



**Tender No. 15/2023**

**Bidding Documents**

**SPECIAL INSTRUCTIONS**

- No Cutting erasing is allowed in the Tender bid.
- Bid offered strictly in accordance with the bid document will only be accepted.
- Only typed bid will be accepted (no hand written)
- Bid Security will be accepted in the form of CDR (Call Deposit Receipt)

**THIS IS FOR STRICT COMPLIANCE, FAILING WHICH THE RESPECTIVE BID SHALL STAND CANCELLED**

**Contact Address:**  
**Assistant Treasurer/Incharge Purchase Cell**  
**Cholistan University of Veterinary and Animal Sciences,**  
**Near DHA Bahawalpur**  
**Tel: 062-9255718,731**

**Focal Person:**  
**Dr. Mubashir Raouf**  
**Project Director / Associate Professor**  
**Department of Pathology**  
**CUVAS Bahawalpur**  
**Contact: 0333-9965850**

### TERMS & CONDITIONS

1. The price of this tender document is Rs.1,500/- (Non-Refundable) which must be deposited into Account title " **CHOLISTAN UNI OF VET & ANI SCI BWP** " A/c. No, **1752-79010215-03** in any branch of Habib Bank Limited.
2. The Tender complete in all respect along with 2% Bid Security of Estimated Price / Cost in the shape of only "Call Deposit Receipt" (CDR) in favor of "Treasurer, CUVAS", Bahawalpur should reach in Treasurer office by **02.10.2023** at **11:00AM** in the Cholistan University of Veterinary & Animal Sciences, Bahawalpur.
- 3.

Lot No.	Description	Bid Security (Rs.M)
1	Department of Veterinary Anatomy and Histology Department/Section of Veterinary Physiology Department/Section of Biochemistry Department/Section of Veterinary Pharmacology Department/Section of Veterinary Microbiology	0.2447
2	Veterinary Parasitology Veterinary Pathology Department/Section of Veterinary Medicine	0.2492
3	Department/Section of Veterinary Surgery Department/Section of Livestock Management Department/Section of Livestock Products Technology and Dairy Technology Department of Meat Technology	0.2407
4	Department/Section of Animal Nutrition Department/Section of Poultry Husbandry/Science	0.233

4. The Technical proposals will be opened on **02.10.2023 at 11:30AM**. in Administration Block, Treasurer Office, Meeting Room, 1<sup>st</sup> Floor, Cholistan University of Veterinary and Animal Sciences, Bahawalpur.
5. The offered price should be inclusive of all taxes.
6. All the bids will be evaluated item wise instead of lot wise for best utilization of money.
7. Bids will be evaluated item wise instead of lot wise and purchase order will be issued to the bidder who have lowest bid for any particular item.
8. The rate must be quoted only in Pakistani Rupees.
9. Quoted rates must be valid for 90 days.
10. No offer shall be considered if it is:
  - a) Submitted without Tender Document.
  - b) Submitted without Bid Security money.
  - c) Received after the date and time fixed for the receipt of tenders.
  - d) Is unsigned.
  - e) Is ambiguous.
  - f) Is conditional.
  - g) Is given by the firm black listed, suspended or removed from the approved list by any Government, Semi Government, Autonomous Bodies or other firm.
  - h) Is received by Telegram.
  - i) Is received with a validity period shorter than the required in the tender enquiry.
  - j) Does not confirm to general conditions of the enquiry i.e it is not accompanied by sample or manufacturers literature where required.
  - k) for store materially and substantially different from that required in the tender enquiry.
11. 10% amount as performance security will be deducted from the bills of the firms at the time of payment of total of the supply order which will be retained, for at least three months after delivery of Items mentioned above or till the warranty period which ever will be later, by the Treasurer CUVAS Bahawalpur. In case of non-warranty items performance guarantee/security will be refunded/released after three months subject to the satisfactory report from the end user.

12. The sample may be provided as & when required by Technical Committee.
13. Applicable Govt. levies will be deducted at source from the bill.
14. The equipment / stores supplied by the bidder shall be brand new, in original manufacturer packing and complete in all respects. Cost of transportation of supplied equipment / goods to the site of university and cost of installation and commissioning of equipment shall be the responsibility of the supplier.
15. Supply of material should be made within stipulated period of the Purchase Order positively; in case of failure the amount of CDR may forfeited and purchase will be made at the risk and cost of the defaulter or any penalty as decided by the purchase committee of the University can also be imposed.
16. The buyer shall notify the supplier in writing/through telephone of any defects that occur during the warranty period. On receipt of such notification/telephonic message the supplier shall attend the breakdown call within a maximum of 6 working hours.
17. The firm offering prices for supply of machinery and equipment should have sufficient qualified technical staff and be equipped and having capability to undertake the maintenance or replacement for the equipment supplied to this University.
18. The successful venders will attach the stamp duty of 0.25% or Rs. 1200/- (whichever is greater) of total value of the contract / purchase order at the time of signing of contract.
19. The bidding documents should be dropped in Tender Box in the office of the treasurer, 1<sup>st</sup> Floor, CUVAS, Bahawalpur, during five working days till the last date mentioned in tender notice.
20. Bids must be quoted on company's letter pad duly signed stamped by the bidder
21. Please attach NTN, GST and professional tax certificates with bidding documents.
22. Please attach the copy of your FBR Active taxpayer serial Number list for the current financial year.
23. Please read, sign all the tender documents, terms and conditions carefully and attached with your bidding documents.
24. Any further information if required can be obtained from Purchase Cell, CUVAS, Bahawalpur.
25. In case the contractor fails to execute the contract satisfactorily, the amount of security shall be forfeited. The security shall be released after satisfactory completion of the contract on production of report to the effect issued by the committee constituted for the purpose and expiry of successful warranty period.
26. On finding substandard quality or lower specification as and when noticed during process, the security deposited shall be forfeited in favor of the CUVAS Bahawalpur. The purchaser also reserves the right to purchase the material from elsewhere without any notice at the risk and cost of the defaulting contractor.
27. All pages of the tender document should be signed and stamped by the bidder.
28. CUVAS reserves the right to decrease /increase the quantity without consultation as and when required as per requirement and available budget.
29. CUVAS may ask the lowest bidder for any clarification/providing of documents for satisfactory evaluation of offer.
30. The payment shall be subject to the satisfaction of all items duly certified by the inspection committee/end user. Findings of the inspection committee will be binding on the supplier.
31. Quantity of Items can be increased or decreased (Fully or Partially) at the time of issuance of Purchase / Supply Order keeping in view the budgetary provision or any other reason thereof.

