## DEPARTMENT OF GEOGRAPHY

| Sl.no. | Part No. | Description | Qnty. | Remarks |
| :---: | :---: | :---: | :---: | :---: |
| 1. | $\begin{aligned} & 4000- \\ & \text { AAS- } 001 \end{aligned}$ | Perkin Elmer owned Spectrum Instrument make SP-3000 Single Beam AAS without Air Compressor features \& Specifications: <br> * Optical system: High light throughput single beam <br> * Modes of operation: Atomic absorption \& atomic emission <br> * Monochromator: Czerny-Turner type 2 focal lengths 355.8 mm \& 345.6 mm , automated wavelength and slit selection <br> * Wavelength range: $180-900 \mathrm{~nm}$ <br> * Grating: holographic diffraction with 1200 lines <br> * Wavelength repeatability: $\pm 0.1 \mathrm{~nm}$ <br> * Wavelength accuracy: $\pm 0.3 \mathrm{~nm}$ <br> * Sensitivity (Cu): Approx.0.9A at 5ppm, RSD $\leq 0,5 \%$ <br> * Slits: Automated slit selection $0.1,0.2,0.4,0.7,1.4,2.0 \mathrm{~nm}$ <br> * Detector: Wide range UV sensitive photomultiplier tube <br> * Lamps: Automated 8-lamp turret with independent lamp power supply for each lamp. Two additional heating circuits for pre-heating lamps. Non-coded lamp and coded lamp can be used <br> * Background Correction: Deuterium (D2) background correction and self-absorption background correction <br> Flame system: <br> * Burner-Nebulizer System: Titanium 100 mm burners heads, 100 mm burner for air/acetylene operation. The optimization of the operating flame condition is also fully automatic and software controlled <br> * Spray chamber: The PPS (Polyphenylene Sulfide) spray chamber is used for both aqueous and organic solution <br> * Gas controls: Software controlled gas box allows the automatic setting of gas flows for each element | 01 no. |  |

## DEPARTMENT OF GEOGRAPHY

| Sl.no. | Part No. | Description | Qnty. | Remarks |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Cont'd from page-1:- <br> * Safety functions: Sensor controls for protection to use the incorrect Burner head and check the siphon system. In case of pressure failure of fuel or oxidant gas or power failure, safety interlocks will shut down the gasses automatically in the right order <br> * Weight (main unit): 90 kg <br> * Dimension (W x D x H): $800 \mathrm{~mm} \times 580$ <br> mm x 575 mm <br> * Power requirement: $220 \mathrm{~V} \pm 10 \%$, <br> $50 / 60 \mathrm{~Hz}, 1000 \mathrm{~W}$ (max) | (1) |  |
| 2. | $\begin{aligned} & 4000- \\ & \text { CPS-000 } \end{aligned}$ | Compressed-Air compressor 50 Hz | 1 no. |  |
| 3. | $4000-$ <br> $\mathrm{HCl}-015$ | Cu Element Non Coded Lamp | 1 no. |  |
| 4. | $\begin{aligned} & 4000- \\ & \mathrm{HCl}-018 \end{aligned}$ | Fe Element Non Coded Lamp | 1 no. |  |
| 5. | $\begin{aligned} & 4000- \\ & \mathrm{HCl}-032 \end{aligned}$ | Mg Element Non Coded Lamp | 1 no. |  |
| 6. | $\begin{aligned} & 4000- \\ & \text { CONFL- } \\ & 000 \end{aligned}$ | Consumables for Flame Technique | 1 no. |  |
| 7. | NPN1 | Cylinder with Acetylene Gas in 41 liter purity (99.6\%) | 1 no. |  |
| 8. | NPN2 | Two stage Cylinder Regulator SS body with S.S. Diaphragm for Acetylene | 1 no. |  |
| 9. | NPN3 | Fume Hood for AAS, S.S. body maximum length 10 feet with exhaust blower: <br> a) Duct: S.S. Total length 10 feet (Approx.) <br> b) Hood: S.S <br> c) Blower: S.S., 0.2 HP Motor Fan: 7" $x$ 4", 2800 rpm <br> d) Flow control to regulate air flow (Damper) | 1 no. |  |

