
|  | • Temperature (°C): 1 to 35 (34° to  |              |  |           |  |
|  | 95°F)  |              |  |           |  |
|  |  |              |  |           |  |
|  | Electrical Requirements  |              |  |           |  |
|  | Power supply voltage: 90-240V  |              |  |           |  |
|  | 50/60Hz  |              |  |           |  |
|  | <ul> <li>Connection type: IEC320-C13</li> <li>Max. consumption power (W):</li> </ul> |              |  |           |  |
| -  | 240 (280V)   |              |  |           |  |
|  | • Fuse rating (A): 4   |              |  |           |  |
|  |  |              |  |           |  |
|  | Connections  |              |  |           |  |
|  | • Outlet port: 1/8*female  |              |  |           |  |
|  | • Inlet port: 1/8*female   |              |  |           |  |
| ison, in the contract of   | Water purge: ISO M5 female pipe<br>thread  |              |  |           |  |
|  | thread   |              |  |           |  |
|  | Operating Conditions   |              |  |           |  |
|  | Temperature (°C) 5° to 35 (41° to  |              |  |           |  |
|  | 95°F)  |              |  | le o reli |  |
|  | • Humidity (°C) (Max, non-   |              |  |           |  |
|  | condensing): 80% at 25 (77°F)  |              |  |           |  |
|  | IP rating: 20  |              |  |           |  |
|  | Manufacturer: LabTech, Italy   |              |  |           |  |
|  |  |              |  |           |  |
|  | Total  | 1,311,114.00 |  |           |  |
|  | 17%  | 222,889.00   |  |           |  |
|  | ıties)   | 1,534,003.00 |  |           |  |

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

GRAND TOTAL (Value in Words) One Million Five Hundred Thirty Four Thousand & Three Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee:

Civil Engineering Department (Water Institute)

- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- 11. Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.
- 13. Inspecting Officer.
- 14. Place at which to be inspected.
- 15. Payment.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

The consignee/ Indenting officer or his authorized representative.

At firms premises/ Consignee's end.

- i. 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 2022.
- iii. If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- v. In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

#### NOTE

- The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for paymen

Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

Assistant Director Procurement-II
For & on behalf of Vice Chancellor
NED University of Engg. Tech.

Dated:



# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

### CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021

Name & Address of Contractor:Contractor's Tender No.:

M/s. Rizvi & Company, Karachi 7051/2021 Date 21-06-2021

4. Indenter's Name & Address:

Chairman, Civil Engg. Deptt.

5. Indenter's Indent No & Date:6. Particulars of stores:

As below.

7

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code   | Description of Store  | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req. | Total Value  |
|--------------------|--|---|---------------|------------------|-----------------------|--------------|
| 01 WQL-3           | WQL-31   | Reverse Osmosis and Ultrafiltration Pilot<br>Plant<br>Mod. UOUc/EV manual with data logging<br>Elettronica Veneta Spa. Italy<br>Training Projgramm                                      | Nos.          | 7,723,690.00     | 01                    | 7,723,690.00 |
|                    |  | This unit enables to deepen the following issues:  • Effect of the following operational parameters on the process:   |               |                  |                       |              |
|                    |  | <ul> <li>Feeding low rate</li> <li>Feeding concentration</li> <li>Working pressure</li> <li>Temperature</li> <li>Pre-concentration and concentration of milk</li> </ul>                 |               |                  |                       |              |
|                    |  | - Clarification and concentration of fruit juice - Desalination of water  TECHNICAL SPECIFIATIONS:  |               |                  |                       |              |
|                    |  | Mod. UOU/EV  • Framework of AISI 304 stainless steel with castors  • Feeding tank of AISI 304 stainless steel   |               |                  |                       |              |
|                    |  | with capacity of 30 litres  Tank of AISI 304 stainless steel, with capacity of 30 litres, for permeate  Piston pump of AISI 316 stainless steel  Centrifugal pump of AISI 316 stainless |               |                  |                       |              |
|                    |  | <ul> <li>AISI 316 stainless steel housing for 2 membranes; typical flow of permeate = 5-50 ml/min</li> </ul>  |               |                  |                       |              |
|                    | <ul> <li>Heat exchanger of AISI 304 stainless steel</li> <li>2 variable area flowmeters for permeate<br/>and concentrate (for mode. UOU/EV,</li> </ul> |   |               |                  |                       |              |

|            | only) • 4 Pt100 with sheath of AISI 316 stainless steel • 2 Bourdon gauges of AISI 304 stainless • Safety valve • Safety pressure switch • Switchboard with ELCB |      |                  |
|------------|--|------|------------------|
|            |  |      | 7,723,690.00     |
|            | Add: GST 17%   | <br> | <br>1,313,027.30 |
| Total (inc | lusive all federal and provincial taxes and duties)  | <br> | <br>9,036,717.30 |

## INSTRUCTIONS:

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

**GRAND TOTAL (Value in Words)** Twenty Nine Million Seven Hundred Four Thousand One Hundred Ninety Seven Only

- 7. Date of Delivery: On or before 01-03 Months; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee: Civil Engineering Department (Water Institute)
- Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- 11. Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.

  Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.
- 13. Inspecting Officer.

  The consignee/ Indenting officer or his authorized representative.

  At firms premises/ Consignee's end.
- Place at which to be inspected.
   i. 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- 15. Payment.

  ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 2022.
  - iii. If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
  - iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.

- v. In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

## NOTE

- The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- 2. The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.

The cost is debitable to Head of Account as mentioned in the Sanction order (office order). This issues with the sanction and approval of the Competent Authority of this University.



# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

# PROCUREMENT CELL

BY REGISTERED A.D./COURIER SERVICE.

# CONTRACT SCHEDULE

1. Contract No: PC(WI)NED/Equip/W.Q.Lab./03/7051/2021

2. Name & Address of Contractor: 3. Contractor's Tender No.:

M/s. Q-Tech., Karachi. Nil Date 22-06-2021

4. Indenter's Name & Address:

Chairman, Civil Engg. Deptt.

5. Indenter's Indent No & Date: 6. Particulars of stores:

As below.

| BOQ<br>Item<br>No. | Tender<br>Item<br>Code | Description of Store  | Acct.<br>Unit | Price per<br>A/U | Total<br>Qty.<br>Req.  | Total Value  |
|--------------------|------------------------|---|---------------|------------------|--|--------------|
|                    |                        | WATER TREATMENT STUDIES BENCH WITH DAQ SYSTEM:  Model: HWT-121  Specifications:  Computer controlled study unit with DAQ system Supply Unit Raw water storage tank Capacity: 300 1  Water Treatment Unit: Two transparent filters: Diameter: 200 mm, each one. Height: 650 mm, each one. Gravel and sand filter. Two differential pressure sensors, range: 0-2 bar Two transparent absorbers: Diameter: 200 mm, each one. Height: 650 mm each one. Aluminum oxide absorber activated carbon absorber. Two exchangers: Diameter: 240 mm, each one. Height: 400 mm, each one. Exchanger contains mixed bed with cations and anions. Pressure sensor (range: 0-6 bar) to measure a plant pressure. Inductive magnetic flow sensors (range: 0.21 1/min – 50 1/min) of the | Unit Nos.     | A/U 1,311,114.00 | Company of the Compan | 1,311,114.00 |
|                    |                        | raw water input. Temperature sensors to measure the temperature of raw water input.   |               | -                |  |              |

| Three temperature sensors. Three conductivity sensors (range:  |                          |              |
|--|--------------------------|--------------|
| 0-20 mS/cm) Flow control Valve. Samp[ling Valves at each stage.  |                          |              |
| Make: Hawk Engineering Services.   |                          |              |
| Training: Local Training is included in this package.  |                          |              |
| Warranty: One (01) Year  |                          |              |
|  |                          |              |
|  |                          |              |
|  |                          |              |
|  |                          |              |
|  |                          |              |
|  |                          |              |
|  |                          |              |
| restricted in the second of th | Total                    | 3,846,154.00 |
|  | Add: GST 17%             | 653,846.00   |
| Total (inclusive all federal and prov  | incial taxes and duties) | 4,500,000.00 |

# INSTRUCTIONS:

- Store must be delivered to Central Store in due period which will be issued by the Central Store to the Indenter.
- Bill should be submitted with covering letter in Asst. Dir. Procurement-II Office along with Invoice, GST Invoice, Delivery Challan (duplicate), Contract Agreement on Stamp Paper with Stamp Duty & Valid Professional Tax Certificate (photocopy) required for payment
- Inspection Certificate may be issued by Indenting Department.

GRAND TOTAL (Value in Words) Four Million Five Hundred Thousand Only

- 7. Date of Delivery: On or before 04-08 Weeks; (if goods not delivered within stipulated time; please immediately intimate to the procurement cell).
- 8. Place of Delivery: NED University Campus/Consignee.
- 9. Name & Address of Consignee:

Civil Engineering Department (Water Institute)

- 10. Performance Security equivalent to 5% of Contract Schedule is required at the earliest.
- 11. Contract Agreement on Stamp papers value equivalent to rate as specified in Stamp Act.
- 12. Dispatch Instruction.
- 13. Inspecting Officer.
- Place at which to be inspected.
- 15. Payment.

Stores should be delivered at firm's premises/free to the consignee at NED University of Engineering and Technology.

The consignee/ Indenting officer or his authorized representative.

At firms premises/ Consignee's end.

- i. 100% payment to be made on the proof of inspection and Consignee's receipt certificate during year 2021-2022.
- ii. \_\_\_% Payment in advance along with contract/and balance after complete delivery and in proof of consignee's receipt during the year 2021 2022.
- iii. If the supply is not according to the specifications or unsatisfactory, the contract will be rejected and cancelled at the risk and cost of firm.
- iv. If the firm fails to execute the contract/supply order as per condition action will be taken against them which may be their black listing and E.M.S.D. will be forfeited.
- v. In Case of late delivery L.D. charges @ 0.1% per day will be imposed. Part payment against part supply is/ not allowed.
- vi. Valid Professional Tax Certificate is required for payment.

## NOTE

- 1. The firms may send the Inspection call with-in delivery period under intimation to the Assistant Director Procurement in writing.
- 2. The Bill in duplicate along with Inspection certificates on form F/QSP 09/10/00 may be sent to the P.O for payment.

Copy to

- 1. Resident Auditor
- 2. Indenting Officer
- 3. Manager Central Store
- 4. Master File
- 5. Case File

Assistant Director Procurement-II For & on behalf of Vice Chancellor NED University of Engg. Tech.

The cost is debitable to Head of Account as mentioned in the Sanction order (office order). This issues with the sanction and approval of the Competent Authority of this University.





| Model # | DESCRIPTION  | Qty | Unit Price<br>in PKR | Total Price<br>in PKR |
|---------|--|-----|----------------------|-----------------------|
| CEY     | OPTIONAL ITEMS.  Plug Flow Reactor  A small-scale plug flow reactor for use with the CEXC designed to demonstrate both flow pattern characterisation and steady-state conversion in a packed tubular reactor with axial dispersion. The reactor column is 1044mm long with a 1L working volume. It is packed with 3mm diameter glass beads. A feed assembly is supplied with the reactor which consists of a six-port injection valve mounted on a base plate and a feed vessel assembly with heat exchangers for cooling for use with the CEXC and the CW-17. The reactor assembly is mounted on a painted frame and includes a sensor block for the conductivity and temperature sensors from the CEXC. Can perform flow visualization where the progress of the reaction can be monitored visually using colour. Can also perform true reactions where the progress of the reaction is recorded using the CEXC conductivity sensor and compared with the theory  M/S. ARMFILED LTD., UK |     | 9,99,999.00          | 9,99,999.00           |

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ECHNO KARACHI PH:3435481# 3499452 PH:4845489 PH:4845489

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oac dom 7588 h.bř JIU \$25 670 883 194

04.021,540,40

11,011,426.04

83,407,168,68

Grand Total

12% GST

Total

| Total Price in PKR | Unit Price<br>ANG ni | Qty | DESCRIPTION   | # ləboM |
|--------------------|----------------------|-----|---|---------|
|                    |                      |     | Filtration Unit with Plate & Frame Filter   |         |
| . 6 556 71°        | 98 517 999 9         | 1   | Filtration Unit with Plate & Frame Filter   | A-S19OU |
| ۷,888,8            | 98.217,938,9         |     | (Includes Educational Software and Data logging as standard)  A benchtop unit comprising a vacuum formed ABS plastic plinth, integral electrical console on which is          |         |
| ',                 |                      |     | mounted the filtration system A plate and frame batch filter (separation area 230cm2) is supplied as standard. Both constant flow rate and constant pressure operation are    |         |
|                    |                      |     | possible<br>An optional tangential flow hollow fibre<br>microfiltration cartridge (plus prefilter and shell and   |         |
|                    |                      |     | tube heat exchanger) can be fitted.<br>The hollow fibre cartridge has a separation area of 110cm2 and a cut-off of 0.2µm  | ±       |
|                    |                      |     | Feed flow rate can be varied between 0-130 l/hr All electrical circuits are protected by appropriate protection devices   |         |
|                    |                      |     | The console contains a pump motor control and display panel   | 1       |
| ş <sup>1</sup>     |                      |     | A separate controller displays the filter inlet pressure and is used to control the pump speed. Another digital meter displays, via a selector ewitch eithor outlet pressure. |         |
|                    |                      |     | switch, either outlet pressure, permeate pressure, temperature or optical absorbance. Sensor signals are also routed to an I/O port for connection to a PC                    |         |
|                    |                      |     | Interface device and educational software package included A comprehensive instruction manual is included with a range of fully detailed laboratory teaching                  | ar"     |
|                    |                      |     |   |         |

ote: Item Code WQL-24 GST is not Applicable

M/S. ARMFILED LTD., UK

idity: 90 Days ivery: 8 to 16 Weeks

STEK Technologies

RASTEI( is a Registered Trade Mark of RASTEI(TECHNOLOGIES





| Tubular Reactor  Tubular Reactor  A small-scale tubular reactor for use with the CEXC capable of demonstrating large-scale behaviour. The 20m long reactor coil is mounted in a clear acrylic vessel through which heating or cooling medium is circulated. Volume of reactor coil is 0.4L. Two heat exchanger coils bring the reactants up to the reaction temperature separately before they are mixed to start the reaction. Fitting points for temperature and conductivity sensors  M/S. ARMFILED LTD., UK  Stirred Tank Reactors in Series  (Includes Educational Software and Data logging as standard) | Model #  | DESCRIPTION   | Qty | Unit Price<br>in PKR | in PKR      |
|--|----------|---|-----|----------------------|-------------|
| reaction. Fitting points for temperature and conductivity sensors  M/S. ARMFILED LTD., UK  Stirred Tank Reactors in Series  CEP-MkII-A Stirred Tank Reactors in Series  (Includes Educational Software and Data logging)   | CET-MkII | Tubular Reactor A small-scale tubular reactor for use with the CEXC capable of demonstrating large-scale behaviour. The 20m long reactor coil is mounted in a clear acrylic vessel through which heating or cooling medium is circulated. Volume of reactor coil is 0.4L. Two heat exchanger coils bring the reactants up to the reaction temperature |     |                      | PRICE INCLU |
| tianous stirred tank reactor for 1 1   | CEP-MkII | reaction. Fitting points for temperature and conductivity sensors  M/S. ARMFILED LTD., UK  Stirred Tank Reactors in Series  |     |                      |             |

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Dofmm

KARAGHI PH:34993814 34994952 ESLAMABAD PH:484518D





| Model #      | DESCRIPTION  | Qty | Unit Price   | Total Price<br>in PKR |
|--------------|--|-----|--------------|-----------------------|
| 33 CEB-MkIII | Transparent Batch Reactor A small-scale batch reactor for use with the chemical reactors service unit designed to demonstrate both adiabatic and isothermal operation CW-17 accessory is recommended for isothermal operation).  1L working volume The vessel includes a jacket through which hot water from the CEXC or chilled water from the CW-17 is passed. A variable-speed agitator aids heat transfer through the vessel The vessel is made of glass to give full visibility of the contents and enables the use of colour tracers to illustrate the reaction process Fitting points for temperature and conductivity sensors (supplied with the CEXC) M/S. ARMFILED LTD., UK  ACCESSORIES   | 1   | 86,99,999.00 | 8,699,999.0           |
| CW-17-A      |  | 1   |              | PRICE INCLUDE         |
| CEXC-A       | Chemical Reactor Service Unit (for CEB-MkIII, CEM-MkII, CET-MkII, CEY & CEZ)   | 1   |              | PRICE INCLUDE         |
|              | A self-contained benchtop service unit designed to provide services for up to five different chemical reactors:- Continuous Stirred Tank Reactor – CEM MKII- Tubular Reactor – CET-MKII- Transparent Batch Reactor – CEB-MKIII- Laminar Flow Reactor – CEY- Plug Flow Reactor – CEZ Fully computer controlled and supplied with educational software specific to each reactor type. Simple interfacing to the (user supplied) computer by a USB interface Two peristaltic feed pumps with individually variable flow rates 0-140 ml/min Provides PID temperature-controlled hot water in order to maintail reactor temperature Complete with two thermocouples, an input for a third (user) thermocouple and a dual-range conductivity sensor A comprehensive instruction manual is included which details installation and operating procedures |     | 42           | HNO                   |
|              | M/S. ARMFILED LTD., UK   | /   | 1/5/         | ARACHI                |



| N | Nodel#                |  | DESCRIPTION  | Qty                            | Unit Price<br>⁵in PKR | in PKR      |
|---|-----------------------|--|--|--------------------------------|-----------------------|-------------|
|   | Control of the second | Sedimer                                  | ntation studies<br>ntation Studies Apparatus   | 1                              | 721,000.00            | 721,000.0   |
|   |                       | Model Findles: Includes: Capacity:       | <b>tech Uk</b><br>Triple Beam Top Loading Bala   | ance:                          |                       |             |
|   | W2-MkII               | Sedime                                   | NATIVE-1 Intation Studies Itation is a process used widely Item of water and waste water. F  | in the Particles               | 1,165,104.00          | 1,165,104.0 |
|   |                       | settle fro<br>dependir<br>and the        | om suspension in different ways<br>ng on the concentration of the s<br>characteristics of the particles.   | suspension                     |                       |             |
|   |                       | of a dilut                               | plest type of sedimentation is to<br>te suspension of particles that<br>ency to flocculate. In these circ<br>diction of clarification rates and  | umstances,                     |                       |             |
|   |                       | scaleup<br>straight                      | to plant design is relatively forward.  her concentrations where inter-  |                                |                       |             |
|   |                       | effects<br>agglom<br>settling<br>Informa | become significant and where<br>leration may take place, differe<br>rate occur, known as 'zone' se<br>ation from batch tests for such<br>a vital part of the search for the<br>and operation of industrial sec | nt regimes of ettling. systems |                       | ,           |
|   |                       | tanks.<br>Techn                          | ical Specifications:   |                                |                       |             |
|   |                       | Tube i<br>Numb                           | ength: 1m<br>internal diameter: 51mm<br>er of tubes: 5<br>ARMFILED LTD., UK  |                                |                       |             |
|   |                       |  | ESSORY   |                                |                       | 85,9        |
|   | INSTA05               | Tripl<br>M/S.                            | e Beam Balance<br>ARMFILED LTD., UK  |                                | 1 85,999              | .00         |
|   |                       |  |  |                                | TECH.                 |             |
|   | 1                     |  |  |                                | PH: 4993<br>349949    | 810         |





| ltem<br>code | Model # | DESCRIPTION  | Qty | Unit Price<br>in PKR | Total Price in PKR |
|--------------|---------|--|-----|----------------------|--------------------|
|              | FT18-6  | Spiral Wound Filter Module Filter housing: 1812 (1.8" x 12") 316 stainless steel sanitary housing Generic module for use with female elements from different membrane manufacturers Membrane area depends on element (max: 0.45m2) The module can be used for MF, UF, NF and RO operations Max operating pressure: 40 bar M/S. ARMFILED LTD., UK |     | 1,993,266.67         | 1,993,266.67       |
|              | FT18-7  | Hollow Fibre Filter Module Membrane housing: Polysulfone Filter length: 0.46m Fibre internal diameter: 1.1mm Max operating pressure: 2.1-2.8 bar Membrane area: 0.09m2 Available membranes: 5-500 kDa M/S. ARMFILED LTD., UK   | 1   | 1,043,226.67         | 1,043,226.6        |
|              | FT18-8  | Tubular Filter Module Filter housing: 316 stainless steel Filter length: 2 x 0.3m Membrane area: 0.024m2 Max operating pressure: 40 bar (recommended) Available membranes: UF: 2-200 kDa NF: 60-75% CaCl2 rejection RO: 80-99% NaCl rejection M/S. ARMFILED LTD., UK   | 1   | 1,371,506.67         | 1,371,506.6        |
|              | FT18-20 | Vessel Option 30-litre 316 stainless steel retentate vessel for recirculated product, complete with sensor to protect against dry running. Mass balance option for permeate flow rate measurement.  M/S. ARMFILED LTD., UK   | 1   | 2,200,520.00         | 2,200,520.0        |