We, M/s. \_\_\_\_\_ hereby certify that we have read and agreed with all terms and conditions mentioned above.

Signature: \_\_\_\_\_

Designation: \_\_\_\_\_

Dated: \_\_\_\_\_

Stamp: \_\_\_\_\_

Deputy Treasurer/ Incharge Purchase Cell  
Cholistan University of Veterinary and Animal  
Sciences, near DHA, Bahawalpur  
Tel: 062-9255718, 731



# TECHNICAL PROPOSAL

TENDER NO. 15 / 2023

**TENDER DOCUMENTS**

**LABORATORY EQUIPMENT**

Sr. #	Name of item	Qty	Required Specifications	Origin/Make	Offered Specification
<b>LOT No. 1</b>					
<b>Department of Veterinary Anatomy and Histology</b>					
1	Rib cutter	3	Packing 1 Quantity Per Pack 1 Finishing MAT Automation Grade Manual Material Grade 410 Material Steel Is It Portable Portable Finish MAT Grade 410 Sterilization YES	Local/China	
2	Rib shear	3	Low maintenance Robust structure Excellent strength User friendly Simple design Enhanced durability	Local/China	
3	Rotary Microtome with accessories	1	Section Thickness 0.5-60 $\mu$ m Total Horizontal specimen feed: 25mm Vertical specimen stroke; 59mm Microtome Razor Stainless Steel Specimen orientation XY- $\pm$ 8 Power Source Electricity/manual Accessories All accessories, 200 Microtome S.S blades	Germany/Equivalent	
4	Automatic knife processor	1	Usage: Knife sharpening machine Brand: well-reputed Type: Automatic Grinding Material: Metal	China/Local	
5	Hone with surfaces	1	Hone length capacity (power stroke) 305 mm Honing speed (general) 80 & 160 Rpm Honing speed (with inverter) step less 0 to 160 Rpm Max Cylinder block length 1000 mm Electric motor 2 hp (3 phase) Stroking speed 0-60 SPM	China/Local	
6	Stropping leather	2	Use for sharpening of lab instruments	China/Local	
7	Hollow organs (animal models)	1	Canine torso model with complete organs	Advanced countries	

8	Dissection microscopes	1	<p>Magnification      Zoom objective 7X-45X</p> <p>Eyeiece              Optional Eyepiece 15X/15mm, 20X/10mm, 25X/9mm, 30X/8mm</p> <p>Main Body            Binocular head, 45° inclined, 360° rotatable, can be locked in any position desired.</p> <p>Objective            0.7X-4.5X stereo zoom; Zoom Ratio:6.4:1</p> <p>Focusing Mount      Focusing mount with vertical working distance 50mm</p> <p>Stand                 Vertical Post: 240mm ; Diameter: φ32mm; With φ95mm B/W Plastic &amp; Perspex Plate and Paired Clips; Base Size: 200x255x60mm</p> <p>Illumination         Transmitted and reflected 12v/15w halogen; *LED illumination</p> <p>C-Mount              SZM 1X C-Mount; *SZM 0.5X C-Mount; SZM 0.3X C-Mount</p> <p>Accessories: Yes</p>	Advanced countries	
9	Specimen slides of histology and embryology (2 of each organ	1 each	Set of 100 prepared microscopic veterinary histology and embryology slides for veterinary medicine education study with Hematoxylin and Eosin (HE) stained samples (preferably equine, canine, caprine, chicken)	USA/ Europe/ Germany/ China/ local / Equivalent	
10	Specimen of some major zoo animal's skeleton, etc.)		Deer, Lion, Bear	Local/ Imported	
11	Meat saw	1	<p>Material              Stainless Steel</p> <p>Blade Size            8-inch blade</p> <p>Motor Powe          0.5 hp</p>	Advanced Countries /Imported	
12	Side warmers (hot plate)	1	<p>Voltage                220 V A.C</p> <p>Power Source        Electric</p> <p>Shape                  Rectangular</p> <p>Condition             New</p> <p>Feature                High Quality</p> <p>Temperature Range      80-140 Degree Celsius</p>	Advanced Countries	
13	Slide cabinet 5000 slides	1	<p>Material: Wooden</p> <p>Usage: to keep microscope slides safe</p> <p>No. of Slide: 5000</p> <p>Finish: Painted</p>	Local/ Imported	
<b>Department/Section of Veterinary Physiology</b>					
1	Wintrobes sets.	12	<p>Reusable blood sedimentation tubes suitable for determining sedimentation rates and the volume of packed red blood cells.</p> <p>Thick walled, cylindrical, and 11 with internal bore diameter of 2.5 mm</p> <p>Graduations from 0-10 in both upward and downward direction</p> <p>Provided with wintrobe stand</p>	Must be of reputed brand	
2	Stimulators	1	A part of Kymograph	USA/	

				Japan/France/Germany	
3	Catheters (solstice)	12	Feline Catheter, Equine Catheter Mare: 8.0 mm X 700 mm, -PVC, Sterile, Luer Hub, Plastic, Catheter, Mare Equivet, 8.0 mm Stallions: Catheter, Stallion Equivet, 6.5 mm, 6.5 mmX1350 mm, -transparent PVC, -sterile, -Luer hub, Canine Catheter, Description: Canine urinary catheters, 3,3X600 mm	Must be of reputed brand	
4	Electrocardiogram (portable)	1	Animal Portable electrocardiogram appreciable: Frequency 25-50Hz 1. Sync sampling, digital signal processor, gets better quality ECG waveform by ECG signals filtering through the power frequency filter, baseline filter and EMG filter. 2. Display 3/6/12-lead ECG waveform, and states of print mode, sensitivity, paper speed, filter, etc. in one screen, convenient for contrastively diagnosing. 3. Multi-print mode and format: manual and automatic 4x3, auto 3x4+1, auto 3x4, auto 2x6+1, auto 2x6, auto 3-2+1, auto 3-2, auto 1x12+1, auto 1x12, rhythm 4, rhythm 3 and rhythm2, etc. Waveform length can be adjusted and timing print function is available, which meets the need of different applications. 4. Built-in high-capacity memorizer can store up to 1000 cases, which is convenient for doctor's review and statistic. 5. The interface languages including: English	USA/ Japan/France/Germany	
<b>Department/Section of Biochemistry</b>					
1	Refractometer	1	Measurement range nD: 1.32000-1.58000 Accuracy nD (±): 0.0002 Repeatability nD (±): 1e-005 Measurement range Brix: 0-100 % w/w Accuracy Brix: 0.014 % w/w Temperature control range: 5 °C – 75 °C Temperature control accuracy (±): 0.03 °C Minimum Sample volumes: 0.50 mL (0.5 mL) Measurement Scales: Refractive Index, Sugar (Brix and more), Acid/Base, Chemical, Freezing Point, Salt, Others; Up to 30 user-defined concentration tables (can be entered as tables or formulas). Built-in Measurement Scales: Others; Chemicals, acids, bases and freezing	USA/ Japan/France/Germany/China	