-2-


Cont'd...

| DEPARTMENT OF ANTHROPOLOGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Sl.no. | Model <br> No. | Description | Qnty. | Remarks |
| 1. | Cat.No. 1855200 BioRad | CFX Connect ${ }^{\text {TM }}$ Real-Time PCR <br> Detection System with Starter Package Specification <br> * Designed for control by remote personal computer (up to 4 CFX Systems) <br> * Detection of up to 2 targets per well, plus a channel dedicated to singleplex FRET <br> * Integrated solution for your SYBR® <br> Green or EvaGreen and duplex experiments <br> * Thermal gradient feature that identifies optimal annealing temperature in a single run <br> * CFX Maestero Software and qbase+ Software for reliable validation, data analysis, and export of RDML files for conformance with MIQE guidelines Technical data: <br> * Chassis: CFX Connect <br> * Maximum ramp rate: ${ }^{\circ} \mathrm{C} / \mathrm{sec}: 5$ <br> * Average ramp rate: ${ }^{\circ} \mathrm{C} / \mathrm{sec}: 3.3$ <br> * Heating and cooling method: Peltier <br> * Lid, ${ }^{\circ} \mathbf{C}$ : Heats up to 105 <br> Temperature <br> * Range, ${ }^{\circ} \mathrm{C}: ~ 0-100$ <br> * Accuracy, ${ }^{\circ} \mathrm{C}: \pm 0.2$ of programmed target at $90^{\circ} \mathrm{C}$ <br> * Uniformity, ${ }^{\circ} \mathrm{C}: \pm 0.4$ well-to-well with in <br> 10 sec of arrival at $90^{\circ} \mathrm{C}$ <br> * Gradient <br> * Operational range, ${ }^{\circ} \mathrm{C}: 30-100$ <br> * Programmable span, ${ }^{\circ} \mathrm{C}$ : 1-24 Optical Detection <br> * Excitation: 3 filtered LEDs <br> * Detection: 3 filtered photodiodes <br> * Range of excitation/emission <br> wavelengths, nm: 450-580 <br> * Sensitivity: Detects 1 copy of target sequence in human genomic DNA <br> * Dynamic range: 10 orders of magnitude | 1 No. |  |



| DEPARTMENT OF ANTHROPOLOGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SI.no. | $\begin{aligned} & \text { Model } \\ & \text { No. } \\ & \hline \end{aligned}$ | Description | Qnty. | Remarks |
|  |  | Cont' $d$ from page-3:- <br> Scan time <br> * All channels, sec: 12 <br> * FAM/SYBR® Green only, sec: 3 <br> * Software <br> * Operating systems: Windows 7, Windows <br> 8, Windows 10 <br> * Multiplex analysis: Up to 2 targets per well <br> System <br> * Licensed for real-time PCR: Yes <br> * Sample capacity, wells: 96 <br> * Sample size, $\mu$ I: 1-50 (10-25 <br> recommended) <br> * Communication approvals: IEC, CE <br> * Dimensions (W x L x H), cm/in: $33 \times 46 \times$ $36 / 13 \times 18 \times 14$ <br> * Weight, kg/lb: 21/47 |  |  |
| 2. |  | Compatible PC | 01 no. |  |



Cont'd...