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Dollarm

PH:34993810 24994952 SLANABA PH 4805483





| ode   | Model #            | DESCRIPTION   | Qty | in PKR        | Total Price<br>in PKR |
|-------|--------------------|---|-----|---------------|-----------------------|
| QL-31 | FT18-MKII<br>-50-C | Modular Cross Flow Filtration Unit With Digital Instrumentation The Armfield FT18-MkII is a small pilot-scale cross-flow filtration system designed to operate with a range of membrane module configurations. It can operate with as little as 5-10 litres of material but still give data that is useful for process scale-up.  It can be used over the full range of cross-flow filtration applications from microfiltration through to reverse osmosis.  Technical Specifications:  Maximum flow rate: 1670 l/hr  Maximum operating pressure: 50 bar  Pressure sensors: 0-50 bar  Mass balance range: 0-6kg  M/S. ARMFILED LTD., UK | 1   | 11,759,306.67 | 11,759,306.67         |
|       | FT18-5             | ACCESSORIES  Ceramic Filter Module Filter housing: 316 stainless steel Filter length: 0.5m N° of channels: 1 Channel internal diameter: 7mm Membrane area: 0.022m2 Available membranes: MF: 110-800nm UF: 3-10nm (2-20 kDa) NF: 200-600 Da M/S. ARMFILED LTD., UK   | 1   | 1,803,413.33  | 1,803,413.33          |

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Dapam

KARACHI PH:34993810 34994952 ISLAMAB (B) PH:404549





| ltem code | Model # | DESCRIPTION   | Qty | Unit Price   | Total Price<br>in PKR |
|-----------|---------|---|-----|--------------|-----------------------|
|           | W3-MkII | ALTERNATIVE-1 Permeability/Fluidisation Studies Apparatus to verify Darcy's law, to examine Kozeny's equation and to observe liquid fluidisation behaviour of a granular bed Equipment consists of a metal framework, transparent test section for observation Pump 24 L/hr | 1   | 1,506,453.33 | 1,506,453.3           |
|           | 2*      | 2 x Solenoid Valves Differential Pressure Sensor 0-5psi 1.5L glass funnel Test material (Ballotini) for the packed bed is supplied with the unit Software for control and data logging  |     |              |                       |
|           |         | Operational manual with teaching exercises  Technical Specifications:  Sample tube: I/D 0.038m  Sample tube length: 0.507m  Pump: 24 L/hr  Flow meter range: 0-3 L/min  |     |              | ,                     |
|           |         | Glass funnel: 1.5L Solenoid valves: 2 Pressure range: 0-5 psi   |     |              |                       |
|           |         | Armsoft LCD Screen 15.6" M/S. ARMFILED LTD., UK   | 1   | 349,160.00   | 349,160.(             |

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| Hem    | Model #  | DESCRIPTION  | Qty     | Unit Price<br>in PKR | Total Price<br>in PKR |
|--------|----------|--|---------|----------------------|-----------------------|
| wQL-2  | INSTA059 | 2 X stiffener bar 1 X adjustable inlet weir 1 X 1L bottle, Armfield blue dye with COSHH sh 25Kg precipitated Calcium Carbonate & safety data sheet Operational manual with teaching exercises Technical Specifications: Sedimentation tank: 97L Acrylic settling tank: 1.05m x 0.35m x 0.2m Feed tank capacity: 120L Sediment flowmeter range: 0 – 2 L/min Water flowmeter range: 0.5 – 5 L/min Pump flow rate: 60 L/min @ 15m head M/S. ARMFILED LTD., UK  ACCESSORY  Triple Beam Balance M/S. ARMFILED LTD., UK  HP Z640 M/s.HP Processor: 22-Core 2.2GHz Intel Xeon Broadwell 2699 v4 [22-cores / 44-threads] Memory: 256GB (4x 64GB) of 2400MHz DDR4 E Memory Primary Drive: 2TB SATA 2.5" Solid-State Drive Drive Bay 2: 4TB 7200RPM SATA 3.5" Hard Driv Optical Drive (Default): DVD Writer Operating System:Windows 10 Professional 64- | 1 E5-CC | 92,800.00            | /                     |
| 10 WQL | -27 FM 6 | Tesla P100 16GB NVLINK 900-2H400-030 M/s.nVidia (GPU)  View Sonic ViewBoard 55" 4K UHD Interactive Flat Panel IFP5550 M/s.View Sonic  Permeability / Fluidization Studies Apparatus Model FM 63 M/s. Sci-tech Uk   | 0100-   | 1 699,999            | 9.00 699,999          |





| Item   | Model #             | DESCRIPTION   | Qty   | Unit Price<br>in PKR      | Total Price<br>in PKR |
|--------|---------------------|---|-------|---------------------------|-----------------------|
| wQL-21 | ArmBUS-<br>LCD-15.6 | Fechnical Specifications:  2 x vertical columns: 16mm ID  Solenoid valves: 5 x Two-way valves (suitable for 10% HCl, 5% NaOH and 10% NaCl)  Pumps: 4 x 0-50mL (suitable for acid and alkali)  Pump 1 x 0-75mL (suitable for acid and alkali)  PH sensors: 2  Conductivity/temperature sensors: 2 x 0 – 2mS/cn  Conductivity probes: 2 x 0 – 2mS/cm  Regenerant bottles: 2 x 1L  Waste-water container: 25L  Feed & wash water containers: 2 x 10L  M/S. ARMFILED LTD., UK | 1 1 1 | 349,160.00<br>3,996,586.6 |                       |

# RASTEKTECHNOLOGIES

Classic Centre, C-15, Block-16, Gulshan-e-Iqbal, Main University Road, Karachi-75300. PAKISTAN Tel: +92-21-34994952, 34993810 Fax: +92-21-34994678 Email: info@rastek.com Web: www.rastek.com, www.rastek.pk & www.rasta.edu.pk

RAS/IND/QR-101795/21

Date: 21-06-2021

Attn: Director Procurement

**Ned University** 

Karachi

# Tender for PROCURMENT OF LABORATORY EQUIPMENT FOR WATER INSTITUTE

FR NO. : PC (WI)/NED/Equip/ W.Q. Lab/03/7051/2021

|    |              | Citati is | TENDER NO. : PC (WI)/NED/Equip/ W.Q. La   | b/03/70 | 51/2021   | m ( I Dries |
|----|--------------|-----------|---|---------|---|-------------|
|    |              |           |   | Qty     |   | Total Price |
| S# | Item<br>code | Model #   | DESCRIPTION   | 1       | in PKR<br>1,999,000.00                                    | 1,999,000.0 |
| 1  | WQL-01       | FM 136    | Aeration Apparatus<br>Model# FM 136   |         |   |             |
|    |              |           | M/s.Sci-tech Uk Includes: a) Chemicals: Sodium sulphite cobalt chloride.  |         |   | ,           |
|    |              | W10-MkII  | An aeration unit to permit the study transfer characteristics of diffuse air systems 27 litre open tank with a variable-speed motor-driven stirrer paddle and compressed air supply line via a pressure regulator valve and flow meter to a diffuser Sparge device Single and treble airstone diffusers Electronic dissolved oxygen probe with water temperature reading Stop clock Measuring cylinder Operational manual with teaching exercises | er,     | 2,974,626.67  | 2,974,626   |
|    |              |           | Technical Specifications:  Open tank: 27 litre  Diffusers: 3 (sparger, treble stone and single stone)  Flowmeter range: 0 -10L/min  Oxygen/temperature meter ranges:  - 5 to 199% DO  - 5 to 25.0% DO  - 5 to 19.99mg/L  - 10 to 105oC  Length of oxygen probe: 300m  M/S. ARMFILED LTD., UK  |         | KARACHI<br>PH:34993810<br>34994952<br>ISIMABAD<br>PH:1400 | COLOR       |











Ingenuity for life





| Model # | # DESCRIPTION  | Qty                   | Unit Price<br>in PKR | Total Price<br>in PKR |
|---------|--|-----------------------|----------------------|-----------------------|
|         | ACCESSORY  |                       |                      |                       |
|         | ACCECCA!!  |                       | 1                    | 7000 000 07           |
| AC4 A   | Air Compressor   | 1 /                   | 202,226.67           | 202,226.67            |
| AC1-A   | M/S. ARMFILED LTD., UK   |                       | ′                    |                       |
|         | MIO. AINIM TEED 21-17  |                       |                      |                       |
| W11-A   | A Aerobic Digester   | //1                   | 2,724,840.00         | 2,724,840.00          |
| VV11-A  | A 101 bench mounted aerobic digester, comp   | lete /                |                      |                       |
| 1       | with peristaltic feed pump, air compressor and   | / t                   | 1                    |                       |
|         | temperature control system   | /                     |                      |                       |
|         | Dissolved oxygen and pH probes and meters  | are                   | 1                    |                       |
|         | included   | /1                    |                      |                       |
|         | The reactor comprises a cylindrical porous lin   | e lid                 |                      | 1                     |
|         | held in position with sealing rings between the<br>and the base to facilitate removal for cleaning | and                   | 1                    |                       |
| 1       | replacement  |                       | 1                    |                       |
| 1       | Suspended solids are held within the reactor   |                       |                      |                       |
| 1       | volume, while treated water permeates through  | gh the                | 1                    |                       |
|         | porous liner into an outer annular exit chamb  | er/                   | 1                    |                       |
| 1       |  | /                     |                      |                       |
|         | The water level is maintained by an adjustab   | 19                    |                      |                       |
|         | constant head overflow device This digester system is designed to operate                          | safely                |                      |                       |
|         | and reproducibly for periods of several days   |                       |                      |                       |
|         |  |                       |                      |                       |
| A       | The equipment is mounted on a moulded pla  | astic                 |                      | 1                     |
|         | base, equipped with an internally moulded d  | rain                  |                      |                       |
|         | channel, designed to cope with spillages and   | 7                     |                      |                       |
|         | washdown water   |                       |                      |                       |
|         | Operational manual with teaching exercises   |                       |                      | ,                     |
|         | Technical Specifications:  |                       |                      |                       |
|         | Feed pump: 24V DC, peristaltic, 0-30rpm corresponding to 0-40 L/day                                | 1                     |                      |                       |
|         | Air compressor: 120V/240V, 0-3.0 L/min (S  | TP)                   |                      |                       |
|         |  |                       |                      |                       |
|         | Reactor vessel: 10L maximum capacity   |                       |                      |                       |
|         | pH meter range: 0.00 to 14.00  |                       |                      |                       |
|         | DO meter range: 0-100% saturation, resolu  | tion:                 | 11                   |                       |
| •       | 2%   | 1                     |                      |                       |
|         | Reactor heater: Toughened glass, electrica   | u \                   | ///                  |                       |
|         | immersion 200W Temperature controller: 3-term PID (tempe   | rature                |                      |                       |
|         | limit set at 35°C)   | 7.                    |                      |                       |
|         | M/S. ARMFILED LTD., UK   |                       |                      |                       |
|         |  | 7 /                   |                      |                       |
| 1       | ACCESSORY  | / /                   |                      |                       |
|         | ACCESSORT  | \                     |                      | /                     |
| CURL    | 17-A Chilled Water Circulating Unit  |                       | 498,413.33           | 3 /498,413            |
| GW-     | 17-A Chilled Water Circulating Unit  | TECHA                 |                      |                       |
|         | IVI/O. ARWIFILED LTD., UK  | AHRACHI<br>Jaggas III | 1                    | /                     |

RASTEK is a Registered Trade Mark of RASTEK TECHNOLOGIES





| Item<br>code | Model # | DESCRIPTION  | Qty | Onit Price<br>in PKR  | Total Price in PKR |
|--------------|---------|--|-----|-----------------------|--------------------|
| WQL-05       | W8-A    | Anaerobic Digester   | 1   | 2,949,106.67          | 2,949,106.6        |
|              |         | A benchtop anaerobic digester for waste water  |     |                       |                    |
|              |         | treatment studies  |     |                       | \                  |
|              |         | Equipped with two 5l packed bed, upward-flow   |     |                       |                    |
|              |         | reactors Each reactor has gas sampling & collection                                      |     |                       |                    |
|              |         | facilities   |     |                       |                    |
|              |         | Reactors may be operated in series or parallel flow                                      |     |                       |                    |
|              |         | arrangement, using variable-speed peristaltic  |     |                       | \                  |
|              |         | pumps  |     | 1                     | \                  |
|              |         | Feed flow rate to each reactor can be accurately &                                       |     | V                     |                    |
|              |         | independently controlled to any temperature between ambient and 55°C, using 200W heating |     |                       | \                  |
|              |         | jackets  |     |                       | \                  |
|              |         | Thermostatic cut-out set to 110°C  |     |                       |                    |
|              |         | Operational manual with teaching exercises   |     |                       |                    |
|              |         | including details of a proven feedstock (synthetic                                       |     |                       |                    |
|              |         | waste water) included  |     |                       |                    |
|              |         | Technical Specifications:  |     |                       |                    |
|              |         | Reactors:  |     |                       |                    |
|              |         | Two identical reactors   |     |                       |                    |
|              |         | Nominal capacity: 5L   |     |                       |                    |
|              |         | Packed volume: 4L  |     |                       |                    |
|              |         | 150mm dia x 250mm high   |     |                       |                    |
|              |         | Reactor packing:   |     |                       | k                  |
|              |         | 25mm diameter Bio-balls  |     |                       |                    |
|              |         | Temperature control:   |     | 1                     |                    |
|              |         | For each reactor 200W heating jacket with PID  |     |                       |                    |
|              |         | control from a temperature sensor positioned   |     |                       |                    |
|              |         | inside the reactor, set point within range ambient to 55°C,                              |     |                       |                    |
|              |         | the jacket is thermostatically protected by a cut-pu                                     | t   |                       |                    |
|              |         | set at 85°C  |     |                       |                    |
|              |         | Feed pumps:  | 1   |                       |                    |
|              |         | Two identical peristaltic pumps variable speed   | 1   |                       | 5*                 |
|              |         | using 10 turn potentiometer to 4rpm supplied with  | 1   |                       |                    |
|              |         | three tube diameters, 1.6, 3.2 and 4.0mm,  |     |                       |                    |
|              |         | flow rates from 0.2 to 5.8 l/day   | 4   |                       |                    |
|              |         | Reactor vessel: 2 x 5L (4.3L packed sestion)   |     | $A = \{1, \dots, k\}$ |                    |
|              |         | Gas collecting vessel: 2 x 5L  |     |                       |                    |
|              |         | Heat jacket: 2   |     |                       | /                  |
|              |         | Temperature sensor: 2  |     |                       | / 1                |
|              |         | Pump: 2 x 0-40mL, supplied with 4.0, 3.2 and   | 1   |                       | 1 / N              |
|              |         | 1.6mm tubes  | 1   | TECHA                 | 1                  |
|              |         | M/S. ARMFILED LTD., UK   |     | Trecayo!              | 1                  |
|              |         |  |     | 24993810              |                    |



| am T      | Model # | DESCRIPTION   | Qty   | Unit Price<br>jn PKR | Total Price<br>in PKR |
|-----------|---------|---|-------|----------------------|-----------------------|
| de<br>-13 |         | Filterability index unit with a triple beam balance Filterability Index Unit Demonstrator Model FM 64 M/s.Sci-tech UK Includes: Triple Beam Top Loading Balance: Capacity: 2610g  | 1     | 525,000.00           | 525,000.00            |
|           | W4-MkII | ALTERNATIVE-1 Filterability Index Unit The Filterability Apparatus utilises a bed of granular material, which can be chosen by the investigator to suit their own purposes. The measurements taken with this apparatus enable a filterability number to be calculated, which has significance in deep-bed filter performance. For example, the effects of changing pre-treatment dosing can be evaluated before making changes on the operating plant.  Solenoid valves enables the operator to select the direction of flow through the granular bed. At the base of the column is a sieve mesh to retain the granular media. Wastewater can either flow downward via gravity from the funnel into the column to demonstrate filterability or via a pump to demonstrate head loss characteristics using an electronic pressure sensor. The new W4-MKII alsenables backwashing of the granular bed using the pump. All tubing connections are transparent to enable operations to be observed and air bubbles avoided.  Technical Specifications:  Sample tube I/D: 0.038mm  Sample tube length: 0.60mm | to so | 1,378,466.67         | 1,378,466.67          |
|           | NSTA05  | Pump operating range: 0-100 L/hr Solenoid valves: 1 Differential pressure sensor: 0-1 psi M/S. ARMFILED LTD., UK  ACCESSORY Triple Beam Balance M/S. ARMFILED LTD., UK  | 11.1  | 1 92,800.0           | 92,800.0              |

Dorbon

KARACHI 134993810 1294952





| Item   | Model #    | DESCRIPTION  | Qty         | Unit Price   | Total Price  |
|--------|------------|--|-------------|--------------|--------------|
| WQL-14 | FM 61      | Flocculation test unit with hand held  |             | in PKR       | in PKR       |
|        | 1 01       | turbidity unit   | 1           | 999,999.00   | 999,999.00   |
|        |            | Flocculation Test  | 1 /         |              |              |
|        | 1. 4.      | Demonstrator Model FM 64   | 1           |              |              |
|        |            | M/s.Sci-tech Uk  |             |              |              |
|        |            | Includes: Turbidity Meter  |             |              | \            |
|        |            | includes. Furbidity Meter  |             |              | /;           |
|        |            | AL TERMATINE   |             |              |              |
|        | VAVA BALLI | ALTERNATIVE-1  |             |              |              |
|        | W1-MkII    | Flocculation Test Unit   | 1 1         | 1,141,826.67 | 1,141,826.67 |
|        |            | The equipment allows for the well-known 'jar tests' to be conducted on water samples requiring |             |              |              |
|        |            | treatment to determine the correct coagulant   |             |              |              |
|        |            | dosage on a laboratory scale as a prelude to full-   |             | 1            |              |
|        |            | scale plant operation.   |             | 100          |              |
|        |            | Determination of optimum coagulant dosage  |             | 3            |              |
|        |            | Determination of optimum pH  |             |              |              |
|        |            | Effect of mixing time and intensity on aggregation /   |             |              |              |
|        |            | Coagulation tests in conjunction with activated carbo  | on          |              |              |
|        |            | Coagulation tests in conjunction with filterability tests                                      | s           |              |              |
|        |            | Technical Specifications:  |             |              |              |
| 1      |            | Dimensions of paddle blade: 50mm x 15mm  |             |              |              |
|        |            | Stirrer speed range: 0-200rpm  |             |              | . \          |
|        |            | Sample volume: 1L  |             |              |              |
| - 1    |            | Test tube capacity: 16mm x 150mm   |             |              |              |
|        |            | M/S. ARMFILED LTD., UK   |             | 1            |              |
| ,      |            |  |             |              |              |
|        |            | ACCESSORY ( )  |             |              |              |
|        |            | ( ( f  |             |              |              |
|        | INSTA060   | Handheld Turbidity Meter   | 1           | 619,440.00   | 619,440.00   |
|        |            | M/S. ARMFILED LTD., UK   |             |              |              |
| -51    |            |  |             | 17 7 7 7 7   |              |
| L-15   | CEU-A      | Catalytic Reactor (Includes Educational  | 1           | 4,421,533.33 | 4,421,533.33 |
|        |            | Software and Data logging as standard)   |             |              |              |
|        |            | A benchtop unit comprising a vacuum-formed ABS   |             |              |              |
|        |            | plastic plinth with integral electrical console on to  |             |              |              |
|        |            | which is mounted the packed bed reactor  |             | T T          | 1            |
|        |            | columns, feed pump, optical sensor and optional  |             |              | 1,           |
|        |            | flow injection analysis (FIA) system   |             |              | -            |
|        |            | The unit is supplied as standard with two reactor \  |             | 10.          |              |
|        |            | columns for chemical catalysis   |             | X            | ,            |
|        |            | An optional third column can be added to the system for biological (enzymic) catalysis         |             |              | 0            |
|        |            | A heated water supply to the column jackets  | $\setminus$ |              | NOW.         |
|        |            | enables automatic control of reaction temperature  | \           | TECHN        | MY           |
|        |            | to a set point value   |             | PH SOR       | 191          |
|        |            | Feed flow rate 0-15 ml/min   | \           | 3499         | MY /         |

| Item<br>code | Model # | DESCRIPTION  | Qty | Unit Price<br>in PKR                           | Total Price<br>in PKR |
|--------------|---------|--|-----|--|-----------------------|
| ,4           |         | The optional FIA pump can be adjusted to give flow rates up to 2.5 ml/min All electrical circuits are fitted with appropriate protection devices The console has two digital meters. The first, associated with the controller, shows the temperature of water supplied to the column jackets and the second shows the optical sensor reading which provides a measurement of product concentration. Corresponding signals are routed to the I/O port for connection to a PC.  M/S. ARMFILED LTD., UK  |     |  | ,,                    |
|              |         | ACCESSORY  |     |  |                       |
|              | CEU-3   | Flow Injection Analysis Accessory  | 1   | 1,400,506.67                                   | 1,400,506.67          |
| VQL-19       | TH 175  | Ion exchange unit Ion Exchange Chamber Model TH 175 M/s.Sci-tech Uk Includes: Bench Top Conductivity Meter   | 1   | 1,999,999.00                                   | 1,999,999.0           |
|              | W9-MKII | ALTERNATIVE-1 Ion Exchange Unit The unit consists of two vertical transparent columns containing the cation and anion resins, mounted on a support frame together with the necessary pumps, valves and sensors. The arrangement of pumps and solenoid valves enables the flow configuration to be changed to demonstrate the various stages involved in the demineralisation or water-softening processes. Each stage of the process is selected by the operator using a PC and a mimic diagram for the appropriate stage displayed on the screen. | 1   | 3,396,093.33                                   | 3,396,093.3           |
|              |         | Conductivity, temperature and pH of the influent and effluent of the columns are measured using electronic sensors for data logging. The apparatus is supplied with a typical commercial cation and anion resin, but other ion-exchange materials (not supplied) may be used so that their characteristics, exchange capacity etc may be measured and compared.  |     |  |                       |
|              |         | Union couplings at both ends of the columns enable the column to be easily removed for maintenance and setup without the need for tools. Regenerant, test and wash solutions are stored in separate containers to avoid cross-contamination, and effluents are fed to a waste-water tank for proper disposal.  |     | CHNO<br>PH:SE9310<br>PH:SE9310<br>SV ISLAMABBO |                       |