			<p>point tables; Refractive Index; Brix / Sugar tables</p> <p>Connectivity: HDMI (Terminal); USB client (PC Software); Ethernet (Network and PC Software); 3 × USB host (printer, memory stick, barcode reader, hub, keyboard, mouse); RS232 (Automation units); CAN (Multiple LevelSens)</p> <p>Product Type: Benchtop refractometer</p> <p>Compliance/Data Security: Audit Trail (requires LabX software); Data integrity (requires LabX software); 21 CFR part 11 / EU Annex 11 (requires LabX software)</p>		
2	Polari meter	1	<p>Principle: Automatic digital polarimeter with symmetric angular oscillation using the optical-null balance method</p> <p>Light Source: Tungsten-Halogen lamp (W), Sodium lamp (Na), Mercury lamp (Hg) (Up to two light sources can be installed.)</p> <p>Modulator: Faraday cell</p> <p>Wavelength: 253, 280, 296, 313, 302, 325, 334, 365, 405, 436, 546, 578, 589, 633, 880 nm</p> <p>Aperture: 1.8, 3 and 8 mm diameters</p> <p>Angular Range: ±90°</p> <p>Response Speed: 6°/sec</p> <p>Measurement Accuracy: ±0.002° (up to 1°)</p> <p>Repeatability: ±0.2% (larger than 1°) 0.002°</p> <p>Resolution: 0.0001°</p> <p>Integration Time: 1-100 sec</p> <p>Detector: Photomultiplier tube (1P28-01) (R928 - option)</p> <p>Readout Modes: Optical rotation, optical specific rotation, concentration, sugar scale Z, Brix purity, optical purity</p> <p>Temperature Measurement Range: 0~40°C (minimum display temperature: 0.1°C)</p> <p>Power Requirement: AC100~240V ±10%, 50 or 60 Hz, 80 - 300 W</p> <p>Dimensions: 653 (W) x 249 (D) x 364 (H) mm</p> <p>Weight: Approx. 30 kg</p>	USA/ Japan/ France/ Germany/ China	
<b>Department/Section of Veterinary Pharmacology</b>					
1	Colter Counter	1	<p>Particle size range of 0.3 to 10µm, Lightweight and ergonomic design, 10 hours of standard-use battery life, 10,000 records stored, View data in traditional tabular or trend graph, Configurable display, sample methods, &amp; alarm setting, Data export to USB or PC, Internet-enabled and meets ISO, JIS, and CE standards</p>	Local/Imported	
2	Anesthetic Monitor	1	<p>12.1" inch colored display, parameters: SpO<sub>2</sub>, ECG, NIBP, TEMP, RESP, Suitable for dogs, cats, and horses, 72 hours of graphic and tabular trends, 32 seconds full-disclosure waveform review, Built-in rechargeable lithium</p>	Local/Imported	



			battery, Power supply: AC85~265V/50Hz/60Hz		
3	Manometers, catheters, etc.		<p><b>Manometer</b> Pressure of 0 to 100 mmHg. Accuracy of <math>\pm 0.5</math> mmHg and a precision of <math>\pm 0.1</math> mmHg, with a resolution of 0.01 mmHg. Calibration, portability, and durability are essential, along with safety features. The manometer should be user-friendly and compatible with research accessories.</p> <p><b>Equine Catheter</b>, Mare: 8.0 mm X 700 mm, -PVC, Sterile, Luer Hub, Plastic. Canine Catheter, Canine urinary catheters, 3,3X600 mm. They should have radiopacity for visualization</p>	Local/Imported	
4	physio graph with recorder		<p>ECG electrodes with Bio Potential Junction Box, EMG disc electrodes and EEG Paste as accessory. Coloured TFT for display: 15.5 x 9.5 cm. channel width should be not less than 80mm. Sensitivity: 50,100,200,500 uv/cm and 1,2,5,10,20,50,100 mv/cm. Data Sampling Frequency: should be more than 250Hz. CMRR: &gt; 80-85 db.</p> <p>The physiograph with a recorder designed for pharmacological research must capture diverse physiological signals such as ECG, EMG, and blood pressure. It should provide multiple channels, adjustable amplification and filtering, high signal resolution, and variable sampling rates. Real-time display, data storage, export, and analysis</p>	Local/Imported	
5	Isolated heart perfusion apparatus		<p>UP-100IH Core System, Basic: 73-4384 (115V) or 73-4385 (230V) UP-100IH Core System, Advanced: 73-4386 (115V) or 73-4387 (230V) Includes:</p> <ol style="list-style-type: none"> <li>UP-100 Base Unit • Heart Chamber and Holder to UP-100 System • UP-100 Addition for Langendorff (with cannulae for rat/guinea pig)</li> <li>Thermocirculator • Analog Roller Pump • Compliance Chamber (Windkessel)</li> <li>Perfusion Pressure Measurements ° Pressure Transducer ° TAM-D PLUGSYS Transducer Amplifier Module</li> <li>PLUGSYS Basic System Case (Core System 6 Slot Units) - UP-100IH Basic: PLUGSYS 601 Case, 10 Slot Units* - UP-100IH Advanced: PLUGSYS 603 Case, 20 Slot Units</li> <li>Left Ventricular Pressure Measurement ° Pressure Transducer ° TAM-A PLUGSYS Transducer Amplifier Module * If your chosen</li> </ol>	Local/Imported	