DEPARTMENT OF ZOOLOGY

| SI.no. | Part/Model No. | Description | Qnty. | Remarks |
| :---: | :---: | :---: | :---: | :---: |
| 1. | $\begin{aligned} & 305.00 \mathrm{~V} \\ & 05 \\ & \text { Model Z } \\ & 216 \mathrm{MK} \end{aligned}$ | Hermle Microprocessor Controlled Bench Top Refrigerated Centrifuge (German Make) <br> Specifications: <br> * Perfect for DNA and RNA isolation. <br> * Maintenance-free induction drive. <br> * Motor driven lid lock <br> *Active imbalance identification and cut off <br> * Standstill cooling <br> * Audible signal at the end of each run <br> * CFC-free refrigeration system <br> * Rapid acceleration and deceleration (see rotor data) <br> * Lowest sample temperature $4^{\circ} \mathrm{C}$ at 20000 xg <br> * Noise level $<60 \mathrm{dBA}$ at 21380 xg <br> * Extremely compact with a space saving footprint <br> * Quick access to samples with a snap on lid <br> * Automatic rotor recognition facility <br> * inner chamber made of Stainless steel to avoid corrosion <br> Distinct Control Panel <br> * Simple one handed operation <br> * Easy to program with gloves on <br> * Foil keyboard <br> * Permanent indication of preset and actual values <br> * Selection of speed in both rpm and gforce, with increments of 10 . <br> * Quick-key for short runs <br> * 10 acceleration and deceleration rates, possibility of unbraked deceleration <br> * Storage of up to 99 runs including rotor <br> * Temperature range from $-20^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ <br> * Input and indication of temperature either <br> in ${ }^{\circ} \mathrm{C}$ or ${ }^{\circ} \mathrm{F}$ <br> * Pre-cooling program (Pre-cooling time from room temperature to $+4^{\circ} \mathrm{C}<10 \mathrm{~min}$ ) <br> * Pre-selection of the running time from 10 s to 99 h 59 min or continuous | 01 no. |  |

-5-


| DEPARTMENT OF ZOOLOGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SI.no. | Part/Model No. | Description | Qnty. | Remarks |
|  |  | Cont'd from page-5:- <br> Features: <br> * Microprocessor controlled with large LCD display <br> * Speed range from 200rpm to 15000 rpm <br> * 10 acceleration and deceleration rates <br> * "Quick"-key for short runs with corresponding digital display of elapsed time in seconds <br> * Input and indication of speed or RCFvalue in steps of 10 <br> * Automatic imbalance indication with safety cut off <br> * Optional audible signal at the end of each run <br> * Manufactured according to IEC 61010 and 61010-2 standard <br> * Centrifuge conforms to CE-requirements <br> \& IVD Certified <br> * Rotor and rotor lid is made of metal <br> Technical data Z 216MK: <br> * Max.Speed: 15000 min-1 <br> * Max.RCF: $21380 \times \mathrm{g}$ <br> * Max. Volume: $44 \times 1,5 / 2,0 \mathrm{ml}$ <br> * Speed range: $200-15000 \mathrm{~min}-1$ <br> * Temperature range: $-20^{\circ} \mathrm{C}$ to $40^{\circ} \mathrm{C}$ <br> * Running time: $59 \mathrm{~min} 50 \mathrm{~s} / 10 \mathrm{~s}$ increments $99 \mathrm{~h} 59 \mathrm{~min} 50 \mathrm{~s} / 1 \mathrm{~min}$ Increments <br> - Dimensions: $28 \mathrm{~cm} \times 29 \mathrm{~cm} \times 55 \mathrm{~cm}$ (W $\times \mathrm{H} \times \mathrm{D}$ ) <br> - Weight:: 35 kg <br> - Power input:: 280 W | ? |  |
| 2. | 220.87 V 13 | Angle rotor for $24 \times 1.5 / 2.0 \mathrm{ml}$ tubes (sealable \& aerosol tight): <br> * Max. Speed: 15000 min-1 <br> * Max. RCF: $21380 \times \mathrm{g}$ | 01 no. |  |
| 3. | 221.35 V 13 | Angle rotor for $12 \times 5 \mathrm{ml}$ reaction tubes (sealable): <br> * Max. Speed: 14500 min-1 <br> * Max. RCF: $19978 \times \mathrm{g}$ | 01 no. |  |



## TERMS AND CONDITIONS

1. Applicable tax should be clearly indicated.
2. The rates are FOR Nagaland University, Lumami.
3. EMD @ $2 \%$ of the total quoted price in the form of DD should be deposited in favour of the Registrar, Nagaland University, Lumami.
4. A self addressed envelope should be enclosed along with the EMD.
5. Defective equipment should be replaced at the cost of the supplier.
6. Warranty period to be specified.
7. The rates quoted should be inclusive of installation and all other applicable charges.
8. The University reserves the right to accept or reject the tenders without assigning any reasons thereof and no representation will be accepted.


Registrar