# IZVI & COMPANY 24, Block 9, Gulshan-e-Iqbal, Karachi-75300, Pakistan : 34821116, 34827124

| m<br>o. | Description   | Qty        | Unit Price<br>W/o GST<br>Pak. Rs. | Total Price<br>W/o GST<br>Pak. Rs. |
|---------|---|------------|-----------------------------------|------------------------------------|
|         | steel, LEZ, PTFE, glass measurement cell: - coplanar optical windows with antireflective coating - scratch-resistant BK7 glass - cartridge like design for a quick change between different dispersing units - quick and simple cleaning  |            |                                   |                                    |
|         | 22.9270.00 Ultrasonic box 230V A-22 NeXT For wet dispersion unit A-22 NeXT 2.565,00- Ultrasonic box for dispersion with ultrasonic with max. 50 Watt ultrasonic output, variably adjustable - simple integration into measuring circulation between dispersing and measuring unit - dimensions (w x d x h): 29 x 9 x 27,9 cm  | 01<br>No.  | 750,000.00                        | ~ <b>750,000.00</b>                |
| 3       | Fixed And Fluidized Beds Apparatus Mod. FFB/EV Elettronica Veneta Spa. Italy  Training program  • Pressure drop through fixed or fluidized beds with air/ or water  • Fluidization equation (Carman-Kozeny etc.)  • Observation of different types of fuidization (particulate and aggregative)  Technical specifications  • AISI 304 stainless steel bench framework • 2 transparent acrylic cylindrical columns, DN50, h = 600 mm  • 2 sizes of bed material • 2 pressure gauges • 2 variable area flow meters with control valve • Water tank • Water circulation pump | 01/<br>No. | 3,579,825.00                      | 3,579,825.00                       |
| 27      | REVERSE OSMOSIS AND ULTRAFIL TRATION PILOT PLANT Mod. UOUc/EV manual with data logging Elettronica Veneta Spa. Italy  TRAINING PROGRAM This unit enables to deepen the following issues:  • Effect of the following operational parameters on the process:  • feeding flow rate  • feeding concentration • working pressure  • temperature  • Pre-concentration and concentration of milk • Clarification and concentration of fruit juice • Desalination of water  TECHNICAL SPECIFICATIONS: Mod. UOU/EV  • Framework of AISI 304 stainless steel with castors           | 01<br>No.  | 7,723,690.00                      | 7,723,690.00                       |

ck 9, Gulshan - Agbal, Karachi-75300, Pakistan

| 211 | 16, 348271_4   |           |                                   |                                    |
|-----|--|-----------|-----------------------------------|------------------------------------|
| n   | Description  | Qty       | Unit Price<br>W/o GST<br>Pak. Rs. | Total Price<br>W/o GST<br>Pak. Rs. |
|     | of 30 litres • Tank of AISI 304 stainless steel, with capacity of 30 litres, for permeate • Piston pump of AISI 316 stainless steel • Centrifugal pump of AISI 316 stainless steel • AISI 316 stainless steel housing for 2 membranes; typical flow of permeate = 5-50 ml/min • Heat exchanger of AISI 304 stainless steel • 2 variable area flowmeters for permeate and concentrate (for mod. UOU/EV, only) • 4 Pt100 with sheath of AISI 316 stainless steel • 2 Bourdon gauges of AISI 304 stainless steel • Safety valve • Safety pressure switch • Switchboard with ELCB  |           |                                   |                                    |
|     | MODEL SEDIMENTATION TANK Mod. MST/EV Elettronica Veneta Spa. Italy  TRAINING PROGRAM:  Displaying the hydraulic behaviour by a tracer Comparing actual and theoretical hydraulic behaviours Effect of the flow rate and of baffle position on sedimentation Determination of settling efficiency  TECHNICAL CHARACTERISTICS: Framework of AISI 304 stainless steel with castors Tank of clear methacrylate with capacity of 80 litres and section for mixing tap water and suspension Suspension feed tank with capacity of 120 litres and recycle Centrifugal pump of AISI 304 stainless steel Variable area flowmeter for tap water Variable area flowmeter for suspension | 01<br>No. | 3,500,000.00                      | 3,500,000.00                       |
|     | REVERSE OSMOSIS AND ULTRAFILTRATION PILOT PLANT Mod. UOUc/EV manual with data logging Elettronica Veneta Spa. Italy  TRAINING PROGRAM This unit enables to deepen the following issues: • Effect of the following operational parameters on the process: • feeding flow rate • feeding concentration • working pressure • temperature • Pre-concentration and concentration of milk • Clarification and concentration of fruit juice • Desalination of water  TECHNICAL SPECIFICATIONS: Mod. UOU/EV  | 01<br>No. | 7,723,690.00                      | 7,723,690.00                       |

# IZVI & COMPANY

24 Block , Gulshan-e-Iqbal, Karachi-75300, Pakistan 34821116, 34827124

|             | Elettronica Veneta<br>Spa. Italy   |           |           |              | Only)  |              |  |
|-------------|--|-----------|-----------|--------------|--|--------------|--|
| /QL<br>22   | 22.9040.00 ANALYSETTE 22 NeXT Nano Measuring Unit. Fritsch GmbH — Germany  | Germany   | 01<br>No. | 6,300,000.00 | (Rupees Six<br>Million Three<br>Hundred<br>Thousand<br>Only)                             | 6,300,000.00 |  |
|             | 22.9200.00<br>ANALYSETTE 22<br>NeXT wet<br>dispersion unit.  | Germany   | 01<br>No. | 1,800,000.00 | (Rupees One<br>Million Eight<br>Hundred<br>Thousand<br>Only)                             | 1,800,000.00 |  |
|             | 22.9270.00<br>Ultrasonic box<br>230V A-22 NeXT   | Germany   | 01<br>No. | 750,000.00   | (Rupees<br>Seven<br>Hundred Fifty<br>Thousand<br>Only)                                   | 750,000.00   |  |
| VQL<br>- 23 | Fixed And<br>Fluidized Beds<br>Apparatus<br>Mod. FFB/EV<br>Elettronica Veneta<br>Spa. Italy  | Italy     | 01<br>No. | 3,579,825.00 | (Rupees Three Million Five Hundred Seventy Nine Thousand Eight Hundred Twenty Five Only) | 3,579,825.00 |  |
| VQL<br>27   | Reverse Osmosis<br>And Ultrafiltration<br>Pilot Plant<br>Mod. UOUc/EV<br>manual with data<br>logging<br>Elettronica Veneta<br>Spa. Italy | Italy     | 01<br>No. | 7,723,690.00 | (Rupees Seven Million Seven Hundred Twenty Three Thousand Six Hundred                    | 7,723,690.00 |  |
| VOL.<br>28  | Model<br>Sedimentation<br>Tank<br>Mod. MST/EV<br>Elettronica Veneta<br>Spa.  | Italy     | 01<br>No. | 3,500,000.00 | Ninety Only) (Rupees Three Million Five Hundred Thousand Only)                           | 3,500,000.00 |  |
| (인<br>- ) 2 | Reverse Osmosis<br>And Ultrafiltration<br>Pilot Plant<br>Mod. UOUc/EV<br>manual with data<br>logging<br>Elettronica Veneta<br>Spa.       | Italy     | 01<br>No. | 7,723,690.00 | (Rupees Seven Million Seven Hundred Twenty Three Thousand Six Hundred Ninety Only)       | 7,723,690.00 |  |
| TCL SP      | Anaerobic Water<br>Treatment Pilot<br>Plant Mod.<br>BIO1c/EV<br>Elettronica Veneta<br>Spa.   | Italy (1) | 01<br>No. | 6,454,600.00 | (Rupees Six<br>Million Four<br>Hundred Fifty<br>Four<br>Thousand<br>Six Hundred<br>Only) | 6,454,600.00 |  |

Add 17% GST...Pak. Rs. 11,156,200.00 Total Amount with 17% GST...Pak. Rs. 76,780,905.00

# IZVI & COMPANY

4, Block 9, Gulshan-e-Iqbal, Karachi-75300, Pakistan 34821116, 34827124

Form-II

# Price Schedule in Pak. Rupees

| Name of Bidder Rizvi & Company. | IFB Number | ·   | Page | of |
|---------------------------------|------------|-----|------|----|
| 18 40 19 40 17 5 C              |            | - / |      |    |

| 4           | 2   | 3         | 4         | 5            |  | 6            | 8        |
|-------------|---|-----------|-----------|--------------|--|--------------|----------|
| 1<br>em     | Description   | Country   | Qty       | Unit F       |  | Total        | Remarks  |
|             | 5000, pare  | of origin |           | Word         | Figure   |              | (If Any) |
| 01          | Aeration Study<br>Apparatus Mod.<br>ASA/EV Elettronica<br>Veneta Spa.   | Italy     | 01<br>No. | 3,406,200.00 | (Rupee<br>Three Million<br>Four<br>Hundred Six<br>Thousand<br>Two Hundred<br>Only)       | 3,406,200.00 |          |
|             | Anaerobic Water<br>Treatment Pilot<br>Plant Mod.<br>BIO1c/EV.<br>Elettronica Veneta<br>Spa.                                 | Italy     | 01<br>No. | 6,454,600.00 | (Rupees Six<br>Million Four<br>Hundred Fifty<br>Four<br>Thousand<br>Six Hundred<br>Only) | 6,454,600.00 |          |
| WQL<br>- 05 | Water Treatment Pilot Plant Mod. DE/EV service unit Mod. DE2/EV anaerobic purification system Elettronica Veneta Spa. Italy | Italy     | 01<br>No. | 3,426,500.00 | (Rupees Three Million Four Hundred Twenty Six Thousand Five Hundred Only)                | 3,426,500.00 |          |
| WQL<br>- 07 | Bet Surface<br>Analyzer- 117-<br>BSA100 Lab Expo.   | Canada    | 01<br>No. | 5,400,000.00 | (Rupees Five<br>Million Four<br>Hundred<br>Thousand<br>Only)                             | 5,400,000.00 |          |
| WQL<br>-11  | Filterability Index<br>Unit Mod. FIU/EV<br>Elettronica Veneta<br>Spa. Italy   | Italy     | 01<br>No  | 2,338,700.00 |  | 2,338,700.00 |          |
| WQL<br>- 16 | Ion Exchange<br>Apparatus<br>mod. IEU/EV<br>Elettronica Veneta<br>Spa. Italy  | Italy .   | 01<br>No  |              | (Rupees Three Million Two Hundred Sixty Six Thousand Nine Hundred                        | 3,266,900.00 |          |
| WQL<br>- 18 | Model<br>Sedimentation<br>Tank<br>Mod. MST/EV   | Italy     | O'No      |              | 0 (Rupees<br>Three Million<br>Five Hundred<br>Thousand                                   |              | 0 8      |

VI & COMPANY

19, Gulshan-e-Iqual, Karachi-75300, Pakistan
116, 34827124

| 116, 34827124   |           |                                   |                                    |
|---|-----------|-----------------------------------|------------------------------------|
| Description   | Qty       | Unit Price<br>W/o GST<br>Pak. Rs. | Total Price<br>W/o GST<br>Pak. Rs. |
| • Feeding tank of AISI 304 stainless steel with capacity of 30 litres • Tank of AISI 304 stainless steel, with capacity of 30 litres, for permeate • Piston pump of AISI 316 stainless steel • Centrifugal pump of AISI 316 stainless steel • AISI 316 stainless steel housing for 2 membranes; typical flow of permeate = 5-50 ml/min • Heat exchanger of AISI 304 stainless steel • 2 variable area flowmeters for permeate and concentrate (for mod. UOU/EV, only) • 4 Pt100 with sheath of AISI 316 stainless steel • 2 Bourdon gauges of AISI 304 stainless steel • Safety valve • Safety pressure switch • Switchboard with ELCB  |           |                                   |                                    |
| ANAEROBIC WATER TREATMENT PILOT PLANT Mod. BIO1c/EV Elettronica Veneta Spa. Italy  TECHNICAL CHARACTERISTICS:  · AISI 304 stainless steel framework with castors · Feed tank, 80 I capacity · Transparent plastic cylindrical digester with settler, 15 I capacity · Peristaltic feed pump · Sludge recirculation peristaltic pump · Diaphragm compressor with body of stainless steel · Microprocessor-controlled board-type pH-meter, with range of 2 to 12 pH, 4 to 20 mA output signal · Microprocessor-controlled board-type rH-meter, with range of -1500 and +1500 mV, 4 to 20 mA output signal · Microprocessor-controlled board-type dissolved oxygen meter, with range of 0 and 20 ppm, 4 to 20 mA output signal · Switchboard IP55, complying with EC conformity mark, including plant synoptic and ELCB · Data acquisition software for Windows | 01<br>No. | 6,454,600.00                      | 6,454,600.00                       |
| TRAINING PROGRAM: The process unit enables to develop and analyze the following issues: Purification efficiency versus the following parameters: recycle ratio digester temperature organic load pH and rH  |           | -0                                |                                    |
| ADD 17% GST   |           | PKR<br>PKR                        | 65,624,705.00                      |
| TOTAL AMOUNT WITH 17% GST.\   |           | PKR                               | 11,156,200.00<br>76,780,905.00     |
|   |           |                                   | /5,700,303.00                      |

for: RIZVI & COMPANY

# RIZVI & COMPANY

3-24, Block 9, Gulshan-e-Iqbal, Karachi-75300, Pakistan el : 34821116, 34827124

| Item<br>No. | Description  | Qty       | Unit Price<br>W/o GST | Total Price<br>W/o GST |
|-------------|--|-----------|-----------------------|------------------------|
| -           |  | 41        | Pak. Rs.              | Pak. Rs.               |
| 11          | FILTERABILITY INDEX UNIT Mod. FIU/EV<br>Elettronica Veneta Spa. Italy  | 01<br>No. | 2,338,700.00          | 2,338,700.00           |
|             | TRAINING PROGRAM:  • Principles of filtration through solid beds   |           |                       |                        |
|             | Use of coalescents     Calculation of filterability index number   |           |                       |                        |
| 16          | ION EXCHANGE APPARATUS mod. IEU/EV Elettronica Veneta Spa. Italy   | 01<br>No. | 3,266,900.00          | 3,266,900.00           |
|             | TRAINING PROGRAM   | NO.       | 7                     |                        |
|             | Measurement of the exchange capacities of different materials  |           |                       |                        |
|             | Study of the effect of different regeneration procedures, so as to determine the most economic               | /         |                       |                        |
|             | combination of softening/demineralisation and regeneration.  | /         |                       |                        |
|             | TECHNICAL SPECIFICATION  | /         |                       |                        |
|             | Pump: self-priming, diaphragm type     Flowmeter range: 10-80cc/min  |           |                       |                        |
|             | Sump tank capacity: 30 litres, made of AISI3 6 stainless steel   |           |                       |                        |
|             | Anion exchange resin: 0.75 litre     Cation exchange resin: 1 litre  |           |                       |                        |
|             | Chemicals required: sodium chloride - hydrochloric acid - sodium hydroxide                                   |           |                       |                        |
|             | Portable conductivity meter     Portable pH meter  |           |                       |                        |
|             | Dimensions: 1100x450x900 h mm     Gross weight: 100 kg   |           |                       |                        |
|             | UTILITIES: • Electrical power: 220/240V, single-phase, 50 Hz   |           |                       |                        |
| 18          | MODEL SEDIMENTATION TANK   | 01        | 3,500,000.00          | 3,500,000.00           |
|             | Mod. MST/EV Elettronica Veneta Spa. Italy  | No.       |                       |                        |
|             | TRAINING PROGRAM:  • Displaying the hydraulic behaviour by a tracer  |           |                       |                        |
|             | Comparing actual and theoretical hydraulic behaviours     Effect of the flow rate and of baffle position on  |           |                       |                        |
|             | sedimentation  • Determination of settling efficiency  |           |                       | Mah                    |
|             | TECHNICAL CHARACTERISTICS:   |           |                       | 7                      |
| 100         | Framework of AISI 304 stainless steel with castors     Tank of clear methacrylate with capacity of 80 litres |           | <u> </u>              |                        |
|             | and section for mixing tap water and suspension • Suspension feed tank with capacity of 120 litres and       |           |                       |                        |
|             | recycle  • Centrifugal pump of AISI 304 stainless steel  • Variable area flowmeter for tap water             |           | 8.1                   |                        |
|             | Variable area flowmeter for suspension   | H         | Keyron                | 1                      |

21ZVI & COMPANY 24, Block D, Gulshan-e-Iqbal, Karachi-75300, Pakistan 1: 34821116, 34827124

| m<br>o. | Description  | Qty        | W/o GST<br>Pak. Rs. | W/o GST<br>Pak. Rs. |
|---------|--|------------|---------------------|---------------------|
|         |  | / 04       |                     | 6 300 000 00        |
|         | 22.9040.00 ANALYSETTE 22 NeXT Nano Measuring Unit. Fritsch GmbH − Germany  Measuring Unit for rapid automatic particle size analysis - total measuring range of 0.01 - 3800μm - one laser diodes, wavelength λ = 532nm power app. 1mW each - fast, automatic beam alignment - laser class 1 - multi-element-silicon detector, μp to 60 measuring channels for high particle size resolution - specific detector for backscattered light - simultaneous connection of up to 2 dispersing units possible - USB port for communication with PC - dimensions (w x d x h): 66,6 x 31,9 x 29,4 cm Software - MaS control software for automatic data aquisition and analysis - Standard Operating Procedures (SOPs) for very flexible programming capabilities of both dispersing and measuring process - Calculation of particle size distribution (PSD) using Fraunhofer or Mie theory - MieSearch.exe can assist in searching Mie parameters - Graphical presentation of results as distribution density or cumulative curve - Individual setup of graphs - Measurements can be labelled with a set of editable attributes - User-defined value tables - Manual data input possible (e.g. min/max. limits for specific values) - Combination of measuring result with data from other measuring procedure - Trend analysis and data export to Excel™ Statistical values | Qty 01 No. |                     |                     |
|         | - Statistical values - Building of average values out of up to 100 measurements - Free configuration of result reports - Data manager with integrated "database engine" - Results stored in SQL data base Incl. Windows PC with pre-installed software MaS control Keyboard, mouse and display included  |            |                     |                     |
|         | 22.9200.00  ANALYSETTE 22 NeXT wet dispersion unit  Wet dispersing unit for the measurement of powder samples or suspension with the ANALYSETTE 22  - total volume selectable by software: 150 - 500ml  - ultrasonic sensor for detection of liquid filling height  - centrifugal pump with variable pump speed  - automatic exchange of liquid after measurement  - dimensions (w x d x h): 29 x 27,2 x 29 cm  - measurement cell included  | 01<br>No.  | 1,800,000.0         | 0 1,800,000.00      |

# IZVI & COMPANY

, Block 9, Gulshan-e-Iqbal, Karachi-75300, Pakistan 34821116, 34827124

Quotation No.AS33796/2021 Dated: June 21, 2021

PART-VIII

# SPECIFICATIONS AND QUANTITIES

| m<br>o.  | Description   | Qty       | Unit Price<br>W/o GST<br>Pak. Rs. | Total Price \\ W/o GST Pak. Rs. |
|--|---|-----------|-----------------------------------|---------------------------------|
|  | AERATION STUDY APPARATUS Mod. ASA/EV Elettronica Veneta Spa. Italy  TRAINING PROGRAM:  • Measurement of the absorption coefficient Ks and of the oxygenation capacity R  • Effects of:  - the degree of mixing  - temperature   | 01<br>No. | 3,406,200.00                      | 3,406,200.00                    |
|  | - air flow - depth of water - diffuser typology - water composition TECHNICAL CHARACTERISTICS: - Framework of stainless steel AISI 304 - Graduated tank of transparent methacrylate with capacity of 25 litres - Diaphragm compressor - Variable area flowmeter (0-12 l/min) - Portable oxygen probe with display, range of 0-20 mg/l - Variable speed stirrer - 3 interchangeable diffusers  |           |                                   |                                 |
| The state of the s | ANAEROBIC WATER TREATMENT PILOT PLANT Mod. BIO1c/EV. Elettronica Veneta Spa. Italy  TRAINING PROGRAM: The process unit enables to develop and analyze the following issues: Purification efficiency versus the following parameters: recycle ratio digester temperature organic load pH and rH  | 01<br>No. | 6,454,600.00                      | 6,454,600.00                    |
|  | TECHNICAL CHARACTERISTICS:  • AISI 304 stainless steel framework with castors  • Feed tank, 80 I capacity  • Transparent plastic cylindrical digester with settler, 15 I capacity  • Peristaltic feed pump  • Sludge recirculation peristaltic pump  • Diaphragm compressor with body of stainless steel  • Microprocessor-controlled board-type pH-meter, with range of 2 to 12 pH, 4 to 20 mA output signal  • Microprocessor-controlled board-type rH-meter, with range of -1500 and +1500 mV, 4 to 20 mA output |           | Waren                             | 100gh                           |