			options require more than 10 Slot Units you will need to choose the UP-100IH Advanced system. For a working unit, the core system requires the addition of a selection of one of the options UP-MOUSE or UP-RAT/GP.		
6	Tracheal cannula		Tracheal cannula designed for laboratory animals Accommodate various animal sizes, made from biocompatible materials for easy insertion. Secure attachment mechanisms, an external port for connection, and controlled airflow capabilities. Sterilization compatibility, durability, and anatomical fit are essential, considering animal welfare.	Local/Imported	
7	Arterial cannula		Tracheal cannula designed for laboratory animals Accommodate various animal sizes, made from biocompatible materials for easy insertion. Secure attachment mechanisms, an external port for connection, and controlled airflow capabilities. Sterilization compatibility, durability, and anatomical fit are essential, considering animal welfare.	Local/Imported	
8	Automatic dispenser		Automatic dispenser designed for laboratory animals in pharmacological research Precise dosing accuracy across a wide range of substances. Reliable delivery mechanism multiple dosing channels and programmable settings. Real-time monitoring, compatibility with different substances, and user-friendly controls are crucial. Data logging, alarms, and sterility considerations	Local/Imported	
9	Percolators (glass)		Capacity should be 1000-1500 ml, shape should be conical, constructed from heat-resistant borosilicate glass efficient filtration system, graduated volume markings, and an airtight seal. Compatibility with heating equipment, easy assembly, and stability are crucial. The glass should be chemically inert, transparent, and have multiple inlets/outlets if needed. Stainless steel with steel sieve on 3 leg	Local/Imported	
10	Isolated tissues bath with accessories		Chamber Capacities 5, 10, 25 or 50 ml Coil Capacity 180 ml Temperature Range +3°C to 50°C (Protection); Resolution 0.1°C Room Temperature Temperature Stability $\pm 0.1^\circ\text{C}$ in the Whole Water Heat Tank Power Supply	Local/Imported	

			115-220 V, 50-60 Hz; Consumption 1000 W.		
11	Observation cages for rats and mice		Cages designed for rats and mice in pharmacological research Should proper in size, be constructed from durable and non-toxic materials, and have proper ventilation, lighting, and environmental controls. Integration of observation equipment, provide cage enrichment, and facilitate waste collection.	Local/Imported	
12	Surgical Instruments for a pack		Scalpel handles, forceps, scissors, needle holders, suture materials, hemostatic instruments, and tissue retractors.	Local/Imported	
13	Glass Desiccator with Pump		Desiccator, Glass, 12" 17 X 16 X 13 (IN), Vacuum, UNSPSC: 4.1123e+007. Compatible with a vacuum pump, offer adjustable pressure control, and include a vacuum gauge. An observation port, shelving system, and moisture indicating mechanism. Vacuum pump	Local/Imported	
<b>Department/Section of Veterinary Microbiology</b>					
1	Sites filter (assemble including sites filters etc.	1	Sites filter filters are asbestos pads provided with metal holder and assembly system with vacuum pump, EK-grade which retains bacteria, for separation of viruses from bacteria, Approximate size of the virus, Sterilization of certain thermo-labile material, vacuum pump	USA/Europe/Equivalent	
2	Freeze Dryer Machines (with oxyflame sealer, complete set for small vials)	1	LCD touch screen, drying chamber transparent, shelve stainless-steel, Freeze-Drying Area 0.12 m2, tray 4 pcs, height between trays 50 mm, Cold trap temperature $\leq -56/-80^{\circ}\text{C}$ , Cold trap capacity 9.5L, Cold trap size (diameter*h), $\Phi 215*260\text{mm}$ , Vacuum degree $<10\text{ Pa}$ , Water capture capacity 4 Kg/24h, Tray size (d*h) $\Phi 200*20\text{mm}$ , Freeze drying time 24h, Loading capacity/shelf (liquid) 0.3L, Total loading capacity (liquid) 1.2L, Drying, chamber size (diameter*h) $\Phi 260*450\text{mm}$ , Total qty. Of vial $\phi 22$ (260), Total qty. Of vial $\phi 16$ (480), Total qty. Of vial $\phi 12$ (920), Refrigerant R600a+R290+R23, Cooling system Air cooling, Power supply 220V/50Hz,60Hz (single phase), Power consumption 1.3/1.8KW With Vacuum pump 2L/S, 8m3/h, Accessories; Temperature controlled equipment (Air Conditioner, Voltage controlled Stabilizer, UPS, extra freeze drying trays, vacuum pump liquid etc.)	USA/Europe/Equivalent	
3	Sonicator	1	LCD touch screen display, Storage capacity: 20 groups of program data, Temp, monitor: over-temperature protection, Other functions: automatic tracking the frequency, fault alarm,	USA/Europe/Equivalent	

			Frequency(KHz), 19.5~20.5, Crushing Capacity(ml), 1~1000, Standard Amplitude-change Pole 20 mm, Optional Amplitude-change Pole 10.15,20, 22,25 mm, Consumption 12-1200 (W), Power Supply, AC220V±10%, 50/60Hz(Standard); AC110V, Package Size (W*D*H), 350*350*550mm(acousticchamber), 470*305*430mm(main body), 29 kg Gross Weight with electric stabilizer		
4	Punch for AGPT	1	Punches for gel cutting with suction 3.5 mm circular junks out of gel to prepare wells for antigen-antibody interaction-based agar gel precipitation test	USA/Europe/ Equivalent	
<b>LOT No. 2</b>					
<b>Department of Veterinary Parasitology</b>					
1	Dissection microscope	3	Binocular viewing head, inclined at 45°, 360° rotatable, Inter pupillary adjustment distance 54-76mm, left Eye piece WF 10/20 mm, magnification 20x, 40x, Working distance 100mm, head mount 76mm, dual light	Advance Country	
2	McMaster Counting Chamber	12	For counting worms eggs, suitable for solid media, dimensions: approx.. 75 X 25-32 mm, cover glass with 2 counting grids approx.. 10 X 10mm (divided into 10 parts) affixed on 3 supports, distance between bottom plate and cover glass: approx.. 1.5mm, Grid size:10mm X 10mm, WD: Requires at least 0.5mm working distance	Advance Country	
3	Slides of various parasites	50	Parasitology microscopic slides for various parasites	Imported/Local	
4	Dark field microscope	1	LED illumination, Binocular tube, a pair of eye piece, 10 X FN20, revolving quadruple nose piece, right – handle double- plate stage, abbe condenser, plan achromat objectives ( )4, 10, 40, 100 X, including AC adapter, Darkfield central stop, Power cord, Immersion oil	USA/ Germany/ China	
5	Insect rearing boxes	10	To rear insects/parasites	Local/Imported	
<b>Department of Veterinary Pathology</b>					
1	Specimen slides of various histopathological lesions. (100 slides)	1	Set of 100 prepared microscopic veterinary pathology slides for veterinary medicine education study Different cases with a confirmed diagnosis Slides with Hematoxylin and Eosin (HE) stained samples	USA/Europe / Germany/ China/ equivalent	
2	Heavy duty rotary/autopsy saw for large animal P.M with assembly	1	<b>A)- Heavy duty rotary/autopsy saw</b> The autopsy can work with both AC and DC power. Watertight High-quality stainless-steel blades. Simple and convenient in operation, safe and lightweight. Flexible silicon hood for improved visibility Chargeable with charging time: min 4 hour.	USA/Europe/ Germany/equal/ equivalent	