# IZVI & COMPANY

, Block ⅓, Gulshan-e-Iqbal, Karachi-75300, Pakistan 34821116. 34827124

| em<br>No. | Description   | Qty        | Unit Price<br>W/o GST<br>Pak. Rs. | Total Price<br>W/o GST<br>Pak. Rs. |
|-----------|---|------------|-----------------------------------|------------------------------------|
|           | signal • Microprocessor-controlled board-type dissolved oxygen meter, with range of 0 and 20 ppm, 4 to 20 mA output signal • Switchboard IP55, complying with EC conformity mark, including plant synoptic and ELCB • Data acquisition software for Windows Power-supply: 230 Vac 50 Hz single-phase - 1,5 kVA (Other voltage and frequency on request)   | <i>f</i> . |                                   |                                    |
| 5         | WATER TREATMENT PILOT PLANT Mod. DE/EV service unit Mod. DE2/EV anaerobic purification system Elettronica Veneta Spa. Italy This equipment consists of a service unit (mod. DE/EV) including two peristaltic pumps (for feeding and recycle) of variable speed and a compressor with flowmeter that can be coupled to the aerobic purification system (mod. DE1/EV) or to the anaerobic purification system (mod. DE2/EV). The minimum purchasable configuration includes the service unit (mod. DE/EV) and one of the two purification systems. Anaerobic purification system mod. DE2/EV is a desktype pilot plant including an anaerobic digester with built-in settler. Feeding and recirculation of sludges are carried out by the two peristaltic pumps of the service unit, whereas biomass is continuously stirred thanks to the compressor of service units that recycles/gas from the top to the bottom of the digester.  TRAINING PROGRAM: The process unit enables to develop and analyze the following issues:  Mod. DE2/EV Study, simulation, sizing and optimization versus the following parameters: hydraulic residence time recycle ratio packing | /<br>:     | 3,426,500.00                      |                                    |
| 7         | Bet Surface Analyzer- 117-BSA100 Lab Expo. Canada Pressure Measurement: 0-1000Torr (0-133Kpa), 0-10Torr (0-1.33Kpa) (optional) Transducer Accuracy: 0.1% Partial Pressure: 5x10-6-0.998P/Po Ultimate Vacuum: 4x10-2Pa (3x10-4 Torr) Sample Types: powders, particle, fiber, flakes and other materials Adsorbate Gas: high purity nitrogen (≥99.999%), Ar, Kr, CO, C02, C4H10 etc.  | O No       |                                   | 5,400,006.00                       |



7/I, Block F,

Pakistan.

Lahore-54660

Near Main Market, Gulberg-II,

Fax:0092-42-35753906 Email: sales@raystechno.com Website: www.raystechno.com

Tel: 0092-42-35753903, 35753904-5

Ref. No.:

RT/0373/2021

Date:

17-06-2021

The Assistant Director

Procurement - II

NED University of Engineering & Technology

Karachi

Tel # 99261261-68, (Ext: 2291)

Fax: 99261255

QUOTATION

REF: SEALED TENDER ENQUIRY NO. PC (WI)/NED/EQUIP/ W.Q. LAB/03/ 7051/2021 FOR PROCURMENT OF LABORATORY EQUIPMENT FOR

WATER INSTITUTE "ESTABLISHMENT OF 21ST CENTURY WATER

INSTITUTE AT NED UNIVERSITY" DUE ON 23-06-2021

# FINANCIAL OFFER

Dear Sir,

We refer to your enquiry and are pleased to quote hereunder our best prices for your consideration:

# Sr.#. Description

Unit Price

DO Meter Multi-parameter portable Oxygen meter MultiLine® 10. Multi 3510 IDS with D.O Probe

High-quality portable digital IDS multi-parameter instrument with a universal measurement input for starting with digital measurement technology

Future proof prepared for wireless sensor technology

QSC function for optimum tracking of the sensor quality

**Technical Specification** 

Measuring range:-

Saturation measuring range:-

Partial pressure measuring range:-

Temperature

Display

Memory

Protection class

Concentration measuring range: 0.00...20.00 mg/l, ± 0.5 % of value 0...90.00 mg/l, ± 0.5 % of value 0.0 ... 200.0 % ± 0.5 % of value

0...6.00 mg/l, ± 0.5 % of value 0.0 to 400 hPa ± 0.5 % of value

0 ... 50.0 °C (32 ... 122 °F) ± 0.2 °C

LCD graphic, backlit

manual 500 / 4500 automatic

IP 67

Complete with DO Probe, Battery operated Model Multi 3510 IDS SET 4 Cat No. 2FD354

WTW Made in Germany.

Sales Tax @ 17%

Total after Addition of Sales Tax

Rs. 295,000.00 Rs. 50,150.00

Rs. 345,150.00



# Flocculation Apparatus 6 Chamber type with Stirrer 12.

Easy to use and Reliable

- Microprocessor controlled operating time for unattended operation
- Illuminated back panel simplifies the observation of the samples
- Stirring rods adjustable in height without tools
- Digitally selectable speed from 10 to 300 rpm
- Identical speed and time for all positions for comparable results
- Reliable and repeatable results from VELP stirring quality
- Precise speed from an electronically controlled DC gear motor
- Strong resistance to chemical and mechanical corrosion
- High visibility LED displays for speed and time

# **Technical Data:**

Construction Material:

Number Of Positions

Back Panel:

Stainless Steel Stirring Rods:

Monoselector:

Dimensions (Wxhxd):

Electronic Speed Control:

Speed Setting Interval:

Microprocessor Controlled Timer

epoxy painted metal structure

6 positions

disconnectable illuminated

adjustable in height by a selfblocking chuck

same speed for each rod

935x347x260 mm (36.8x13.7x10.2 in)

from 10 to 300 rpm

1 rpm

0÷999 min or 0 ÷99 hours (or continuous)

Complete unit as above, operated on 220 volts

Model JLT6, Velp Made in Italy.

Rs. 535,000.00

Sales Tax @ 17%

Rs. 90,950.00

Total after Addition of Sales Tax

Rs. 625,950.00

### pH meter Portable 24.

The pH 3110 is ideal for all seeking an easy, robust and waterproof instrument for portable pH measuring.

## Features:

- pH or ORP measurements
- Easy 1- to 3-point calibration with adjustable calibration timer
- Robust and waterproof (IP 67)

# Specification:

Hg

-2.000 ... +19.999 ±0.005 pH

mV

-1200.0 ... +1200.0 ±0.3 mV

-2000 ... +2000 ±1 mV

Temperature

-5.0 ... +105.0 ±0.1°C (23 ... 221 °F)

1, 2 or 3-point calibration

Calibration

7-Segment LCD,\customized Display For battery operation, with Electrode Sentix 41

Model PH 3110 Set 2, WTW Made in Germany.

Rs. 140,000.00 Rs. 23,800.00/

Sales Tax @ 17% Total after Addition of Sales Tax

Rs. 163,800.00



# RAYS TECHNOLOGIES

High Speed Refrigerated Centrifuge Machine 33.

230 V 50 Hz, maintenance free brush-less motor with a speed range of 18000 rpm universal speed range, microcontroller with automatic rotor identification, LCD-Display for the preselection of all centrifuge parameters 10 each curves of acceleration and deceleration, simple starting, Temperature control range -20 to +40°C, with built in time display, range 0 - 99hr or infinite, Operated on 220 Volts, Model Z326K, Hermle Made in Germany.

# Special Features:

# Distinct Control Panel

- Simple one handed operation
- Easy to program with gloves on
- Splash proof digital display
- Permanent indication of Preset and Actual Values
- Selection of speed in both rpm and g-force, with increments of 10
- 10 acceleration and 10 deceleration rates, Possibility of unbraked deceleration
- Preselection of the temperature from 20°C to 40°C with 1°C increments
- Indication of the sample temperature
- Pre-selection of running time from 10 sec to 99h 59minor continuous
- Storage of up to ninety runs incl. rotor type
- Quick-key for short runs
- Diagnostic program

# Specifications:

- Maintenance-free induction drive
- Microprocessor with large L¢D display
- Automatic rotor identification system with over speed protection, immediately upon rotor insertion
- Active imbalance-identification and -cut off (rotor specific)
- Imbalance tolerant drive
- CFC free refrigeration system
- Manufactured according to international safety regulations, i.e. IEC 1010
- Audible signal at the end of each run with several melody options
- · Rotor exchange is easy to handle
- Noise level under 60 dBA at max. Speed

1-No. Angle Rotor capacity 24x1.5ml/2.0ml Speed 15000rpm

1-No. Angle Rotor capacity 6 x 85ml Speed 13500rpm With adaptors of 50ml & 15ml

Complete with Rotor operated on 220 Volts, Model Z326K, Hermle Made in Germany.

Sales Tax @ 17%

Total after Addition of Sales Tax

Rs. 1,575,000.00 Rs. 267,750,00

Rs. 1,842,750.00





Water Purification System OmniaTap 6 OmniaTap gives pure water and ultrapure water (ASTM I & II) for QC Labs,

Analytical Labs in Universities, Pharma, Chemical Industries & for Research & Development. It is compact unit and can be directly connected to the drinking water supply.

Feed water requirements:-

Drinking water according to DIN 2000, Feedwater temperature +2°C to 35° Feedwater pressure 1 to 6 bar, Manganese and iron content < 0.05 mg/l Free chlorine content < 1 mg/l, Silt density index (SDI) max. 3

Type 1 ultrapure water

0.055 Conductivity µS/cm 18.2 Resistance MΩ x cm 5 - 10TOC-value\* ppb up to 2 Dispensing performance I/min. < 1 Particles\*\*/ml < 0.1 Bacteria\*\* CFU/ml

Typical applications:-

Life Sciences, Cell and tissue cultures, molecular biology and microbiology

6

Type II pure water

Pure water performance I/h at 15 °C

0.067 - 0.1Conductivity µS/cm 15 - 10Resistance MΩ x cm yes

Pure water tank pressurized outlet

With built in 10 litre Tank Operated on 220 Volts,

Rs. 850,000.00 Model OmniaTap6 Stakpure Made in Germany. Rs. 144,500.00 Sales Tax @ 17%

Total after Addition of Sales Tax Rs. 994,500.00

Sales Tax Registration No

03-94-9999-778-91

National Tax No

0665848-2

CNIC

3520278351505

# Terms & Conditions:-

Offer Validity

: 90 days

Delivery Period

: 90 days

Payment

: By Cheque as usual

Warranty

:One year from the date of installation by our engineer.

Note:- 17% Sales tax will be charged extra on the quoted price. However if Govt. will increase the sales tax it will charged as per actual. EUC will be required for export approval from respective country. If EUC may be rejected by export control authority the order will stand ad cancelled without any obligation on our part. Due to current COVID-19 global situation shipment /delivery may get delayed and we may not in position to ensure the delivery / shipment on time.

Thanking you

# Rays Technologies

Rays Technologies

7/I, Block F.

Near Main Market, Gulberg-II, Lahore-54660 Pakistan.

Tel: 0092-42-35753903-4-5 Fax: 0092-42-35753906 Email. Info@raystechno.com/sales@raystechno.com

Website: www.raystechno.com



Office: West Land Trade Center, Suite 615B, 6th Floor C/5, Block - 7 & 8 Commercial Area, K.C.H.S., Shaheed-e-Millat Road, Karachi 74800, Pakistan. Tel: (92-21) 34325586, Fax: (92-21) 34325585, Email: qtech@cyber.net.pk info@qtech.com.pk Web: www.qtech.com.pk

WOLUL

# Represents World Renowned Manufacturers of Quality Instruments

| System Model: HWT-121 Make: Hawk Engineering Services  Specifications: Computer controlled study unit with DAQ system Supply Unit Raw water storage tank, |   |  | 4,500,000,0   |
|---|---|--|---|
| Make: Hawk Engineering Services  Specifications: Computer controlled study unit with DAQ system   |   |  | 4,500,000,0   |
| Specifications: Computer controlled study unit with DAQ system  |   |  | 1,300,000   |
| Computer controlled study unit with DAQ system  | . /   |  |   |
| Computer controlled study unit with DAQ system  | ./  |  |   |
| Computer controlled study unit with DAQ system  | . /   |  | 1   |
|   |   |  |   |
| Supply Offic Naw Water Storage tank,  | /   |  |   |
| conscitut 200 l   |   |  |   |
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|   |   |  |   |
|   |   |  |   |
| absorber.   |   |  |   |
| Two exchangers: Diameter: 240 mm, each one.   |   |  |   |
|   |   |  |   |
|   | 1   |  |   |
| anions.   | 1   | -  |   |
| Pressure sensor ( range: 0-6 bar) to measure a  |   | -  |   |
| plant pressure.   |   |  |   |
| Inductive magnetic flow sensors ( range: 0.21   |   |  |   |
| I/min - 50 I/min) of the raw water input.   |   |  | X   |
| Temperature sensors to measure the  |   |  |   |
| temperature of raw water input.   |   |  |   |
| Three temperature sensors.  |   |  |   |
| Three conductivity sensors ( range: 0-20 mS/cm)   |   |  |   |
| Flow control Valve. Sampling Valves at each   | 1   |  |   |
| stage.  |   | 1.   |   |
|   | capacity: 300 l.  Treated water storage tank, capacity: 300 l  Water Treatment unit: Two transparent filters: Diameter: 200 mm, each one. Height: 650 mm, each one. Gravel and sand filter. Two differential pressure sensors, range: 0-2 bar Two transparent absorbers: Diameter: 200 mm, each one. Height: 650 mm, each one. Aluminium oxide absorber activated carbon absorber. Two exchangers: Diameter: 240 mm, each one. Height: 400 mm, each one. Exchanger contains mixed bed with cations and anions. Pressure sensor ( range: 0-6 bar) to measure a plant pressure. Inductive magnetic flow sensors ( range: 0.21 I/min - 50 I/min) of the raw water input. Temperature sensors to measure the temperature of raw water input. Three temperature sensors. Three conductivity sensors ( range: 0-20 mS/cm) Flow control Valve. Sampling Valves at each | capacity: 300 l.  Treated water storage tank, capacity: 300 l  Water Treatment unit:  Two transparent filters: Diameter: 200 mm, each one. Height: 650 mm, each one. Gravel and sand filter.  Two differential pressure sensors, range: 0-2 bar  Two transparent absorbers: Diameter: 200 mm, each one. Height: 650 mm, each one. Aluminium oxide absorber activated carbon absorber.  Two exchangers: Diameter: 240 mm, each one. Height: 400 mm, each one. Exchanger contains mixed bed with cations and anions.  Pressure sensor ( range: 0-6 bar) to measure a plant pressure. Inductive magnetic flow sensors ( range: 0.21 I/min - 50 I/min) of the raw water input. Temperature sensors to measure the temperature of raw water input. Three temperature sensors. Three conductivity sensors ( range: 0-20 mS/cm) Flow control Valve. Sampling Valves at each | capacity: 300 l.  Treated water storage tank, capacity: 300 l  Water Treatment unit:  Two transparent filters: Diameter: 200 mm, each one.  Height: 650 mm, each one.  Gravel and sand filter.  Two differential pressure sensors, range: 0-2 bar  Two transparent absorbers: Diameter: 200 mm, each one. Height: 650 mm, each one.  Aluminium oxide absorber activated carbon absorber.  Two exchangers: Diameter: 240 mm, each one. Height: 400 mm, each one. Exchanger contains mixed bed with cations and anions.  Pressure sensor ( range: 0-6 bar) to measure a plant pressure. Inductive magnetic flow sensors ( range: 0.21 I/min - 50 I/min) of the raw water input. Temperature sensors to measure the temperature of raw water input. Three temperature sensors. Three conductivity sensors ( range: 0-20 mS/cm) Flow control Valve. Sampling Valves at each |

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Office: West Land Trade Center, Suite 615B, 6th Floor C/5, Block - 7 & 8 Commercial Area, K.C.H.S., Shaheed-e-Millat Road, Karachi 74800, Pakistan. Tel: (92-21) 34325586, Fax: (92-21) 34325585, Email: qtech@cyber.net.pk info@qtech.com.pk Web: www.qtech.com.pk



# Represents World Renowned Manufacturers of Quality Instruments

| 2.  | 3        | 4        | 5   | 5                | 6                | ,             |
|---|----------|----------|---|------------------|------------------|---------------|
| Description   | Country  | Quantity | Unit Price                                  |                  | Total            | Rema<br>(if a |
|   | Origin   |          | Words                                       | <u>Figure</u>    |                  |               |
| Reverse Osmosis Plant Package unit  Model: HRO-221            | Pakistan | 01       | Two Million<br>Five<br>Hundred<br>Thousand  | Rs.<br>2,500,000 | Rs.<br>2,500,000 |               |
| Water Treatment Studies Bench with DAQ System  Model: HWP-121 | Pakistan | 01       | Four Million<br>Five<br>Hundred<br>Thousand | Rs.<br>4,500,000 | Rs.<br>4,500,000 |               |
| id amount in words: Seven Mid amount in figure: Rs. 7,000     |          | pees     |   |                  |                  |               |



Office: West Land Trade Center, Suite 615B, 6th Floor C/5, Block - 7 & 8 Commercial Area, K.C.H.S., Shaheed-e-Millat Road, Karachi 74800, Pakistan. Tel: (92-21) 34325586, Fax: (92-21) 34325585, Email: qtech@cyber.net.pkinfo@qtech.com.pk Web: www.qtech.com.pk

# Represents World Renowned Manufacturers of Quality Instruments

June 22, 2021

Director Procurement Ned University of Engineering And Technology, Karachi.

Subject:

PROCURMENT OF LABORATORY EQUIPMENT FOR WATER INSTITUTE TENDER NO. : PC (WI)/NED/Equip/ W.Q. Lab/03/7051/2021

| S. No. | Specification                                   | Qty. | Unit Price | Total Price |
|--------|---|------|------------|-------------|
| 01     | Reverse Osmosis Unit                            | 01   | 2,500,000  |             |
|        | Model: HRO-221                                  |      | 2,500,000  |             |
|        | Make: Hawk Engineering Services                 |      |            | 2,500,000.  |
|        | VFD for monitoring sensor's data.               |      |            |             |
|        | Positive displacement feed pump.                |      |            |             |
|        | Frequency variator that control pump/motor.     |      |            |             |
|        | PP melt blown filter + carbon charcoal filter + |      | 1          |             |
|        | Activated carbon filter for pretreatment.       |      |            |             |
|        | Tubular Membrane connected in series (Reverse   |      |            |             |
|        | osmosis + Ultraltration).                       |      |            |             |
|        | Flow Rate: 1500 Gallons Per Day.                |      |            |             |
|        | Max Operating Pressure: 600 PSI.                |      |            |             |
|        | Max Chlorine Concentration:<0.1 PPM.            |      |            |             |
|        | Max Operating Temperature: 113 F (45 C).        |      |            | 1           |
|        | High Salt Rejection.                            |      |            |             |
|        | Feed pump for Antiscalant.                      |      |            |             |
|        | Relief valve to protect unit.                   |      |            |             |
|        | Three Temperature sensors.                      | 1    |            |             |
|        | Pressure sensor.                                |      |            |             |
|        | Flow sensor.                                    |      |            |             |
|        | Level switch.                                   |      |            |             |
|        | TDS meter                                       |      |            |             |





| S. No | Description of Items   | Qty   | Unit Price<br>(PKR) | Total<br>Price(PKR) |
|-------|--|-------|---------------------|---------------------|
|       | Total Chromium, Yes  |       |                     |                     |
|       | Copper, Fluoride (Free), Iron, Iron (Low Range),   |       |                     |                     |
|       | Formaldehyde, Hydrogen Peroxide, Manganese,  |       |                     |                     |
|       | Ammonium, Ammonium- Nitrogen, Nickel, Nitrite,   | h 1   |                     |                     |
|       | Nitrite-Nitrogen, Nitrate-Nitrogen, Nitrate, Lead, Phenol,   |       |                     |                     |
|       | Phosphate, Phosphate-Phosphorus, Sulfide (Hydrogen   |       |                     |                     |
|       | Sulfide), Total Hardness, Turbidity, Zinc Yes<br>Accessories: All necessary including Multi-Sample   |       |                     |                     |
|       | Measurements, Water Analysis Pro   | 1     |                     |                     |
|       | gram Software Yes  |       |                     |                     |
|       | Make: AELAB Guangzhou Co (UK Base Company)   |       |                     |                     |
|       | Catalogue attached (Chana)   |       |                     |                     |
|       | OPTION " B"  | 01 No | 2194,000-           |                     |
|       | UV-visible spectrophotometer   |       | /                   |                     |
|       | Halo DB-20 (1.5nm slit width) Double Beam  |       |                     |                     |
|       | Spectrophotometer with UV detective software   |       |                     |                     |
|       | 110-220V switchable  |       |                     |                     |
|       | Main Unit  |       |                     |                     |
|       | Operation Manual   |       |                     |                     |
|       | Power Cord   |       |                     |                     |
|       | The state of the s |       |                     |                     |
|       | Set of Fuses   |       | 1                   |                     |
|       | Screw Drivers  |       |                     |                     |
|       | Micro cell holder Micro Cell not included  |       |                     |                     |
|       | (DB-20-FCC) 5-cell Changer   |       |                     |                     |
|       | Make: Dynamac UK   |       |                     |                     |
|       | Attached Broucher  |       |                     |                     |
| 35    | Vacuum Filters and Centrifuges (GP-8) with a rotor   | 1 No  | N/Q                 | N/Q                 |



| S. No | Description of Items   | Qty     | Unit Price<br>(PKR) | Total<br>Price(PKR) |
|-------|--|---------|---------------------|---------------------|
| 36    | Water Purification (deionizers)  | 1 No    | 1224000-            | 1224000-            |
|       | Direct Q 3 UV Water Production Unit with built-in 6L Reservoir Cat #: ZRQSVP3EU Speciation: The specifications are given below: Water quality: Type-1 & Type-3, Feed water type = tap water, Product Water Resistivity at 25 °C: 18.2 M $\Omega$ ·cm, Product Water TOC < 5 ppb, Product Water Microorganisms < 0.01 CFU/mL, Product Water Particulates < 1 unit/mL (particulates > 0.22 $\mu$ m), |         |                     |                     |
|       | DNAse< 5pg/mL, RNAse< 1pg/mL, Pyrogen (endotoxins) < 0.001 EU/mL, Temperature: 5 – 35 °C, Built-in 6L Tank, Volumetric water delivery, Built-in UV lamp.  Make: Merck Millipore / ZRQSVPEU   | 1       |                     |                     |
| 37    | Attached Broacher  Water Quality Analyzer (Water Logger)  Global Data Logger   | 1 No    | N/Q                 | N/Q                 |
| 38    | Water Treatment Studies Bench Raw water storage tank, capacity: 250 l.   | 01 No   | N/Q                 | N/Q                 |
|       |  | 1       | Total Amount:       | 105,21000.00        |
|       |  | 17%     | GST Amount:         | 1788570.00          |
|       |  | Grant 7 | Total Amount:       | 123,09570.00        |

### Terms & Condition:

Delivery Period: 16 Weeks. Origin UK, EUROP, USA, China

Pay Order: Attached PKR 246200/- Bank Al-Habib

Thanks & Best Regards

Marium & Co

107, 1st Floor, Asia Center, Plot # B-24, Block 13-A, Gulshan- e-Iqbal Karachi. Pakistan: Tel: 34823464, Fax 34823465, Email:mariumandco@gmail.com



| S. No  | Description of Items  | Qty    | Unit Price<br>(PKR) | Total<br>Price(PKR) |
|--------|---|--------|---------------------|---------------------|
| 29 27) | Sequential Batch Reactors (SBR)  Package unit / Service Unit  Anodized aluminum structure and panels of painted steel.  | 01 No  | N/Q                 | N/Q                 |
| 30     | Temperature Test Chamber  | 01 No/ | 27,44000-           | 27,44000-           |
|        | Model: T-230C  Temperature Chamber can realize both high and low temperature test Yes.  • -73°C to +175°C Yes.  But please notice, our chamber T-230C can perform the high and low temperature cycle in the range of -73°C to +175°C. If you need to perform the test at -73°C, our standard type T-230C cannot achieve. It needs to reinforce the cooling power, Temperature Range (opt. to +205°C) T-230C temperature range is -73°C to +180°C  • 7 Cu Ft Workspace, 24 W x 21 H x 24 D (198 Liters) Yes. Chamber T-230C has a bigger space than the customer needs. It is 26" W*22" H *26" D ( 232Liters).  • Programmable Temperature Controller Yes.  • RS-232 Interface (Opt. GPIB and Ethernet) The interface of our chamber is Ethernet and USB. RS232 already be replaced.  • High/Low Limit Control and AlarmYes.  • Viewing Window & Interior LightYes.  • 4" Access Ports on Left & Right SideYes. A 4" access ports on the left side of the chamber  • Non-CFC Cascade RefrigerationYes.  Make: LIB Environment Industry China, Catalogue attached | 01 No  | N/Q                 | Domn N/Q            |
| 31     | TOC Analyzer An ultra-wide measurement range 4 $\mu$ g/L to 30,000 mg/L (with the automatic dilution function)  |        |                     |                     |
| 32     | Ultrafiltration and nano-filtration units Package unit / Computer Controlled Continuous and Batch Filtration Unit Bench-top Unit  | 01 No  | N/Q                 | N/Q                 |

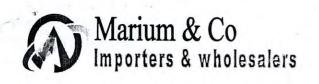


| . No | Description of Items   | Qty   | Unit Price<br>(PKR) | Total<br>Price(PKR) |
|------|--|-------|---------------------|---------------------|
| 33   | Ultracentrifuge (refrigerated)  Recommend D1524R   | 01 No | 924,000-            | 924,000-            |
|      | Refrigerated centrifuge that can handle Yes sample tubes (multiple rotor) with a capacity of 2ml, 15ml and 50ml. Max Yes rotation speed 14000 RPM, Temperature: – 20 or +20 °C   |       |                     |                     |
|      | Yes, -20°C-40°C  Make: AELAB Guangzhou Co (UK Base Company)  Catalogue attached Charac   |       |                     |                     |
| 34   | UV-visible spectrophotometer   | 01/No | 1250,000-           | 1250,000-           |
|      | OPTION "A"  Recommend AE-S90-TD  Double beam UV/Vis spectrophotometer covering 190-1100nm -Yes  Compact design, Colour Touch screen display with   |       |                     |                     |
|      | easy-to-use software built in USB connectivity for method and results storage plus connection to a PC Photometric system: Monitor double beam optics Yes, 10 inches color touch screen double beam Monochromator: Weight Uses an aberration correcting |       |                     |                     |
|      | concave holographic grating -Yes Wavelength range: 190.0 to 1100.0 nm Spectral bandwidth: 5 nm Wavelength range:190-1100nm, bandwidth:1.8nm Detector: Silicon photodiode Light source: 20 W halogen lamp, Deuterium lamp -Yes                          |       |                     |                     |
|      | Output device: USB memory PC control: UV Probe control Nano Stick microliter cuvette: USB output, th microliter cuvette is optional Designed for micro volume measurements; sample volume required should be atleast 2 µl with No                      |       |                     |                     |
|      | standard and buffer Environmental requirements: Temperature: 15 °C to 35 °C Humidity: 30 % to 80 % Humidity of 70 % or less at temp eratures of 30 °C or higher Yes Dimensions: W416 × D379 × H274 mm Software mode:                                   |       | (1)                 | Doglam              |
|      | Photometric mode, Spectrum mode, Quantitation mode, Kinetics mode, Time scan mode – Multicomponent quantitation mode, Biomethod mode Parameters:  Residual Chlorine (Free), Free Cyanide, Total Cyanide, COD, Color, Chromium (Hexavalent),            |       | 23/10               |                     |



| . No       | Description of Items  | Qty      | Unit Price<br>(PKR) | Total<br>Price(PKR) |
|------------|---|----------|---------------------|---------------------|
| 20         | NVIDIA Tesla Workstation NVIDIA Tesla Workstation,  | 05 No    | N/Q                 | N/Q                 |
| 21         | Orbital shaker Orbital shaker, Platform size accepts loads up to 35 lbs   | 01 No    | N/Q                 | N/Q                 |
| 22         | Particle size analyzer Particle size analyzer for suspensions, emulsions, dry powders.  | 01 No    | N/Q                 | N/Q                 |
| 23         | Permeability /Fluidisation Studies Anodized aluminum frame and panels made of painted steel.  | 01 No    | N/Q                 | / N/Q               |
| 24<br>10 L | Portable pH meter Option "A"  | 01 No    | 318,000-            | 318,000-            |
|            | Thermo Scientific™ Orion Star™ A321 pH Portable Mete  The Thermo Scientific™ Orion™ Star A321 pH Portable Meter is the top choice for testing samples anywhere Range: -5 to 105 °C, 23 to 221 °F Resolution: 0.1 °C, 0.1 °F Relative Accuracy: ±0.1 °C, ±0.1 °F Make: Thermo Scientific | <i>x</i> |                     |                     |
|            | Option "B"  pH Meter Bench Top Model: 3510  3 point Calibration pH Range: - 2.000 to + 19.999  pH resolution: 0.001 0.01 0.1 pH accuracy: ± 0.003  Calibration: User selectable 1, 2 or 3 point  Make: Jenway  Attached Broacher  | 01 No    | 228,000-            |                     |
| 25         | Precision Hawk Crop Scouting Phantom Pro or   | 02 No    | N/Q                 | N/Q                 |
| 26         | equivalent drone package  Pure Air Generator  Pure Air Generator Use to replace conventional high-  | 01 No    | N/Q                 | N/Q                 |
| 27         | Pure Air Generator. Use to replace conventional high- Reverse Osmosis Plant Package unit Main Unit Anodized aluminum frame and panels made of   | 01 No    | N/Q                 | N/Q                 |
| 28         | Sedimentation Studies Five graduated, 1m long x 51mm bore glass cylinders   | 01 No    | N/Q                 | N/Q                 |

107, 1st Floor, Asia Center, Plot # B-24, Block 13-A, Gulshan-e-Iqbal Karachi. Pakistan: Tel: 34823464, Fax 34823465, Email:mariumandco@gmail.com



| 09       | Desiccators  | 01 No | N/Q      | N/Q       |
|----------|--|-------|----------|-----------|
|          | Nonvacuum desiccators in electronic models.  |       |          |           |
| NOLY     | Dissolved Oxygen Meter (DO)  | 01 No | 196,000- | 196,000-  |
| No       | Model: A181  |       |          |           |
|          | Professional DO/BOD/OUR/SOUR Meter   |       |          |           |
|          | A & E LAB UK CO LTD Brand.   |       |          |           |
|          | Attached Broacher  |       |          |           |
| 11       | Filterability Index Unit Bench-top unit of Filterability Index Unit.   | 01 No | N/Q      | N/Q       |
| 12       | Flocculation Test Unit Bench-top Flocculation Unit.  | 01 No | N/Q      | N/Q       |
| 13       | Flow injection analyzer Flow injection analyser for analysis of cyanide,   | 01 No | N/Q      | N/Q       |
| 14       | Freezing & Thawing, alternatively add preservatives (acids)  | 01 No | N/Q      | N/Q       |
| 15       | ICP Mass Spectrophotometer Detection limits  | 01 No | N/Q      | N/Q       |
|          | Based on three times the standard hopping.   |       |          | - " -     |
| 16       | Ion Exchange Unit  | 01 No | N/Q      | N/Q       |
| 17       | Ion Exchange Unit having two transparent vertical  | . /   |          |           |
| 20<br>20 | Libelium-e-Berry Smart Agriculture  Libelium-e-Berry Smart Agriculture Solution Kit IoT kit External Temperature, Humidity and Pressure Probes, Soil moisture 1.5 m Probe, Soil moisture 4.5 m Probe, Leaf wetness probe, anemometer, wind vane and pluviometer probe. 1.5 m probe extender, Outdoor USB Cable, International adapter, External solar panel 7V - 500mA (power accessory) along with PC software and data transfer platform. Libelium-e-Berry Smart Agriculture Solution Kit Make: LIBELIUM E-BERRY | 05 No | 773,000- | 38,65000- |
| 18       | Attached Broacher  |       |          |           |
|          | Model Sedimentation Tank   | 01 No | N/Q      | N/Q       |
| 19       | Multimedia filters package unit  | 01 No | N/Q      | N/Q       |
|          | Multipurpose Farm robot anti weed Filtrate Turbidity <5 NTU, Front lifting device that can lift  | 01 No | N/Q      | N/Q       |

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|                              |                                  |   |             | -            |              |
|------------------------------|----------------------------------|---|-------------|--------------|--------------|
| Tender Item No: 34           |                                  |   |             |              |              |
| Tender Item Code: WQL – 39   |                                  |   | /           |              |              |
| Tender Item Name:            |                                  |   | /           |              |              |
| UV-visible spectrophotometer |                                  |   |             | 7            |              |
|                              |                                  | / | /           |              |              |
| AQ8100                       | SUPPLIER:                        | 1 | One Million | 1,053,000.00 | 1,053,000.00 |
| AquaMate 8100 UV-Visible     | THERMO SCIENTIFIC                |   | Fifty Three |              |              |
| Spectrophotometer            | Part of Thermo Fisher Scientific | 1 | Thousand    |              |              |
|                              | USA                              | / | only        |              | V            |
|                              |                                  |   |             |              |              |

Total Bid amount in words: \_One Million Nine Hundred Eighty Four Thousand Nine Hundred\_

Total Bid amount in figure: \_1,984,900/-

Signature of Bidder

#### TERMS OF SUPPLY

Validity: As per stipulated in the tender. Payment: As per stipulated in the tender. Delivery: As per stipulated in the tender. Warranty: As per stipulated in the tender.

We will provide free insallation of the equipment and training to the end user at your lab.

Uninterupted Power Supply (UPS) MUST be installed with the instrument to avoid flactuation in the electricity that will caused damage to the equipment. PAKFIL will not be responsible if found this kind of damage to the instrument.

Prepared by

For PakFil Technologies

Page: 2 of 2



Pak Fil Technologies E-380/3, Block B, Main Road, Nishat Colony

E-380/3, Block B, Main Road, Nishat Colony Lahore Cantt. 54810-Pakistan

Tel: +92 42 37169991-2, 35692123 Fax: +92 42 37224051

Email: fj@pakfiltechnologies.com www.pakfiltechnologies.com

### rutation No: TENDER/PFT/202/2021

Date: 18-06-2021

omer:

**NED UNIVERSITY OF ENGINEERING & TECHNOLOGY** 

PROCUREMENT CELL

FINANCIAL OFFER

ler Title:

Procurement of Laboratory Equipment for Water Institute at NEDUET

ler No:

PC(WI)/NED/Equip/W.Q.Lab/03/7051/2021

Date & Time:

23-06-2021 10:00 AM

Form-II

| Besi   | t Offer for the material   | ofyc | our request.  |                   |                                |        |
|--|--|------|---|-------------------|--------------------------------|--------|
| Description  | Country Origin QTY   |      | Unit Price W  | ith All Tax Rs    | Total Price With<br>All Tax Rs | Remark |
| Tender Item No: 4  Tender Item Code: WQL - 04  Tender Item Name:  Ammonia electrodes and pH-mV meters +  extra filling solution and electrode membrane  STARA2146  Orion Star A214 pH/ISE Benchtop Meter Kit  for Ammonia* | THERMO SCIENTIFIC  Part of Thermo Fisher Scientific              | 1    | Six hundred Sixty Six Thousand                          | Figure 666,900.00 | 666,900.00                     |        |
| Tender Item No: 24  Tender Item Code: WQL – 28  Tender Item Name:  Portable pH meter  STARA2215  Orion Star A221 pH Portable Meter  Standard Kit   | SUPPLIER: THERMO SCIENTIFIC Part of Thermo Fisher Scientific USA | 1    | Nine Hundred Only  Two Hundred Sixty Five Thousand Only | 265,000.00        | 265,000.00                     | Loa    |



| tem<br>No | Item and Specification   | Model No                   | QTY     | Total Price (PKR) |
|-----------|--|----------------------------|---------|-------------------|
| 36        | Water Purification (Deionizer)   | ZRQSVP3UK                  | 1 /     | 2,389,800.00      |
|           | MERCK: Direct-Q <sup>®</sup> 3 UV tap to ultrapure water purification system+ Accessories  |                            |         |                   |
|           | Air gap device (for the bacteriological protection of reject lines)  | AIRGAP001                  |         |                   |
|           | ■ Smartpak® DQ3 purification pack  ■ Compare the compared to | SPROLSIA1                  |         |                   |
|           | Total FOR Value Kara   | chi, Excluding/Sa          | les Tax | 2,389,800.00      |
|           | Total FOR Value Kara   | 406,266.00<br>2,796,066.00 |         |                   |

#### TERMS OF TRADE

PAYMENT:

As per Tender

MANUFACTURER:

MERCK Millipore

VALIDITY:

As per tender

DELIVERY:

Within 14 weeks of contract

NTN/ GST: 4113945/ 3277876165683

#### **Export Control:**

These item(s) may be subject to export controls, if so they may not be sold or otherwise disposed of without prior written approval of the Seller. Where these commodities, technology or software are subject to export regulations, the export or re- export without proper export licenses or export license exceptions is strictly forbidden.

These commodities, technology or software when exported from the United States, are in accordance with the US Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

The validity of our quotation and any resulting contract therefrom may be subject to the granting of a governmental export license. In the event that such a license or end-use statement is required, the buyer shall provide us with such document on first written request, the seller will contact immediately the buyer.

In case the delivery of goods and services will be restricted or forbidden due to (changed) export control laws, rights and obligations of the customer will be suspended for the estimated duration of this (changed) export control law, or even the contract may be cancelled.

**Head Office: Deneb Tower** 

Plot # 2-C, Muslim Commercial, Main Khayaban-e-Ittehad,

D.H.A, Karachi. Pakistan.

**Branch Office:** 

A-85, Block-C, Gulshan-e-Jamal,

Karachi, Pakistan.

Lahore Office:

Office # 24, 2nd Floor,

Metro Heights,

Bahria Town, Lahore, Pakistan.

E-mail: info@denebcrop.org

Tel: + 92-21-34688106-7



| 10.01   | Model No      | QTY .     | Total Price (PKR) |
|---|---------------|-----------|-------------------|
| Item and Specification  |               | X         |                   |
| Ultra Centrifuge Refrigerated   | 31100V05      | 1         | 1,675,440.00      |
| Hermle: Universal Refrigerated Centrifuge Z 326<br>K, 230 V / 50-60 Hz + Accessories              |               |           |                   |
| <u>Options</u>  |               |           |                   |
| <ul> <li>Bucket/Adapter 7 x 5-7 ml Vakutainer, Ø 13<br/>mm; length min./max. 75/100 mm</li> </ul> | 626006        |           | 25,000.00         |
| <ul> <li>Bucket/Adapter 7 x 5-7 ml, Ø 13 mm; length<br/>min./max. 65/80 mm</li> </ul>             | 626015        |           | 25,000.00         |
| <ul> <li>Bucket/Adapter 1 x 50 ml with rim, Ø 29 mm;<br/>length 116 mm</li> </ul>                 | 626010        |           | 25,000.00         |
| Total FOR Value Karac   | hi. Excluding | Sales Tax | 1,675,440.00      |
| Total FOR Value Karac   | SALES TAX     | x @\17 %  | 284,324.80        |
| Total FOR Value Karac   |               | 1         | 1,960,264.80      |

Dopus

Head Office: Deneb Tower
Plot # 2-C, Muslim Commercial,
Main Khayaban-e-Ittehad,
D.H.A, Karachi. Pakistan.

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Bahria Town, Lahore, Pakistan.

E-mail: info@denebcrop.org Tel: + 92-21-34688106-7

Dall)



| tem   | Item and Specification  | Model No   | QTY   | Total Price (PKR) 350,000.00 |
|-------|---|------------|-------|------------------------------|
| No 24 | Ph Meter  Orion Star™: A121 pH Portable Meter Orion Star A121 pH portable meter | STARA-1215 |       | 350,000.00                   |
|       | Total FOR Value Ka  | SALESTA    | (m I) |                              |

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Die P. W

Head Office: Deneb Tower
Plot # 2-C, Muslim Commercial,
Main Khayaban-e-Ittehad,
D.H.A, Karachi. Pakistan.

Branch Office: A-85, Block-C, Gulshan-e-Jamal, Karachi, Pakistan. Lahore Office: Office # 24, 2nd Floor, Metro Heights,

Bahria Town, Lahore, Pakistan.