			<p>Easy blade rotation and fixation Extra blades of different sizes.</p> <p><b>B)- Rotatory automatic tissue processor.</b> User can set up different programs. Delayed start function, 10x reagent beakers, 2x electrically heated paraffin beakers, 1x transport basket (120 cassettes, stainless steel), Reagent beakers: Standard: 2000 ml, white, Paraffin beakers, 2000 ml, aluminum, double walled transport basket: Standard: 1x Stainless steel, Delayed Start time: up to 99 hours</p>		
3	Microtome, blade (100), Tissue castes/rings, S.S L mold	1	<p><b>Microtome, blade (500)</b> High quality S.S blades (500 blades) for rotary microtome</p> <p><b>Tissues cassettes/Rings (5000)</b> 3 × 2.5 × 0.4 cm Plastic tissues cassettes (5000) for tissues processing</p> <p><b>S.S L mold (100)</b> Different size stainless steel mold (100), non-stick with Nano-layer coating for faster cooling</p> <p><b>Dissecting Board (05)</b> For tissue cutting</p>	Local/impo rted	
4	Dark field illumination with projecting units	1	<p><b>A. Darkfield Contrast</b> All projecting units Head: Trinocular rotatable Eyepieces: 10x/22mm Both focusing Nosepiece: Quadruple/5 Place Nosepiece Objectives: Plan Phase E Plan 4x, 10x, 20x, 40x, 100x Oil Stage: Graduated mechanical XY Condenser: Darkfield Oil or Darkfield Dry Condenser, Phase turret condenser - brightfield, ph1, ph2, ph3, darkfield Focusing: Coarse &amp; Fine Illumination: Halogen w/ blue filter. High quality microscopic camera with software. Inbuilt energy backup preferred Warranty: 5 Year.</p> <p><b>B. Phase contrast</b> Trinocular 10x/20mm eyepieces Nosepiece Phase objectives, 10x, 20x, S40x &amp; S100x oil. High resolution images 100x, 200x, 400x and 1000x magnification remain perfectly in focus when changing magnification. All optics anti-fungus treated and anti-reflection coated for maximum light throughput in every contrast method.</p>	Imported/U SA/Europe / Germany/ equivalent	

			Coaxial coarse and fine focus adjustment Phase Contrast Condenser & Illumination Height adjustable for 10x/20x/S40x and S100X objectives, High quality microscopic camera with software. <b>Accessories</b> Polarisation filter Cordless use with optional rechargeable batteries. Warranty: 5 Year.		
5	Wintrobes pipettes	1	Additional attributes: Self Zeroing Disposable/reusable/reposable: Disposable Graduation: Graduated Material : Glass/Polystyrene Primary LWH: 150mm (Quantity : 100/Box) CLIA Complexity: Waived	Imported /Local	
6	Hemocytometer	10	Reusable hemocytometer cell counting chamber for counting cell densities Cell depth: 0.100 mm Volume: 0.1 Microliter Ruling Pattern: Improved Neubauer, 1/400 Square mm Include 100 22x22 mm glass cover slips	Imported/Local	
7	Hemoglobin meter	10	Digital Hemoglobin meter Time to Results: < 15 seconds Memory : 1,000 tests with date/time and ID number Specimen Type: Capillary and Venous whole blood Power Source: Batteries / Adapter Include 100 strips	Imported/USA/Europe / Germany/ equivalent	
8	Slide cabinet 5000 capacity with histopathology slides	1	<b>A)- Slide cabinet 5000</b> Material: Wooden Usage: to keep microscope slides safe No. of Slide: 5000 Finish: Painted <b>B)- Slide Box (50 boxes)</b> Material: Wooden Usage: to keep microscope slides safe No. of Slide: 100 Finish: Painted	Local/Imported	
9	Cold Room	1	Cold Storage room Portable having capacity to freeze large animals (cow, buffalo, horse). Dimensions: Height: 10 feet, Width: 10 feet Length: 10 feet Door size 4.5 feet X 7.5 feet Temperature Range -10°C to 25°C	Imported/Local	
10	Protective wear (gloves, rubber, apron goggles gum boots, masks & cap etc.)	1	Positive pressure protective suits/space suits/moon suits/blue suits" (02) Disposable surgical caps(1000) Disposable Surgical Gloves (1000 pairs) Rubber Gloves (50 pairs) Disposable Face mask (1000)	Imported/Local	

			<p>Ear plugs (100 pairs)  Laboratory aprons (24)  Laboratory coats (12)  Laboratory Goggles (12)  Plastic safety Gum boots (12 pairs)  Disposable Shoes cover (1000 pairs)  Disposable Shoes cover auto boxes (05)</p>		
11	Automatic Microtome with accessories	1	<p><b>Automatic microtome</b>  For tissue sectioning  Section Thickness Range: 1 - 60 µm  Trimming Thickness Range: 5 - 500 µm  Power source Electricity/Manual  Slice precisely, reliable and quiet. Blade carrier can use both of High profile blade and Low profile blade. The LCD screen for showing slice and trimming thickness, section counter.  keyboard with controls for thickness, mode and speed Special function of specimen retraction.  Hand wheel for manual work easily  Sample orientation  Universal cassette clamp and standard specimen clamp Standard <b>Accessory</b>  2 types Clamp 1 Blade Carrier (for disposable blade) 5 Dissecting Board  1 Waste Tray, 10 pcs Tissue Molds  500pcs Cassettes,  2 pcs Fuse.  Automatic Electric/manual Knife Sharpener</p>	Imported/USA/Europe / Germany/ equivalent	
<b>Department/Section of Veterinary Medicine</b>					
1	Phonandoscopes	1	<p>Chestpiece Machined Stainless Steel  Two-sided Binaurals Single Lumen.  Tunable Diaphragm. Headset Material Alloy. Length min. 28 in/71 cm  Diaphragm Diameter min.1.75 in/4.4 cm  Bell Diameter min. 1.25 in/3.2 cm</p>	Local/imported	
2	Blood-pressure monitors	1	<p>Oscillometric (Veterinary)  Blood Pressure Range:  Systolic: 40 – 265mmHg  Diastolic: 20 – 200mmHg  Mean Arterial Pressure: 27 – 222mmHg  Heart Rate: 25 – 300BPM  Pulse Rate Range:25 to 300 BPM (Beats Per Minute)  Cuff Deflate Rate: Deflation variable step size. Initial Inflation Pressure:180 mmHg (default). Subsequent initial inflation: previous Systolic + 30 mmHg  Transducer accuracy:±3mmHg between 0 mmHg and 300 mmHg  Operating Conditions:0°C to 50°C, 15% to 90% non-condensing humidity  Power: Lithium-Ion battery.  A/C Power Adapter - Input:100-240v ~ 47-63Hz 0.48A Max, Output: 5.9V 3A 17.7W Max with battery</p>	Local/imported	
3	Otoscopes with Accessories	1	<p>The ear specula of 3 different sizes 2,3,4 diameter at tip. Illuminating</p>	Local/imported	