E-mail: info@denebcrop.org Tel: + 92-21-34688106-7



| Item | Item and Specification  |                 |        |                         |
|------|---|-----------------|--------|-------------------------|
| No   | ntern and specification   | Model No        | QTY    | Total Price (PKR)       |
| 21   | ORBITAL SHAKER  | ВТ3000-Е        | 1      | 413,800.00              |
|      | BENCHMARK: Orbi-Shaker™ with rubber mat platform (13""x12""), 230V" |                 |        |                         |
|      | Total FOR Value Karach  | SALES TAX (     | 0 17 % | 413,800.00<br>70,346.00 |
|      | Total FOR Value Karachi   | , Including Sal | es Tax | 484,146.00              |

#### TERMS OF TRADE

PAYMENT:

As per Tender

MANUFACTURER:

Benchmark Orbi Shaker

VALIDITY:

As per Tender Terms

DELIVERY:

Within 14 weeks of contract

NTN/ GST:

4113945/3277876165683

#### **Export Control:**

These item(s) may be subject to export controls, if so they may not be sold or otherwise disposed of without prior written approval of the Seller. Where these commodities, technology or software are subject to export regulations, the export or re- export without proper export licenses or export license exceptions is strictly

These commodities, technology or software when exported from the United States, are in accordance with the US Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

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Head Office : Deneb Tower Plot # 2-C, Muslim Commercial, Main Khayaban-e-Ittehad, D.H.A, Karachi. Pakistan.

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E-mail: info@denebcrop.org Tel: +92-21-34688106-7



| Item | Item and Specification                           |                 | T                  |                  |
|------|--|-----------------|--------------------|------------------|
| No   | ntern and Specification                          | Model No        | QTY                | Total Price (PKR |
| 18   | MODEL SEDIMENTATION TANK                         | W7 MKII         | 1                  | 8,122,500.0      |
|      | ARMFIELD: Model Sedimentation Tank + Accessories |                 | /                  |                  |
|      | Triple Beam Balance                              | INSTA059        | /1                 | 104,050.00       |
|      | Hand Held Turbidity Meter                        | INSTA060        | $\left  \right  1$ | 773,450.00       |
|      |  |                 |                    |                  |
|      | Total FOR Value Karach                           | i, Excluding 9a | les Tax            | 9,000,000.00     |
|      |  | SALES TAX       | 0 17%              | 1,530,000.00     |
|      | Total FOR Value Karach                           | , Including Sal | les Tax            | 10,530,000.0     |

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Head Office: Deneb Tower
Plot # 2-C, Muslim Commercial,
Main Khayaban-e-Ittehad,
D.H.A, Karachi. Pakistan.

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E-mail: info@denebcrop.org Tel: + 92-21-34688106-7



|            |   |                  |         | -                 |
|------------|---|------------------|---------|-------------------|
| Item<br>No | Item and Specification  | Model No         | QTY     | Total Price (PKR) |
| 10         | Dissolved oxygen meter (DO)  HANNA INSTRUMENTS: Waterproof DO meter with altitude and salinity comp | HI-9146N         | Á       | 275,000.00        |
|            | Total FOR Value Karaci  | ni, Excluding Sa | les Tax | 275,000.00        |
|            |   | SALES TAX        | @ 17%   | 46,750.00         |
|            | Total FOR Value Karacl  | ni, Including Sa | les Tax | 321,750.00        |

Dolon

Detho Ch



| ltem<br>No | Item and Specification  | Model No   | QTY   | Total Price (PKR)                              |
|------------|---|------------|-------|--|
| 9          | DESICATOR  Bel-Art Dry: Keeper PVC Vertical Auto-Desiccator Cabinet; 2 cu. ft." | H420561003 | 1     | 662,780.00                                     |
|            | Total FOR Value Karac<br>Total FOR Value Karac                                  | SALES TAX  | @ 17% | 662,780.00<br>112,672.60<br><b>775,4</b> 52.60 |

#### TERMS OF TRADE

PAYMENT:

As per Tender terms

MANUFACTURER:

**BEL ART Scientific** 

VALIDITY:

As per Tender terms

DELIVERY:

Within 14 weeks of contract

NTN/ GST:

4113945/3277876165683

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Head Office : Deneb Tower

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Bahria Town, Lahore, Pakistan.

E-mail: info@denebcrop.org
Tel: + 92-21-34688106-7



| n | Item and Specifica-Ion  | ModelNo            | COTY  | Total Price (PKG)                          |
|---|---|--------------------|-------|--|
|   | Block Digesters — Q Block 50 mL 56 Position HDPE Base, With Keypad Controller  With features  Heating block has 7x8 matrix of 56 vials.  Well depth 65mm with flat bottom, Well ID 31mm  Physical dimensions HDPE base 39 x 43 cm.  Usable up to 230°C for high temperature digestions.  Maximum temperature variation 1% tigroughout the block.  Questron Teflon coated Graphite block.  HDPE non-corrosive and acid resistant base.  5-sided high efficiency thermal shield to conserve energy.  Sample carrying Teflon-coated tray and tray holder included.  Includes Interface with Keypad QW-101-111 as Unit controller | QW-100-25 <i>y</i> | 1     | 1,430,000.00                               |
|   | Fotal FOR Value Karach<br>Total FOR Value Karach  | SALES TAX          | 9 17% | 1,430,000.00<br>243,100.00<br>1,673,100.00 |

Jai Di

Office: Deneb Tower
# 2-C, Muslim Commercial,
Khayaban-e-Ittehad,
Karachi. Pakistan.

Branch Office: A-85, Block-C, Gulshan-e-Jamal, Karachi, Pakistan. Lahore Office: Office # 24, 2nd Floor, Metro Heights,

Bahria Town, Lahore, Pakistan.

E-mail: info@denebcrop.org
Tel: + 92-21-34688106-7
Website: www:denebcrop.org

| 0           |   |       | 1  |   |           |                  | 1 |
|-------------|---|-------|----|---|-----------|------------------|---|
| WQL –<br>37 | Computer Controlled<br>Continuous and Batch Filtration<br>Unit<br>Model: TFUC<br>Make: Edibon | Spain | 01 | Six Million Three Hundred Sixty-Four Thousand Six Hundred Forty | 6,364,640 | Rs.<br>6,364,640 |   |

| Total Bid amount in words: Fifty Million | n Nine Hundred Seventy-Two Thous | sand Two Hundred Twenty |
|--|----------------------------------|-------------------------|
| Total Bid amount in figure:              | PKR. 50,972,220 /-               |                         |
| Signature of Bidder                      | So                               | CHINSTRUM               |
| Signature of Bidder                      | Con                              | Shoeth 15               |

| /  |                 |       |    |   |           |  |  |
|--|-----------------|-------|----|---|-----------|--|--|
|  |                 |       | 1  | Thousand Seven Hundred Twenty   |           |  |  |
| Computer Contr<br>Reactor for QRC<br>Model: QRDC<br>Make: Edibon         |                 | Spain | 01 | One Million Two Hundred Eighty- Seven Thousand Six Hundred Eighty                   | 1,287,680 | Rs.<br>1,287,680                           |  |
| Computer Control Flow Reactor for Model: QRTC Make: Edibon               |                 | Spain | 01 | One Million Five Hundred Fifty-Eight Thousand Four Hundred                          | 1,558,400 | Rs.<br>1,558,400                           |  |
| Computer Contr<br>Tank Reactors in<br>QRC<br>Model: QRSC<br>Make: Edibon |                 | Spain | 01 | Three<br>Million<br>Two<br>Hundred<br>Eighty<br>Thousand<br>Six<br>Hundred<br>Forty | 3,280,640 | Rs.<br>3,280,640                           |  |
| Computer Contro<br>Reactor for QRC<br>Model: QRPC                        | olled Plug Flow | Spain | 01 | One Million<br>Five<br>Hundred<br>Eighty-Five<br>Thousand<br>Six                    | 1,585,600 | Rs.<br>1,585,600<br>NSTRUME<br>6 1st Floor |  |
|  | 5-60            |       |    | Hundred   | A PA      | treet # 17 Of Block-3, arfabad, arachi *   |  |

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|                               | 11/10/   |       |
|                               | John S.  |       |
| Signature & Stamp of Tenderer |  |       |
| 1919hre T. 2                  | Total Marie I  |       |
|                               | ADD: GSI/SEB (Whiteheast & duties etc.   |       |
|                               | ADD: GST/SKB (Winchest Auties etc.   | -     |
|                               | ADD: GST/SRB (Whichever is applicable)   |       |
|                               | resistance, - Dinamera   | 100   |
| = 009,01,85.128               | Concrete Mixing Try made of Seamless, heavy-gades corrosion concrete Mixing Try made of Seamless, heavy-gades corrosion steel (1.5mm) min thickness. Finish Plated for rust and corrosion steel (1.5mm) min thickness. Fix W x H (mm) 1200 x 1200 x 507  |       |
| 7/009 01 04                   | Concrete Mixing Try made of Service Finish Plated for rust and corrosion   | ·cc   |
|                               |  | .55   |
|                               | Solving min thickness-Finish Place (1.5mm) min thic |       |
| 1/000/2 1/000/ 90             | Concrete Mixing Try made of Seamless, heavy-gauge burnerete Mixing Try made of Seamless Try made |       |
| 100                           | Concrete Mixing Tray Reamless, heavy-gauge galvanized Concrete Mixing Try made of Seamless, heavy-gauge galvanized Concrete Mixing Try made of Seamless, heavy-gauge galvanized  | 35.   |
|                               | Asing Salve Mixing Tray (2) Asing Mixing algorithms (2) Asing Mixing algorithms (3) Asing Mixing (3) Asing M | -     |
| 1 in alone                    |  | V     |
| -/00012 3/0028 .00            | usage. Capacity 1000 kg Dulator material.  Wheel support made of PVC or other material.  Nos.  |       |
| 1                             | Heavy Duty Than 1000 kg Durable and smooth functioning, -4 usage. Capacity 1000 kg Durable and smooth functioning, -4  |       |
|                               | 4 wheel Tlattorm Trolley manufactured with the Hattorm Trolley manufactured with loop handle support which provides comfortable frame with loop handle support which provides functioning, -4 trame with loop kg Durable and smooth functioning, -4  | 1     |
| 1                             | requirements correctly pace 4 wheel Platform Trolley manufactured with tubular MS  Heavy Duty Platform Trolley manufactured with tubular MS  | 31    |
|                               |  |       |
| =/000/06 ·/0005h              | 77.5 mm (1 17.2 met) 50 mm (2 inch) The sieve mesh and standard sieve frames shall conform to the The sieve mesh and standard sieve frames shall conform to the The sieve mesh and standard sieve frames shall conform to the  | 1     |
|                               | 50 min(2 inch)   |       |
|                               |  |       |
|                               | (unit) min ( ) se  |       |
|                               | (nom 4/g) mm 0.6   | 1     |
|                               | ( )  | 1 1   |
|                               | - (211ph) 1000 +   | U     |
| 11900/2 23800/2               | of 6 Sieves 101 Central Sieves for Coarse Agglegates and Cover of 300 mm diameter (12 inches) made following Pan and Cover of 300 mm diameter (12 inches) made food quality Galvanized steel material: 9.5 mm (3/8 inch)   | i c   |
| 1/008EZ W611                  | et of 6 Sieves for Coarse Aggregates 1 coarse Aggregates of 06 following testing Sieves for Coarse Aggregates and coarse of 300 mm diameter (12 inches) made of the first Pan and Cover of 300 mm diameter (12 inches) made  | 30.   |
| 1000                          | 11 Sieves for Coarse Aggregates Policy (12 inches) made 5.04 following testing Sieves for Coarse Aggregates (12 inches) made 5.04 following testing Sieves for Coarse Aggregates   | ਜ     |
|                               | SON STOR   | erit  |
| .20                           | To the CA to stranging and of might be same is a straight of might be same in the same is a straight of might be same in the same is a straight of might be same in the same in the same is a straight of might be same in the same i | Ca    |
|                               | A shid Cover of 200 and No.200 Made of good quants sieve. 48,16,30,50,100 and No.200 Made of good datasid sieve. As material The sieve mesh and standard sieve. The sieve mesh and standard sieve. The sieve mesh and standard sieve.  | ON    |
|                               | and Cover of and No.200 Made of Bood dues of   | Lar   |
| each.                         |  |       |
| 18000/2 36000/2               |  | 198   |
| 3/00098                       | ations/minute Aggregates P'ok  | rdiv  |
| 70.70                         | Sold Title Williams  | uige  |
| 8                             | Poker Vibrator for internal compaction of contacter: imens. Power: Electric driven 220V, 50 Hz - Shaft Diameter: imens. Power: Electric driven 220V, 50 Hz - Shaft Diameter: one of the forest length; 1000-2000 mm Frequency: 12000   | ono ) |
| to the second second          | Stete Poker vibrator for miernal comp. 50 Hz -Shaft Diameter:  | arz   |
| 3/000557 3/00058              | Poker Vibrator Prete Poker vibrator for internal compaction of concrete poker Vibrator for internal compaction of concrete   | 1     |
|                               |  |       |
| . 60                          | e Beam Moulds made of Min. o min. of X 8 X 96 inches   |       |
|                               | ould base plate. Size: 4 X 8 X 96 inches Nos.  |       |
| 1 -1mg+ 100561                | di y   |       |
| =/0008± 1/00561               | ) and oase one summer  |       |
|                               |  |       |
| 1-2/19/2/00/5/                | SM shift man ) 2029  |       |
| 2/002'19 2/0015               | T SON T  |       |
| N. I                          |  |       |
|                               |  |       |

|             |  |                             |      | -   |           |                  |  |
|-------------|--|-----------------------------|------|---|-----------|------------------|--|
| WQL –<br>14 | Computer Controlled<br>Flocculation Test Unit<br>Model: PEFC<br>Make: Edibon             | Spain                       | 01   | Six Million Nine Hundred Thirty-Nine Thousand Three Hundred Sixty             | 6,939,360 | Rs.<br>6,939,360 |  |
| WQL –<br>19 | Ion Exchange Unit<br>Model: EII<br>Make: Edibon  | Spain                       | 01   | Two<br>Million<br>Eight<br>Hundred<br>Sixty-One<br>Thousand<br>One<br>Hundred | 2,861,100 | Rs.<br>2,861,100 |  |
| WQL –<br>21 | Sedimentation Tank<br>Model: PDS<br>Make: Edibon   | Spain                       | 01   | Three Million Five Hundred Ninety-Five Thousand Two Hundred                   | 3,595,200 | Rs.<br>3,595,200 |  |
| WQL –<br>27 | Permeability/Fluidisation<br>Studies Unit<br>Model: PEFP<br>Make: Edibon                 | Spain                       | 01   | Two Million Six Hundred Fifty-Two Thousand Six Hundred Forty                  | 2,652,640 | Rs.<br>2,652,640 |  |
| WQL -<br>32 | Sedimentation Study Unit<br>Model: ESED<br>Make: Edibon                                  | Spain                       | 01   | One Million Five Hundred Forty Thousand Eight Hundred                         | 1,540,800 | Rs.<br>1,540,800 |  |
| WQL - 33    | Computer Controlled Chemical Reactors QRC  Service Unit for QRC Model: QUSC Make: Edibon | Spain  Spain  236 1st Sheet | 1/2/ | Two<br>Million Five<br>Hundred<br>Seventy-<br>Four                            | 2,574,720 | Rs.<br>2,574,720 |  |

M/s Pak Pech

Form-II

Name of Bidder: Paktech Instruments Co. IFB Number PC (WI)/NED/Equip/ W.Q. Lab/03/7051/2021

| 1           | 2   | 3                       | 4        |   | 5                | 6  | 7                   |
|-------------|---|-------------------------|----------|---|------------------|--|---------------------|
| Item        | Description   | Country<br>of<br>Origin | Quantity | Unit Price  |                  | Total  | Remarks<br>(if any) |
| WQL -<br>01 | Computer Controlled Aeration<br>Unit<br>Model: PEAIC<br>Make: Edibon      | Spain                   | 01       | Four Million three Hundred Seventy- One Thousand Three Hundred      | Figure 4,371,360 | Rs.<br>4,371,360   |                     |
| WQL - 02    | Computer Controlled Aerobic<br>Digester<br>Model: PDAC<br>Make: Edibon    | Spain                   | 01       | Four Million One Hundred Ninety- Nine Thousand Forty                | 4,199,040        | Rs.<br>4,199,040   |                     |
| WQL - 05    | Computer Controlled Anaerobic<br>Digester<br>Model: PDANC<br>Make: Edibon | Spain                   | 01       | Five Million Five Hundred Eighty- Three Thousand Six Hundred        | 5,583,600        | Rs.<br>5,583,600   |                     |
| WQL -<br>13 | Filterability Index Unit Model: PEIF Make: Edibon                         | Spain                   | 01       | Two Million five Hundred Seventy- Seven Thousand Four Hundred Forty | 113              | Rs. 2,577,440  2,577,440  236 1st Floor Street # 17 harfabad arachi 949215 |                     |

Deparen

| Precision Hawk Crop Scouting Phantom Pro or equivalent drone package with smart controller and access to software, Weight: 2404 Payload: 998 grams Flight Time: 45 minutes Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera to give conventional high-pressure cylinders to give conventional high   |         |
|--|---------|
| Precision Hawk Crop Scouting Phantom Pro or equivalent drone package  WQL - 30  WQL - 30  Pure Air Generator  Precision Hawk Crop Scouting Pro or equivalent drone package with smart Pro or equivale |         |
| Pro or equivalent drone package  WQL - 29  Hawk Crop Scouting Phantom Pro or equivalent drone package  Pro or equivalent drone package  Pro or equivalent drone package  2404 Payload: 998 grams Flight Time: 45 minutes Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera available conventional high-pressure cylinders to give cylinde |         |
| Scouting Phantom Pro or equivalent drone package  2404 Payload: 998 grams Flight Time: 45 minutes Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera available conventional high-pressure cylinders to give description of a button. Alarm display with help menu Outlet Flow   |         |
| Phantom Pro or equivalent drone package  2404 Payload: 998 grams Flight Time: 45 minutes Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera available conventional high-pressure cylinders to give cylinders |         |
| Phantom Pro or equivalent drone package  Payload: 998 grams Flight Time: 45 minutes Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera available conventional high-pressure cylinders to give conventional high-pressure cylinders to give years of uninterrupted supply of pure air at years of uninterrupted supply of years of uninterrupted sup |         |
| Flight Time: 45 minutes Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera available 6 WQL-30 Pure Air Generator  Pure Air Generator. Use to replace conventional high-pressure cylinders to give conventional high-pressure cylinders to give vears of uninterrupted supply of pure air at years of u |         |
| Flight Range: 1.9 km 5-channel multispectral camera available 5-channel multispectral camera available 6 WQL-30 Pure Air Generator  Pure Air Generator. Use to replace conventional high-pressure cylinders to give conventional high-pressure cylinders to give vers of uninterrupted supply of pure air at years of uninterrupted supply of pure air at years of uninterrupted of a button. Alarm display with help menu Outlet Flow  GST R1. 222 889 2  | (       |
| Pure Air Generator  Pure Air Generator  Pure Air Generator  Conventional high-pressure cylinders to give conventional high-pressure supply of pure air at years of uninterrupted supply of pure air at years of uninterrupted of a button.  Alarm display with help menu Outlet Flow GST R1 222 889 2  |         |
| WQL - 30   Pure Air Generator   Conventional high-picssate   Signature   Conventional high-picssate   C |         |
| Generator  Generator  Generator  Generator  Generator  Generator  Solventional light of pure air at years of uninterrupted supply of uninterrupted supply of uninterrupted supply of uninterrupted supply of pure air at years of uninterrupted supply of uniterrupted supply of uninterrupted supp | 31111 4 |
| the touch of a button.  Alarm display with help menu Outlet Flow GST R1. 222 889 2   |         |
| Alarm display with help menu Outlet 1 to 1 G37 771   | 22884   |
| Day Point Sensor   |         |
| indicator 2 is neither could to  | ÷.      |
| Indicator Dew-Point Sensor  Water vapour removal with peltier cooler to Water vapour of -15 °C. Automatic a dew point of -15 removal. With   |         |
| a dew point of managed With  |         |
| periodically condensate reinioval.   | - 11    |
| integrated pre-filter for protection of integrated pre-filter for protection of external compressor. With integrated dust external compressor, and outlet for removal of   | . 11    |
| external compressor. With integrated external compressor. With integrated of filter in the in- and outlet for removal of filter in the With integrated separator for   |         |
| aplid particles. With and automatic  |         |
| condensate diopiets safety-valve.  |         |
| condensate droplets with addeduced condensate droplets with addeduced safety-valve. discharge and pressure regulators in the   |         |
| With 2 precision pressure  |         |
| in- and outlet   |         |
| 27 WQL – 31 Reverse Osmosis Plant Package unit  Reverse Osmosis Plant Package unit  Main Unit Anodized aluminum frame and panels made of painted steel. Main metallic elements made of stainless steel. Diagram in the front panel with distribution of the elements similar to the real one. of the elements similar to the real one.   | )2      |
| 27 WQL - 31 Reverse Osmosis Plant Of painted steel.  Anodized aluminum frame and part of stainless Rs. 558152  | 538250  |
| Package unit  Main metallic elements made of stantiess   |         |
| steel. 1 with distribution (CT R 9490)   | 5 94902 |
| Diagram in the front panel with distribution of the real one.  |         |
| Diagram in the front panel was one. of the elements similar to the real one. Rapid changeover from Reverse Osmosis to  |         |
| Rapid changeover from the  |         |
| Ultrafiltration and bush the process   |         |
| All elements in contact with the design fluid constructed from hygienic design fluid constructed fluid construc |         |
| fluid constructed from hygienic general fluid constructed from hygienic and materials such as stainless steel, PTFE and materials bear   |         |
| silicone rubber.   |         |
| Stainless steel feed talk  |         |
| capacity). Computer controlled three head positive   |         |
| Computer controlled times  |         |
| displacement feed pump:  Maximum flow: 38 1/min.  Maximum flow: pressure: 150 bar;   |         |
| Maximum flow: 38 1/min.  Maximum design pressure: 150 bar;  Maximum design pressure: 55 bar.   | 1       |
| Maximum design pressure: 55 bar. maximum operation pressure: 55 bar. maximum operation feed product to the   |         |
| This nump is used to   |         |
| membrane module.  Variable   |         |
| Flow and pressure adjust   |         |
| speed control.  The pump has a relief valve to protect the   |         |
| 1 mil amil nava nava nava inita  |         |
| The pump has a torre   |         |
| The pump has a ferrer unit.  Execute the pump has a ferrer that controls the pump has a ferrer than th |         |
| unit. Frequency variator that controls the pump  | 1 10    |
| unit. Frequency variator that controls the pump motor.   | ) XI 8  |
| unit. Frequency variator that controls the pump motor.   | 76/3    |
| unit. Frequency variator that controls the pump motor. Membrane module: Two tubular membranes connected in   | 370     |
| unit. Frequency variator that controls the pump motor. Membrane module: Two tubular membranes connected in series.   | 13/10/2 |
| unit. Frequency variator that controls the pump motor. Membrane module: Two tubular membranes connected in series. Membrane diameter: 12.5 mm. Membrane area: 0.000122 m².   | 12/4    |
| unit. Frequency variator that controls the pump motor. Membrane module: Two tubular membranes connected in series.   | 3/4/8   |

|    |          |   | Tagas in a second   |                |               |        |
|----|----------|---|---|----------------|---------------|--------|
|    |          |   | 2698 v4 2.2 GHz 20 Core, 2+2TB SSD & 4 TB HDD water cooled system along with 4K 48+" LED, keyboard and mouse.   |                |               |        |
| 21 | WQL - 25 | Orbital shaker                            | Orbital shaker, Platform size accepts loads up to 35 lbs. Operate in temperature ranges of 104°F (0° to 40°C), 20 to 80% non-condensing humidity, can be used with incubators, warm rooms, environmental chambers and refrigerators, Solid-state DC brushless motor with Variable speed control from 15 to 550 rpm. Continuous and timed operation from 0.1 hour up to 999 hours or 0.1 min to 999 min. Digital operating time display and controls. Should have option for user-adjustable speed calibration option  |                |               |        |
| 22 | WQL - 26 | Particle size<br>analyzer                 | Particle size analyzer for suspensions, emulsions, dry powders. Working on principle of Laser light scattering, Mie and Fraunhofer scattering. Data acquisition rate: 10kHz, Typical measurement time: <10 sec, Red light source: Max. 4mW He-Ne, 632.8nm, Blue light source Nominal: 10mW LED, 470nm, Effective focal length: 300mm, Angular range: 0.015 - 144 degrees, Size range: 10nm - 3.5mm, Number of size classes: 100, Accuracy: 0.6%   | /              |               |        |
| 23 | WQL - 27 | Permeability /<br>Fluidisation<br>Studies | Anodized aluminium frame and panels made of painted steel. Main metallic elements made of stainless steel.  Unit to verify the Darcy's Law to examine the Kozeny's equation and to observe liquid fluidisation behaviour of a granular bed. Permeameter: transparent acrylic cylinder of 50 mm diameter, 500 mm length. Two filter metallic disks. Four pressure taps located along the vertical axis of the cylinder. Tubes manometer of 500 mm length. Two manometers, Bourdon type, range: 0 – 1000 mm.c.a. Constant head supply device: max. height variation: 500 mm. Flowmeter, range: 0.2 – 2 l/min. | Rs.<br>GST RI. | 712281        | 712281 |
| 24 | WQL - 28 | Portable pH meter                         | AC Adapter Universal 50-60 Hz, 100- 240 VAC power adapter Accuracy (mV) ±0.2 mV or ±0.05% of reading whichever is greater Accuracy (pH) ±0.002 Alarm Output High/low limit alarm, calibration due alarm Backlight Option Yes, selectable Battery Life 800 hr. Battery Type 4 x AA Calibration pH with calibration editing option, relative mV (RmV), ORP and temperature Calibration Points 1 to 5 Certifications/Compliance CE, TUV 3-1, FCC Class A Data Points 5000 with date and time stamp   | 1              | **            |        |
|    |          | gbran                                     | Dimensions (L x W x H) 24cm x 10cm x 6.5cm (9.5 in. x 3.9 in. x 2.6 in.) pH meter, ROSS Ultra gel-filled epoxy-body pH/ATC electrode with 3m cable, pH  |                | <b>&gt;</b> / | 1      |

|    |          |   |  |               |                   | *               |
|----|----------|---|--|---------------|-------------------|-----------------|
|    | WQL – 19 | Ion Exchange<br>Unit  | Ion Exchange Unit having two transparent vertical columns for the anionic and cationic resins, volume: 0.16 l. One spare column.  Four tanks made of PMMA (treated water, demineralized water, hydrochloric acid and sodium hydroxide). Diaphragm pump. Maximum flow: 5 l/h. Maximum height: 70 m. Hydrochloric acid reistant flow meter. Range: 0-10 l/h. Valves and pipes circuit. Conductivity meter (with conductivity cell):  Scale: 0-10 mS. Operating temperature: 0-50 °C. Accuracy +/-2 %. Typical commercial anionic and cationic resins. Control board.   |               |                   |                 |
| 17 | WQL-20   | Libelium-e-<br>Berry Smart<br>Agriculture<br>Solution Kit or<br>equivalent IoT<br>kit | Libelium-e-Berry Smart Agriculture Solution Kit or equivalent IoT kit External Temperature, Humidity and Pressure Probes, Soil moisture 1.5 m Probe, Soil moisture 4.5 m Probe, Leaf wetness probe, anemometer, wind vane and pluviometer probe. 1.5 m probe extender, Outdoor USB Cable, International adapter, External solar panel 7V - 500mA (power accessory) along with PC software and data transfer platform.  | 5             |                   |                 |
| 18 | WQL -21  | Model<br>Sedimentation<br>Tank  | Model Sedimentation tank of minimum volume 97L, Acrylic settling tank:1.05m x 0.35m x 0.2m, Feed tank capacity: 120L, Sediment flowmeter range: 0 - 2 L/min, Water flowmeter range: 0.5 - 5 L/min, slurry flow meter range is 0-2 L/min, Pump flow rate: 60 L/min @ 15m head, Metal framework with clear sedimentation tank. Flow sparge device in the tank to keep slurry in suspension. Operational manual with teaching exercises. 120L sump tank via a centrifugal pump. A flow sparge device in the sump tank to keep the slurry in suspension. Along with 1 X Burette mount, 3 X 1L Imhoff cones, 1 X Imhoff cones rack, 1 X 600ml sample vessel, 1 X 100ml sample vessel, 2 X stiffener bar, 1 X adjustable inlet weir, 1 X 1L bottle, blue dye with COSHH sheet, 25Kg precipitated Calcium Carbonate & safety data sheet, Operational manual with teaching exercises | 1             |                   |                 |
| 19 | WQL - 22 | Multimedia<br>filters package<br>unit   | A pressure filter vessel which utilizes three or more different media as opposed to a "sand filter". Multimedia filters package unit Deep Bed Filter Unit, computer controlled Filtrate Flow Rate 50-2000 m3/day, Filtrate Recovery Rate 95-98%, Filtrate Particle Size 5 micron, Feed/filtrate water flow: 106.4, Backwash water flow: 1.5~3 x feed water flow. Filtration velocity (sand Media): 20 m/hr, Filtration velocity (DMI-65 Media): 10 m/hr  | Rs<br>GST Rs. | 2625700<br>446369 | 262570<br>44636 |
|    | WQL - 23 | Multipurpose Farm robot anti weed   | Filtrate Turbidity <5 NTU, Front lifting device that can lift up to 750 kg. Lifting device at the rear can lift up to 1,500 kg. Device width 1.8 metres, 35 cm ground clearance. Perkins/FPT engine. Four steered wheels for maximum manoeuvrability. The machine should be able to mow, sow, plough or fertilize 24 hours a day. Includes ais user-friendly, safe software. Features autonomous working via software.   | 1             |                   |                 |
| 20 | WQL - 24 | NVIDIA Tesla  | NVIDIA Tesla Workstation, System memory<br>256 GB RDIMIN DORA CRU Intel Xeon E5-   | 5             | 1                 | /               |

| o Documents |   |      |    |      |    | MC. |
|-------------|---|------|----|------|----|-----|
|             | : | ante | ma | CIII | Do | n I |

| cuments  |                |   |
|--|----------------|---|
| 8  |                | Should feature data export, password-protected  |
|  |                | system with user management and logging of  |
| 1  |                | analyses Transparent and illuminated  |
|  |                | components, Programmable temperature/time   |
|  |                | control along with fume scrubbers, numbered   |
|  |                | insert racks and Eco Kit  |
| VQL-11   | Desiccators    | Nonvacuum desiccators in electronic   |
| IQL-II   | Degreemen      | Horizontal or vertical orientations   |
|  |                | Gasketed doors for an airtight seal, Transparent sides and top for easy identification of   |
|  |                | inner contents without opening up the door along  |
| 3  |                | with Electronic Auto-Desiccator Cabinets which  |
|  |                | features a permanent desiccant which  |
|  |                | entermatically regenerates for worry-free storage   |
|  |                | or drying. The horizontal and vertical models are   |
|  |                | made of clear acrylic and have the desiccant  |
|  |                | located in the control unit; the desiccant is   |
|  |                | automatically regenerated by 30-minute cycle  |
|  |                | every five hours to lower humidity to 30 to 4076  |
|  |                | Vertical cabinet also made from non-transparent,  |
|  |                | insulated ABS plastic and has an enclosed   |
|  | **             | permanent desiccant: the electronic controller  |
| E.   |                | lowers relative humidity inside the cabinet to 20 to  |
|  |                | 30% in six hours (based on unloaded, continuous   |
| 1  |                | operation).   |
| WQL - 12   | Dissolved      | 1 1)() Weier with range up to 50070, many   |
| 14 - 14  | Oxygen Meter   |   |
|  | (DO)           | compensation up to 40 g/L, Automatic temperature compensation, Automatic  |
|  | (DO)           | temperature compensation, Automatic calibration in air, PC compatible via USB, Data   |
|  |                | logging and storage up to 8000 samples, GLP   |
|  |                | Features along with PC software and driver  |
|  |                | Bench-ton unit of Filterability Index Unit. 1   |
| WQL-13   | Filterability  | Anodized aluminium frame and panels made of   |
|  | Index Unit     | Anodized aluminium frame and panels made of painted steel. metallic elements made of stainless steel. Feeding tank of 1 l capacity. Filtration unit, with |
|  |                | metallic elements made of stainless steel.  |
|  |                | Feeding tank of 11 capacity. Filtration unit, with GST Page 10 2259 10 2259   |
|  |                | porous bed filter, removable  |
|  | A              | Height of the filter: 70 mm. Test filter cell   |
|  |                | diameter: 44 mm. The filter unit can be   |
|  |                | dismounted to change the sand. Regulation valve   |
|  |                | controls the flow, which is observed on a flow  |
|  |                | meter. Water flow meter, range: 0.07 - 0.55   |
|  |                | 1/min. Differential manometer of 500 mm, to   |
|  |                | measure the head loss.  |
|  | 1              | Corrosion-resistant materials are used. The   |
|  |                | elements and tubing connections of this unit  |
|  |                | must be transparent so that the operation can be observed and air bubbles avoided Along with  |
|  |                | accessories included with the unit like   |
|  |                | Thermometer, with range from -10° C to 110° C,  |
|  |                | Stopwatch, 1 l graduated test tube, 0.6 l glass   |
| 1  |                | beaker to collect filtrate. Air pump for purging  |
|  |                | the manameter. Unit to be supplied with   |
| Control of the contro |                | manuals, service, assembly and maintenance and  |
|  |                | operation guides and documentation.   |
|  |                | Rench-ton Flocculation Unit.  |
| WQL-14   | 4 Flocculation | Main metallic elements made of stainless steel.   |
|  | Test Unit      | Flocculation test unit illuminated in the base or   |
|  |                | back part. Six stirrers with stainless steel 7 D. 108 287 188 28  |
| (  | mande          | paddles Agitation speed regulation: 25 + 250  |
|  | ( ) Monday     | rom Six flocculating graduated vessels, sample  |
| ~  | 7              | 1 of each worsel: 1/1 Control panel: Timer.   |
|  |                | range: 0 - 60 min approx. Lamp switch, Rpm  |
|  |                | regulator) and rom kuisplay. Includes relevant  |
|  |                | instrumentation like oil (sensor, Conductivity  |
| STATE OF THE PARTY |                | 1 / O 3/1/  |
|  |                |   |
|  |                | /    2  |

rols. Sixt

University of Engineering & Technology | www.neduet.edu.pk

37 / 2 1

|             | Digital Input/Output: Number of channels=24 inputs/outputs. D0 or DI Sample Clock frequency: 0 to 100 MHz. Timing: Number of Counter/timers=4. Resolution: Counter/timers: 32 bits. The Data Acquisition board model may change at any moment, providing the same or better features than those required for the unit  Core i5 11th Generation, 8 GB DDR IV, 1TB hard disk, DVD RW, LCD 19", Keyboard and Mouse), 4GB 128bit GDDR6 Video Graphics Cards, Printer (HP LaserJet pro duplex) |      |       |
|-------------|---|------|-------|
|             | TOTAL   | 7838 | 462-  |
| AD          | D: GST/SRB (Whichever is applicable)  | 433  | 2 528 |
| Total Bid A | mount including all taxes & duties etc.   | 912  | 1000  |

GLOBA.

Signature & Stamp of Bidder

Jan 3 (2)

Dopum

# Mb. Wali 410 bal

Biddi

| siaaing l | Documents |                        |  | F | Procuremen    | t Cell        |
|-----------|-----------|------------------------|--|---|---------------|---------------|
|           |           |                        | enable an easy coupling of the reactors to the Service Unit. All the elements of this unit are chemically resistant. Computer Control Software.  Plug Flow Reactor Small scale Plug Flow Reactor, computer controlled, designed to demonstrate the flow pattern characterisation and the steady state conversion in a tubular reactor with axial dispersion, Working volume: 1 L, Anodized aluminum structure and panels of painted steel, Main metallic elements in stainless steel, Diagram in the front panel with similar distribution to the elements in the real unit, Plug reactor constituted by a glass column of 1 l. and 1100 mm long, packed with 3 mm diameter glass balls, At the bottom of the column a premixer provides a complete mixing of the reagents entering the reactor and improves the flow distribution, Temperature sensor "J" type, Conductivity cell to control the reaction. Measurement range up to 20 mS, Quick connectors with shutoff valve that enable an easy coupling of the reactor to the Service Unit, All the elements of this unit are chemically resistant, Computer Control Software  Desktop Computer  Core is 11th Generation, 8 GB DDR IV, 1TB hard disk, DVD RW, LCD 19", Keyboard and Mouse), 4GB 128bit GDDR6 |   | - ocuremen    | <u>i Cell</u> |
| 30        | WQL - 35  | Temperature<br>Chamber | Video Graphics Cards, Printer (HP LaserJet pro duplex)  Temperature Chamber can realize both high and low temperature test.  Temperature Chamber can realize both high and low temperature zero realize both high and low temperature test.  Temperature Range (opt. to +205°C)  Temperature Range (opt. to +205°C)  Temperature Range (opt. to +205°C)  Rough Range (opt. to +205°C)    | 1 |               |               |
| 31 V      | WQL - 36  | TOC Analyzer           | • standard parts warranty  An ultra-wide measurement range 4 µg/L to 30,000 mg/L (with the automatic dilution function) utilizing 680°C Combustion Catalytic Oxidation/NDIR detection method.  High-temperature catalytic oxidation technique specified in approved methods, including:  • EPA 415.3 • SM 5310B  | 1 | Ks. 41 Hoost. | B. gizionet   |



# EAST WEST INFINITION

Head Office: 146 Industrial Triangle Kahuta Road, Humak, Islamabad - PAKISTAN Tel: +92 51 449 2041 ~ 43; Fax: +92 51 449-1845 J.info@eastwestin.com | www.eastwestin.com

#### Form-II - Price Schedule in Pak. Rupees

#### 786/GWI/NEDUET/21/062021

|        | Prices quote   | ed are in Pak           | Rupees ir | clusive of in   | nport duties and    | d taxes   | \       |
|--------|--|-------------------------|-----------|---|---------------------|-----------|---------|
| 1      | 2  | 3                       | 4         |   | 5                   | 6         | 7       |
| Item   | Description  | Country of<br>Origin    | Quantity  | Uni   | it Price            | Total     | Remarks |
| . – 43 | Global Water<br>WQMS water<br>quality monitoring<br>system<br>In the Offered<br>configuration. | USA                     | 1         | Words one million two hundred eighty- nine thousand     | Figure<br>1,289,562 | 1,289,562 |         |
| WQL    | Latitude 5420<br>Rugged Laptop   | Imported<br>from<br>USA | 1         | five hundred sixty-two one million fifty-three thousand | 1,053,000           | 1,053,000 |         |

Total Bid amount in words: Two Million Three Hundred Forty-Two Thousand Five Hundred Sixty-Two

Total Bid amount in figure: 2,342,562

1. Errors and omissions excepted (E&OE)

2. In case of any discrepancy or arithmetic issues unit price will prevail.

Jan Degen

Dogbann

# EAST WEST INFINITION



Head Office: 146 Industrial Triangle Kahuta Road, Humak, Islamabad - PAKISTAN Tel: +92 51 449 2041 ~ 43; Fax: +92 51 449-1845 | info@eastwestin.com | www.eastwestin.com

Before ordering he customer is requested to confirm the follow configuration for the water level and conductivity sensors.

# 1. WQ-Cond-1 Conductivity Sensor

Includes 25 ft of cable. Specify conductivity sensor range when ordering:

- a. WQ-Cond-1 0-200 μS (PN# DCA500)
- b. WQ-Cond-2 200-2,000 μS (PN# DCB500)
- c. WQ-Cond-3 2-20 mS (PN# DCC500)
- d. WQ-Cond-4 20-200 mS (PN# DCD500)
- e. WQ-Cond-5 200-2,000 mS (PN# DCE500)

### 2. WL400 Water Level Sensor

Choosing the correct Pressure transducer level ranges of 0-3, 0-15, 0-30, 0-60, 0-120, 0-250, and 0-500 feet are available. The 0-3 ft low-level range is ideal for measuring shallow flows or small water level changes like those encountered in sewers, storm drains, welrs, and flumes. The 0-3 ft water monitoring sensor accurately measures small changes in water, even when the water's depth is only a few inches deep.

There is no change n price when choosing the 0-3, 0-15, 0-30 level ranges with 25ft cable additional cable is available at PKR 550+GST/ft if required since the cable is vented for barometric compensation if additional cable is required must be ordered at the time of purchase.

All sensors come with 25ft cable standard additional length can be added at PKR 550 + GST must be ordered at the time the order is placed.

Based on the tendered specification we have quoted the Dell Latitude 5420 Rugged Laptop which meets and exceeds the software requirements for the datalogger software for data collection.

Dell Latitude 5420 Rugged Laptop Configuration: 8th Gen Intel® Core i7-8650U Processor 32GB with 512GB, 2400MHz DDR4 Non-ECC M.2 512GB PCIe NVMe Class 40 Solid State Drive 14.0-in. display. PK

We hope the proposal will find your acceptance; Assuring you of our best, we remain;

Sincerely Yours,

For East West Infiniti (Pvt) Ltd

Zawar Khan

Senior Field Engineer

Jal

1

PAGE 2 OF 4



# EAST WEST INFINITION

Head Office: 146 Industrial Triangle Kahuta Road, Humak, Islamabad - PAKISTAN Tel: +92 51 449 2041 ~ 43; Fax: +92 51 449-1845 | info@eastwestin.com | www.eastwestin.com

786/GWI/NEDUET/21062021 June 21, 2021

COMMERCIAL OFFER

The Director Procurement NED University of Engineering and Technology, Karachi

### TENDER NO. PC (WI)/NED/EQUIP/ W.Q. LAB/03/7051/2021 PROPOSAL FOR OF LABORATORY EQUIPMENT FOR WATER INSTITUTE AT NEDUET

Dear Sir,

We are pleased to make a responsive offer for the subject RFQ.

Introducing ourselves briefly, East West Infiniti; is the country's leading electronic technology engineering, supply & support company with a 36 year history, formed with an endeavor to bridge the technological gap between East & West, by providing electronic technologies with assured support. We are a 30+ man company with offices in Islamabad, Lahore and Karachi serving various sectors including Alternate energy, Oil & Gas, Water & Power etc.