			device with condensing lens and a 2 times magnifying glass.		
4	Laryngoscopes	1	with fibre optic light source on either side. Sealed LED light source Waterproof handle Complete set with handle and 5 blades. blades available in 300 mm (12") and 350 mm (14") (for large dogs, sheep, goats and zoo animals)	Local/imported	
5	Oesophagoscopes	1	Fiber optics ring of light with no reflections, no obstructions. autoclavable stainless steel Graduated tube with removable and cleanable tip. Oesophagoscope min. Length 45cm Dia 16mm	Local/imported	
6	Travis with noise protection.	1	Height at sides: 1400 mm Height of rear gate: 850 mm Width: 800 - (700 mm internal) Length: 1850 - (1800mm internal)	Pakistan	
7	Deionizers	1	Metal plate made laboratory water deionizer Dimensions: 34*55*53cm Tap water feeding 220V/50Hz Capacity: 5 litre per hour Built in RO membrane Timing automatic flush procedure Manual Ro membrane cleaning button Sterile water tank Single process RO system Output of pure water: 10 litre per hour TOC: <20ppb Absorbance: less than or equal to 0.001 Heavy metal <0.01ppm TDS < 200ppm	China	
8	Dark field microscope	1	LED illumination, Binocular tube, a pair of eye piece, 10 X FN20, revolving quadruple nose piece, right – handle double- plate stage, abbe condenser, plan achromat objectives ( )4, 10, 40, 100 X, including AC adapter, Darkfield central stop, Power cord, Immersion oil	USA/ Germany/ China	
9	Pleximeters and percussion hammers	1 set	Reflex hammer Percussion hammer Stainless steel 20 cm	Canada/equivalent	
10	Ophthalmoscopes	1	Ophthalmoscope Indirect Ophthalmoscope binocular	USA	
11	Electrocardiograms	1	Human Portable electrocardiogram appreciable: Frequency 25-50Hz 1. Sync sampling, digital signal processor, gets better quality ECG waveform by ECG signals filtering through the power frequency filter, baseline filter and EMG filter. 2. Display 3/6/12-lead ECG waveform, and states of print mode, sensitivity, paper speed, filter, etc. in one screen, convenient for contrastively diagnosing.	USA/ Japan/France/Germany	



			<p>3. Multi-print mode and format: manual and automatic 4x3, auto 3x4+1, auto 3x4, auto 2x6+1, auto 2x6, auto 3-2+1, auto 3-2, auto 1x12+1, auto 1x12, rhythm 4, rhythm 3 and rhythm2, etc. Waveform length can be adjusted and timing print function is available, which meets the need of different applications.</p> <p>4. Built-in high-capacity memorizer can store up to 1000 cases, which is convenient for doctor's review and statistic.</p> <p>5. The interface languages including: English</p>		
12	Tracheo-scopes	3 Sets	<p>Small animal endoscopy Oto/vagino/rhinology/Lapro/Arthroscopy/Bronchoscopy/Al instrument Wireless or without wireless/Gastroscopy wireless or without wireless/Laparoscopy along with Laparotomy equipment</p> <p><input type="checkbox"/> Equine/Camel endoscopy of the nose, larynx, Bronchoscope and gastroscopy wireless or without wireless</p> <p><input type="checkbox"/> Endoscopy accessories (light source with light guide cables, video camera, suction and irrigation Pump/CO2, HF/RF devices, Hygiene, care, transportation and cleaning material, biopsy obtaining instruments (brush, biopsy wire, alligator forceps for grabbing material from nose, trachea, stomach and colon)</p>	Imported/Local	
13	Fiberoptic endoscope	1	<p><input type="checkbox"/> Small animal endoscopy Oto/vagino/rhinology/Lapro/Arthroscopy/Bronchoscopy/Al instrument Wireless or without wireless/Gastroscopy wireless or without wireless/Laparoscopy along with Laparotomy equipment</p> <p><input type="checkbox"/> Equine/Camel endoscopy of the nose, larynx, Bronchoscope and gastroscopy wireless or without wireless</p> <p><input type="checkbox"/> Endoscopy accessories (light source with light guide cables, video camera, suction and irrigation</p>	USA/Europe/Japan,	

			Pump/CO2, HF/RF devices, Hygiene, care, transportation and cleaning material, biopsy obtaining instruments (brush, biopsy wire, alligator forceps for grabbing material from nose, trachea, stomach and colon)		
14	Slings	1 set	Two (10' X 2") Large Ratchet Straps Two Equine Lifting Hobbles (for surgery) Tow Strap with a 2" snap hook and "D" ring Rescue Straps - (12' X 4") (14' X 4") (16' X 4") (18' X 4") with flat loop design {Available in Custom Lengths} AARNet (Rescue Net) - The net is made from high strength, rip stop mesh with a 1 and 3/4" 6000 lb webbing. Nylon Webbing (20' X 1") - for emergency cut away 1" Colored Webbing - 2 of each length (25' black, 20' red, 15' blue, 12' yellow, 5' green) Large (3/8" x 57") Steel Directional J-Hook- Powder Coated Safety Yellow Small (1/4" x 46") Steel Directional J-Hook- Powder Coated Safety Yellow	USA/europe/equivalent	
<b>LOT No. 3</b>					
<b>Department/Section of Veterinary Surgery</b>					
1	Pedestal Surgical lights	1	5-reflector OT light mobile with stand. Illuminance: 735- 5000Lux Color Temperature: 4300±200k Color rendering index: Ra≥90 Rated Voltage of Bulb: 24V Diameter of luminous spot: 100-250mm	Local/Imported	
2	Dressing drum small	1	Domed top and bottom with sliding removable band, and drop down-hasps Size approx. 6" (Dia.) X 6" (Height).	Local/Imported	
3	Dressing drum large	1	Domed top and bottom with sliding removable band, and drop down-hasps Size approx. 11" (Dia.) X 9" (Height).	Local/Imported	
4	Orthopedic Instruments, large animal	1	Human Hard tissue kit is also appreciable 1. Senn miller Retractor 16 cm blunt 2. Army Navy orthopedic retractor with three hooks 3. Mallet blunt ended 8 X 12 mm and 13 X 45 mm 4. Hohmannsmall, medium and large curved tip 5. Gelpi Perinal and orthopedic retractor 6. Finochietto cardiovascular chest retractor 7. Weitlaner retractor 8. Balfour abdominal retractor 180 mm 9. Lambert Rongeur 158mm	Local/Imported	

			<p>10. Bone Plate modification equipment (2 types)</p> <p>11. Curette small, medium and large sized</p> <p>12. Electric Cast Cutter (Oscillating Saw)</p> <p>13. Lane Bone holding forceps</p> <p>14. Reduction bone holding forceps</p> <p>15. Lewin Bone holding forceps</p> <p>16. Wolford bone holding forceps</p> <p>17. Periosteal elevator small, medium and large size</p> <p>18. Chisel small, medium and large</p> <p>19. Gigli saw wire</p> <p>20. Jacob's Chuck with Key &amp; guard</p> <p>21. Orthopedic Hammer</p> <p>22. Pin Cutter small, medium and large</p> <p>23. Wire Cutter</p> <p>24. Wire Twister</p> <p>25. Electric / Battery Driven Drill Machine</p> <p>26. Drill Bits (2.5, 3.2- &amp; 4.5-mm Diameters)</p> <p>27. Drill Sleeve for 2.5, 3.2- &amp; 4.5-mm Drill Bits</p> <p>28. Drill Sleeve with external diameter of 4.5mm</p> <p>29. Cortical Bone Taps 3.5 &amp; 4.5 Diameter (T-Handle)</p> <p>30. Cancellous Bone Tap 6.5mm Diameter (T-handle)</p> <p>31. Tap Sleeve for 3.5- &amp; 4.5-mm Bone Taps</p> <p>32. Depth Gauge</p> <p>33. Counter-Sink for 3.5- &amp; 4.5-mm Cortical Screws</p> <p>34. Screw Driver for screw driver mentioned below diameter Cortical Screws</p> <p>35. Load Guide for 2.5- &amp; 3.2-mm Drill Bits</p>		
5	Endoscope, small animal	1	Clinical Veterinary Purpose: Small animal endoscope (Including scope, light source with light guide cables, processor, suction and irrigation pump, metal trolley, and Monitor 27 inch)	Local/Imported	
6	X-ray accessories cassettes and different Chemical	1	X-ray Cassettes with appropriately sized 100 film packs: Small: 3" (7.6 cm) H x 4" (10.2 cm) W x 10" (25.4 cm) L Medium: 5" (12.7 cm) H x 7" (17.8 cm) W x 15" (38.1 cm) L Large: 7" (17.8 cm) H x 11" (27.9 cm) W x 24" (60.9 cm) L Suitable SS clips, 3 tanks of 5gallons developing tanks with lid, safelight, Developer & fixer solution.	Local/Imported	
7	Emasculator for equines	1	Emasculator Double Crush (Whites or Serra) sized around 12.5". Must	Local/Imported	

			simultaneously perform clamping, crushing and cutting of spermatic cord.		
8	Trephine	1	Galt Skull Trephine, with adjustable centering point and detachable 19mm cross-bar handle	Local/Imported	
9	Otoscope	1	Human Otoscope is also applicable. The ear specula are supplied in 3 different sizes 2,3,4 diameter at tip. Inexpensive basic model with low-reflection, direct illumination with a 2.7 V vacuum bulb (2500 K) or halogen illumination (3000 K)	Local/Imported	
<b>Department/Section of Animal Nutrition</b>					
1	Photometer	1	Double beam spectrophotometer (UV-Vis) with wide and color LCD screen. Spectral Bandwidth should be 0.5, 1, 2, 4nm. Wavelength Range 190 – 1100nm. Detector Solid Silicon Photodiode, Light Source Tungsten Halogen/Deuterium Lamp. Wavelength Setting should be automatic, Wavelength Accuracy should be $\pm 0.3\text{nm}$ , Wavelength Repeatability should be $\leq 0.2\text{nm}$ . The instrument should show various scanning curves and charts for users to complete various tests without computers. Support USB storage and different data formats such as Excel, txt and image. The instrument should have advanced hardware and processor. The equipment should have long-life socket type tungsten-halogen and deuterium lamps which can work up to 2000 hours, can switch the lamps according to test needs and record its working time automatically. The instrument can be connected to printer directly and output test charts and data. All allied accessories for installation. Laser printer should be supplied with spectrophotometer	USA/Europe/Germany/equivalent	
2	Bomb calorimeter	1	Bomb calorimeter: Heat capacity (14000~15000) J/K Resolution 0.001 K Measurement accuracy $\leq 60\text{J/g}$ Display LCD Printer Yes Repeatability error $\leq 0.2\%$ (Grade C) Pressure endurance of bomb 20 MPa Power $\leq 150\text{W}$ , stainless steel inner water cylinder Equipped with electric stirrer in the water tank Double-layer external container High uniformity of water temperature to meet the requirement of test. Temperature: 5-40 degree centigrade, Measuring range: 5 MJ/kg to 40 MJ/kg, Testing time: 8-15 minute, Power supply: 220 volts, Power: 1.5 KW, Oxygen supply: Automatic, Bomb Firing: Automatic/ Button press, Calculations: Automatic, Data storage: Through computer, Whole material:	USA/Europe/Germany/equivalent	