East West Infiniti is a reputable name in the hi-tech electronic industry with 30 years of experience providing of integrated hydrological, meteorological, and oceanographic monitoring instrumentation, accessories and information systems that help optimize water resource management and enhance forecasting. We start by fully understanding our customers' goals and requirements. Then we design a system (whether simple or complex), consisting of sensors, data logging and process control instruments, communication equipment and necessary software for data presentation. Our objective is finding the shortest path between environmental conditions and your understanding of those environmental conditions to efficiently execute the best decisions.

East West Infiniti Ltd is the official partner for Xylem Inc for Pakistan representing YSI, Global Water, Water Log, Sontek and Aanderaa, while providing in-country warranty support and after sales services for these respective brands

Based on your tendered specifications we have quoted the Global Water WQMS water quality monitoring system with the following configuration:

| 1. | FQ0000K | GL500-7-2,7 | GL500 | Multichannel | Datalogger |
|----|---------|-------------|-------|--------------|------------|
|----|---------|-------------|-------|--------------|------------|

2. FE0850 GL450-7-1 Weatherproof Environmental Enclosure

3. DA0000 WQ101 Temperature Sensor, 25ft Cable

4. DB0000 WQ201 pH Sensor

5. DCA500 WQ-Cond-1 Conductivity Sensor, 0-200uS

6. DE0000 WQ600 ORP Sensor

7. AIC050 WL400-030-050 Water Lvl Snsr,0-30',50'

All sensors come with 25ft cable connected to the data logger.

PAGE 1 OF 4

### SINDH PUBLIC PROCUREMENT REGULATORY AUTHORITY



# TO BE FILLED IN BY ALL PROCURING AGENCIES FOR PUBLIC CONTRACTS OF WORKS, SERVICES & GOODS

|     |   | NED UNIVERSITY  |
|-----|---|---|
| 1)  | NAME OF THE ORGANIZATION / DEPTT.   |   |
| 2)  | PROVINCIAL / LOCAL GOVT./ OTHER   | PROVINCIAL  |
| 3)  | TITLE OF CONTRACT   | Procurement of Laboratory Equipment for Water Institute |
| 4)  | TENDER NUMBER   | PC(WI)/NED/Equip/W.Q.Lab./03/7051/2021                  |
| 5)  | BRIEF DESCRIPTION OF CONTRACT   | Procurement of Laboratory Equipment for Water Institute |
| 6)  | FORUM THAT APPROVED THE SCHEME  | Syndicate   |
| 7)  | TENDER ESTIMATED VALUE  | 151.052 MILLION   |
| 8)  | ENGINEER'S ESTIMATE (For civil works only)  |   |
| 9)  | ESTIMATED COMPLETION PERIOD (AS PI  | ER CONTRACT) son or before 01 to 03 months              |
| 10) | TENDER OPENED ON (DATE & TIME)  | 23-06-2021 10:30 AM                                     |
| 1)  | NUMBER OF TENDER DOCUMENTS SOLD (Attach list of buyers)   | ) 14  |
| 12) | NUMBER OF BIDS RECEIVED   | 14  |
| 13) | NUMBER OF BIDDERS PRESENT AT THE  | TIME OF OPENING OF BIDS 13                              |
| 14) | BID EVALUATION REPORT (Enclose a copy)  | PROVIDED  |
| 15) | NAME AND ADDRESS OF THE SUCCESSF  | UL BIDDER All successful bidders mentioned in BER       |
| (6) | CONTRACT AWARD PRICE  | Rs. 89,615,101/-  |
| 17) | RANKING OF SUCCESSFUL BIDDER IN EV (i.e. 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> EVALUATION BID). | ALUATION REPORT   |
|     |   |   |
|     |   |   |
| 18) | METHOD OF PROCUREMENT USED : - (Tic   | ck one)   |
|     | a) SINGLE STAGE – ONE ENVELOPE  | PROCEDURE YES Domestic/ Local                           |
|     | b) SINGLE STAGE – TWO ENVELOPE  | PROCEDURE   |
|     | Capter a mil  |   |
|     | c) TWO STAGE BIDDING PROCEDUR   | E   |
|     | d) TWO STAGE – TWO ENVELOPE BI  | DDING PROCEDURE   |
|     | DI FACE CDECYEV IS ANY CONTRA   | METHOD OF PROGRESS                                      |
|     | PLEASE SPECIFY IF ANY OTHER EMERGENCY, DIRECT CONTRACTING   | METHOD OF PROCUREMENT WAS ADOPTED                       |

|                           | A ANTHORNES FOR ANA DR OF CONTRA   |              | /ice Chancellor  |
|---------------------------|--|--------------|--|
| 19) APPROVING             | G AUTHORITY FOR AWARD OF CONTRA  | ACT_         |  |
| 20) WHETHER               | THE PROCUREMENT WAS INCLUDED IN  | N ANN        | Yes No No  |
| 21) ADVERTISE             | EMENT:   |              |  |
| -/                        | RA Website res, give date and SPPRA Identification No.)                    | Yes          | T00553-20-0128   |
| (11)                      | os, give date and six ranking  | No           |  |
|                           | vs Papers ves, give names of newspapers and dates)                         | Yes          | Daily Jang, Dawn & Awami Awaz dated: 03-05-2021  |
|                           |  | No           | 77 S - 1 S - |
| 22) NATURE OF             | FCONTRACT  |              | Domestic/<br>Laxed   |
|                           | QUALIFICATION CRITERIA<br>JDED IN BIDDING / TENDER DOCUMEN'<br>se a copy)  | TS?          | Yes No   |
|                           | BID EVALUATION CRITERIA<br>JDED IN BIDDING / TENDER DOCUMEN<br>ise a copy) | TS?          | Yes No No  |
| 25) WHETHER<br>METHOD O   | APPROVAL OF COMPETENT AUTHORIT<br>THER THAN OPEN COMPETITIVE BIDD          | Y WA<br>ING? | AS OBTAINED FOR USING A Yes No   |
| 26) WAS BID SI            | ECURITY OBTAINED FROM ALL THE BI   | DDER         | Yes V No   |
|                           | THE SUCCESSFUL BID WAS LOWEST EVALUATED BID (in case of Consultancies      |              | ATED Yes No  |
| 28) WHETHER<br>COMPLIAN   | THE SUCCESSFUL BIDDER WAS TECHN<br>IT?                                     | NICAL        | LY Yes V No  |
| 29) WHETHER<br>THE TIME ( | NAMES OF THE BIDDERS AND THEIR OF OPENING OF BIDS?                         | QUOT         | TED PRICES WERE READ OUT AT Yes No   |
| 30) WHETHER<br>CONTRACT   | EVALUATION REPORT GIVEN TO   | BIDD         | DERS BEFORE THE AWARD OF   |
| (Attach copy              | of the bid evaluation report)  |              | Yes No   |

| 31) ANY COMPLAINTS RECEIVED (If yes, result thereo.)  | Yes  |
|---|--|
|   | 1  |
|   | No NO  |
| 32) ANY DEVIATION FROM SPECIFICATIONS<br>(If yes, give details)   | S GIVEN IN THE TENDER NOTICE / DOCUMENTS       |
|   | Yes  |
|   | No NO  |
| 33) WAS THE EXTENSION MADE IN RESPONS (If yes, give reasons)  | SE TIME? Yes                                   |
|   | No NO  |
| 34) DEVIATION FROM QUALIFICATION CRIT   |  |
| (If yes, give detailed reasons.)  | Yes  |
|   | No NO  |
| 35) WAS IT ASSURED BY THE PROCURING BLACK LISTED?   | G AGENCY THAT THE SELECTED FIRM IS NO Yes V No |
| 36) WAS A VISIT MADE BY ANY OFFICER/O<br>SUPPLIER'S PREMISES IN CONNECTION<br>BE ASCERTAINED REGARDING FINANCIN<br>(If yes, enclose a copy) |  |
| (ii yes, enclase a copy)  | Yes No V                                       |
| 37) WERE PROPER SAFEGUARDS PROVIDED THE CONTRACT (BANK GUARANTEE ETC  | ED ON MOBILIZATION ADVANCE PAYMENT I           |
| 38) SPECIAL CONDITIONS, IF ANY (If yes, give Brief Description)   | Yes  |
| Jaro  | No NO  |
| Signature & Official Stamp of Authorized Officer Assistant Director Violence  | nement-fl                                      |

<u>SPPRA, Block. No.8, Sindh Secretariat No.4-A, Court Road, Karachi</u> Tele: 021-9205356; 021-9205369 & Fax: 021-9206291

Print Save Reset



# <u>DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.</u> PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

| Contract Number: | PC(WI) NED/Equip/W. Q104/63/70 | Dated:     | 21-09-21 |
|------------------|--------------------------------|------------|----------|
| Contract Value:  | 1984900.00                     | 12029/1923 |          |
| Contract Title:  | Lab - Equipment.               |            |          |

[Name of Supplier/Contractor Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, [Name of Supplier/Contractor Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

Pakfil feelmologies

[Name of Supplier/Contractor/Consultant] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

[Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier /Contractor/Consultant]

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

| Pr (24)  | WED FEWS WELCH  | 103/7051 Dated: 21-09-2021   |
|--|---|--|
| Contract Number: [ C(N)]   | The property of   | 7 Post Dated:  |
| Contract Value: Rs.  | 34,753,897/-  |  |
| Contract Title: Procurem   | nert of tob epup.   | for water Institute  |
| the procurement of any con<br>Government of Sindh (Gos   | ntractor/Consultant] hereby decl<br>ntract, right, interest, priv<br>b) or any administrative su  | lares that it has not obtained or induce<br>filege or other obligation or benefit from<br>abdivision or agency thereof or any other  |
| entity owned or controlled   | by it (GoS) through any co  | 4  |
| represents and warrants that payable to anyone and not anyone within or outside Paperson, including its affit shareholder, sponsor or strickback, whether described inducing the procurement of in whatsoever form, from declared pursuant hereto.  [Name of Supplied disclosure of all agreement transaction with PA and Latabove declaration, representing the procurement of the pr | tit has fully declared the trigiven or agreed to give akistan either directly or in liate, agent, associate, ubsidiary, any commission of a consultation fee or of a contract, right, interest Procuring Agency (PA).  The contractor/Consultant of the series and arrangements with a series and arrangements with a series or warranty.  The contractor/Consultant of the series of this declaration or warranty of the series of this declaration of the series of this declaration of the series of the | e foregoing, Name of Supplier/Contractor/Consultate brokerage, commission, fees etc. paid of and shall not give or agree to give and broker, consultant, director, promote on, gratification, bribe, finder's fee of otherwise, with the object of obtaining of the privilege or other obligation or benefit all persons in respect of or related to the will not take any action to circumvent the sure, misrepresenting facts or taking and not representation and warranty. It agrees the obligation or benefit obtained or procure ght and remedies available to PA under the option of PA.  |
|  |   | nedies exercised by PA in this regard  |
| [Name of Supplier/Contractor/Consultan account of its corrupt busine equivalent to ten time the kickback given by [Name of State  | agrees to indemnify PA ness practices and further sum of any commission of any commission of any contractor/Consultant] as a of any contract, right, in   | for any loss or damage incurred by it or pay compensation to PA in an amount on, gratification, bribe, finder's fee of aforesaid for the purpose of obtaining on the purpose of obtaining of the purpose of the purpose of obtaining obtaining of the purpose of obtaining o |
| Jes )  |   | 29/09/21   |
| [Procuring Agency]   |   | [Supplier /Contractor/Consultant]  |

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

|     | Contract Number:   | PC(NI)/NED/Egmp/W.Q Lot   | /02/7051 Dated: 21-Sep-21  |  |
|-----|--|---|--|--|
|     | Contract Value:  | 3,313,610/-   | 05/7051 Dated: 21-Sep-21   |  |
|     | Contract Title:  | Procurement of Lab Es   | supment for Water Institute.   |  |
|     | 16   | 6 62  |  |  |
|     | Government of Sind entity owned or cont  | any contract, right, interest, pri<br>th (GoS) or any administrative strolled by it (GoS) through any   |  | m<br>er                                  |
|     | With   | out limiting the generality of the  | he foregoing, [Name of Supplier/Contractor/Consultar   | ntl                                      |
|     | represents and warra<br>payable to anyone a<br>anyone within or ou<br>person, including is<br>shareholder, sponso<br>kickback, whether d<br>inducing the procure<br>in whatsoever form<br>declared pursuant he | ants that it has fully declared the and not given or agreed to give triside Pakistan either directly or its affiliate, agent, associate, or or subsidiary, any commission of a consultation fee or ement of a contract, right, interest, from Procuring Agency (PA ereto. | the brokerage, commission, fees etc. paid of the ve and shall not give or agree to give the indirectly through any natural or juridical broker, consultant, director, promote sion, gratification, bribe, finder's fee of otherwise, with the object of obtaining context, privilege or other obligation or benefit except that which has been expression. | or<br>to<br>al<br>er,<br>or<br>or<br>it, |
|     | disclosure of all agr<br>transaction with PA<br>above declaration, re  | reements and arrangements with  | ies that it has made and will make further hall persons in respect of or related to the will not take any action to circumvent the   | he                                       |
|     | [Name making any false de action likely to defe that any contract, rig as aforesaid shall, v   | of Supplier/Contractor/Consultant] accepts<br>eclaration, not making full discle<br>eat the purpose of this declarati<br>ght, interest, privilege or other  | s full responsibility and strict liability follower, misrepresenting facts or taking an ion, representation and warranty. It agrees obligation or benefit obtained or procure right and remedies available to PA under the option of PA.   | ny<br>es<br>ed                           |
| Mls | [Name of Supplier/Contractor account of its corru equivalent to ten t kickback given by [inducing the procur benefit, in whatsoev]   | agrees to indemnify P. ppt business practices and furth time the sum of any commission of Supplier/Contractor/Consultant as rement of any contract, right, wer form, from PA.   | emedies exercised by PA in this regard A for any loss or damage incurred by it does not pay compensation to PA in an amount sion, gratification, bribe, finder's fee of a aforesaid for the purpose of obtaining of interest, privilege or other obligation of   | on<br>int<br>or<br>or                    |
|     | [Procuring Agen  | icy]  | [Supplier Contractor/Consultant]   |  |

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

Contract Value: Rs 9,897,607/-

Contract Title: Procurement of Lab Epupments for water Institute.

M/s. Rosteh technologies

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing frame of supplier/Contractor/Consultant) represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, brice, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

Mls. Rostek tech.

[Name of Supplier/Contractor/Consultunt] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

[Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier/

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

| Contract Number: PC (WI) NED/EQUIP/WOLOB/03/7051/200 Dated: 21-9-21 |  |
|---|--|
| Contract Value: R. 4,500,000/-                                      |  |
| Contract Title: Procurement of Lab Equipments of water Institute.   |  |

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of Supplier/Contractor/Consultant] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

Notwithstanding any rights and remedies exercised by PA in this regard, [Name of Supplier/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier /Contractor/Consultant]

#### DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

|                 | 1 / / / / / / / / / / / / / / / / / / /  |         |  |
|-----------------|--|---------|--|
| Contract Number | PC (WI) NED/Egup/W.O.Lab/03/7051/ Dated: | 21-9-21 |  |
|                 | , ,                                      |         |  |
| Contract Value: | Rs. 9,171,000.54/-                       |         |  |

Contract Title: Procurement of Lab Equipmente for Water Institutes.

M/s. Wali Global.

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Mls. Wali Global Without limiting the generality of the foregoing, [Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

M/s. Wali Global.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

M/s. Wali Global.

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المامان المامان Notwithstanding any rights and remedies exercised by PA in this regard, [Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

Contractor/Consultant]

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

| Contract Numbe  | r: PC (WI) NED/Equip/W. Q Lab/03/7051 Dated: 21-Sep-21.  |
|-----------------|--|
|                 | Rs. 1,534,003/-  |
| Contract Title: | Procurement of Lab Epup for Water Institute.   |
|                 | s. SIFF of Supplier/Contractor/Consultant) hereby declares that it has not obtained or induced |

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

M/s. SIFF

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

M/s. SIFF

[Name of Supplier/Contractor/Consultant] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

Notwithstanding any rights and remedies exercised by PA in this regard, [Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier /Contractor/Consultant]

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

|                  | 1 Lab/03/7051/2021.                               |
|------------------|---|
| Contract Number: | PC (WI) NED/Equip/H.Q Dated: 21-Sep-2021          |
| Contract Value:  | 9,036,717/-                                       |
| Contract Title:  | Procurement of Labortony Epup for Water Institute |
| 21/2 0           | 2:: 6 (2  |

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, M/s. Rizvi & Co.

Without limiting the generality of the foregoing, [Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its artiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of Supplier/Contractor/Consultant] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

[Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier /Contractor/Consultant]

#### DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

PC/W1/1061)/Egmp/w.p.lab/03 Dated: 21/09/21

Contract Value:

RS 2,342,562.00

Contract Title:

Contract Number:

procurement of loob Egupment for water Institute

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

MIS. East west west not west not miting the generality of the foregoing, [Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

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ms. Earl wer Notwithstanding any rights and remedies exercised by PA in this regard, [Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any gommission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Constructor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Supplier /Contractor/Consultant]

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# <u>DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.</u> <u>PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.</u>

| Contract Number: | PC/WI/NED/Equip/w.a. Lab/03/705, Dated: | 21/09/2021         |
|------------------|---|--------------------|
| Contract Value:  | Rs - 994,500.00                         | 1                  |
| Contract Title:  | procurement of Lab Equipment            | for water Institut |

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, [Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

Name of Supplier/Contractor/Consultant) accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

[Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

Supplier /Contractor/Consultant]

# DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

| Contract Number:   | RS 5,3 24, 260,00 Dated: 21/09/2/  |
|--|--|
| Contract Value:  | Rs 5,324,260,00 TOSITION   |
| Contract Title:  | procurement of Lorb Egrupanent for wester Onstitu  |
| M/s. I   | Denels Corp.  pplier/Contractor/Consultant hereby declares that it has not obtained or induced         |
| [Name of Su  | pplier/Contractor/Consultant hereby declares that it has not obtained or induced                       |
| the procurement of a   | my contract, right, interest, privilege or other obligation or benefit from                            |
|  | (GoS) or any administrative subdivision or agency thereof or any other                                 |
|  | rolled by it (GoS) through any corrupt business practice.  |
|  | 사용은 기존 전에 가는 이 경기에 가는 이 사람들이 가는 수 있는데 가는 사람들이 되었다. 그런 그리고 아니는 사람들은 사람들이 되었다. 나는 사람들이 되었다. 그런 사람들이 되었다. |
| Witho  | out limiting the generality of the foregoing, [Name of Supplier/Contractor/Consultant]                 |
| Without and warmen   | the fifthing the generality of the foregoing, [Name of Supplier/Contractor/Consultant]                 |
|  | nts that it has fully declared the brokerage, commission, fees etc. paid or                            |
|  | nd not given or agreed to give and shall not give or agree to give to                                  |
|  | side Pakistan either directly or indirectly through any natural or juridical                           |
|  | s affiliate, agent, associate, broker, consultant, director, promoter,                                 |
| shareholder, sponsor   | or subsidiary, any commission, gratification, bribe, finder's fee or                                   |
| kickback, whether de   | escribed as consultation fee or otherwise, with the object of obtaining or                             |
| inducing the procure   | ment of a contract, right, interest, privilege or other obligation or benefit,                         |
|  | from Procuring Agency (PA), except that which has been expressly                                       |
| declared pursuant her  |  |
| The state of the s | s. Denes Crop.   |
| <u> </u>   | of Supplier/Contractor/Consultant] certifies that it has made and will make full                       |
|  | ements and arrangements with all persons in respect of or related to the                               |
|  |  |
|  | and has not taken any action or will not take any action to circumvent the                             |
|  | presentation or warranty.  |
| M/s.   | Denes Corp.  |
| [Name o  | f Supplier/Contractor/Consultant] accepts full responsibility and strict liability for                 |
| making any false dec   | elaration, not making full disclosure, misrepresenting facts or taking any                             |
| action likely to defea   | at the purpose of this declaration, representation and warranty. It agrees                             |
| that any contract, right   | ht, interest, privilege or other obligation or benefit obtained or procured                            |
| as aforesaid shall, w  | ithout prejudice to any other right and remedies available to PA under                                 |
|  | other instrument, be voidable at the option of PA.   |
|  |  |
| S. Denel Core Notwi  | thstanding any rights and remedies exercised by PA in this regard,                                     |
| [Name of Supplier Contractor/  | Consultant] agrees to indemnify PA for any loss or damage incurred by it on                            |
|  | t business practices and further pay compensation to PA in an amount                                   |
|  |  |
| kiekheek given by  | me the sum of any commission, gratification, bribe, finder's fee or                                    |
|  | ame of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or                    |
|  | ement of any contract, right, interest, privilege or other obligation or                               |
| benefit, in whatsoeve  | r form, from PA.   |
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| [Procuring Agenc   | y [Supplier /Contractor/Consultant]  |