			Stainless steel with external water jacket should be double layered, A computer should be attached for data storage, all accessories along with fittings and dust cover. Pellet machine with 50-100 kg/hour Capacity having three phase/Single phase motor original copper. Pellet size should be 3 mm or 4 mm with cutter, Die size 8 inches, 2 Roll Steel die+ roll material, Complete machine with all accessories and installation.		
3	Particles Separator	1	Set of 4 sieves (19mm, 8mm, 3mm and 1.20mm diameter) with tray as base and cover similar to Pen state particle separator	Local made	
4	Silo pits/towers/bunkers models	1	Model of silage Bunkers, silage Trench and silage Tower made up of MS Steel: Bunkers having the dimension of 4x4 feet base divided into 3 parts having the height of wall of bunkers 1.3 foot, Trench having the dimension of 4x3 feet from outer while the inner trench dimension is 3x2 feet and having the collar of ½ foot, , Towers having the dimension of 2.5x3 feet with circumference of 2 feet with lid at the top of tower and opening at the base.	Local made	
5	Feed formulation Software	2	<p><b>A- Dairy Feed formulation software</b></p> <p>Dairy feed formulation software: Registered Windows 08/ 10, also OS apple supporter, should programmed in Microsoft C™ 32 or 64-bit Microsoft or OS Windows applications and were programmed in Microsoft Visual Basic 6.0 or 8.0TM and Microsoft C++ 6.0or 8.0TM with a Microsoft Access 2000TM database capability to store input and output values.</p> <p>Work under Mathematical nutrition model that computes dairy cattle requirements energy and nutrients based on characteristics of the animal, environment and the physicochemical composition of the feeds under diverse production states.</p> <p>Designed as a steady-state model to use rates of degradation of feed carbohydrate and protein and the rate of passage to estimate the extent of ruminal fermentation, microbial growth, and intestinal digestibility of carbohydrate and protein fractions in computing energy and protein post-rumen absorption, and the supply of metabolizable energy/net energy and protein to the animal. Facilitate the characterization of individual feeds and a sub-model to predict ruminal metabolism and intestinal absorption of long chain fatty acids.</p> <p>Can calculates a least cost formula. It should have advanced features like, Para metrics, Formula comparison, Cost Summary (Profit/loss Managed by</p>	Local/imp orted	

		<p>adding Sale price, Overhead charges etc.), Nutrients Ratio's (Lysine to other Amino Acids). Formula Report available in Notepad, Excel, Word, and pdf format. Amino Acid Calculator (Total and Digestible) just select ingredient and add Crude protein Value). Energy Calculator, just select ingredient and add values of Proximate analysis on a single click it calculate Metabolizable Energy/net energy. Should be compatible with Window 10, 64-Bitt.</p> <p>A computer with Processor i5, 10<sup>th</sup> generation, Ram 8 GB, Storage 256 SSD to run the software.</p> <p><b>B- Computer with Poultry Feed formulation software</b></p> <p>The software should be least cost formulator and evaluator. Auto calculate ingredients without leaving stored formula screen, Change plant codes easily, Export data to tables, Database of feed ingredient and cost, Show nutrient composition on percentage of dry matter and fresh matter, It defines the nutrient level required in the formula and feed ingredient inclusion level, Click to copy data from one plant to all plants within same source plant, Click to delete a nutrient from all ingredients, Compare nutrients in new vs. stored formula, Changes from 0 are marked in red, Formula stored date" on optimization main screen,</p> <p>The software should be easy and friendly to use for poultry Poultry Feed. Multi-plants (Each plant having specific Ingredients, Nutrients, Formulas store and Ingredients Prices) It should have power to handle unlimited numbers of Ingredients (Ingredients values also automatically set on Moisture Basis on a single click) and Nutrients A high-quality interface to set Ingredients and Nutrients Values and limits. Can import and Export database (ingredients, Nutrients, Composition and Price) between computer. Can calculate a least cost formula. It should have advanced features like, Parameters, Formula comparison, Cost Summary (Profit/loss Managed by adding Sale price, Overhead charges etc.), Nutrients Ratio's (Lysine to other Amino Acids). Formula Report available in Notepad, Excel, Word, and pdf format. Amino Acid Calculator (Total and Digestible) just select ingredient and add Crude protein Value). Energy Calculator, just select ingredient and add values of Proximate analysis on a</p>		
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			<p>single click it calculate Metabolizable Energy. Shoul be compatible with Window 10, 64-Bitt.</p> <p>A computer with Processor i5, 10<sup>th</sup> generation, Ram 8 GB, Storage 256 SSD to run the software.</p>		
6	2D/3D digital video microscope with computer and 50 inch LCD	1	<p>1) Digital video Microscoppe  2) Color Printer  3) LCD 50" inches  4) Desktop computer  <b>1) Digital video Microscope:</b> 2D and 3D observing USB fluorescence magnifier camera microscope, Lens parameter: Optical magnification 0.6-5.0X, Total Magnification11-95X base of 12.5"monitor, Working distance 2D:100mm 3D:75mm  Ratio 1:8.3 Field of View24*13.5-2.88*1.62mm  Lens Mount Standard C mount, 2D/3D viewer, Support 2D/3D observing 360 °rotation, 45 objective viewing angle  Camera Parameter: Image Sensor 1/2", Max magnification 1920 x 1080, Pixel Size 3.75µm x 3.75µm  White Balance Manual and auto  Brightness control Manual and auto, Memory function Take photo or video to U disk, Output HDMI TYPE,  Monitor Parameter: Size 24.0" Type IPS Resolution 1920*1080, Color display 16.7M  Brightness 300 cd/m<sup>2</sup> (Typ.)  Contrast1000:1 (Typ.)  Power supply DC : 12V 2A  Input HDMI and VGA StandAram stand,  Light Source Parameter: Light Control 4 zones control. Brightness adjust Light color White Quantity of LED 208PCS LED Intensity 15000 Lux  Wavelength 455-457.5nm  Output voltage 12V  Output power 8-10W  Working distance 35-110mm  Material Aluminum alloy  Diameter Inner diameter 40mm, outer diameter 106mm, height 19mm,  Stand Parameter:  Focus Coarse focus Base size 330*300mm Height 318mm</p> <p><b>2) Color Printer:</b> Type: New Flatbed Inkjet Printer, Wi-Fi Accesses, Automatic, USB Aces, Multicolor, A3-A4 simple Paper Printer, Label Printer  Voltage: AC 220 V - 240 V, Print speed: BK-30 ppm; Colors-4color CMYK, Printing Resolution5760 * 1440dpi, Paper capacity: 100 sheets, Warranty of core components: 1 Year,</p>	Imported	

			<p>With All accessories; Two boxes of all kinds of printer ink.</p> <p><b>3) LCD 50" inch:</b> TV Type Smart TV  USB Port 2.0 Remote Control  Audio systems Dolby Digital Remote Control Type Wattage per Speaker Channel (RMS) 10 W x 2 Built-in speakers Standby Power Consumption 0.3 W Package weight in KGs 17.5 Kgs Processor Type Quad Core VESA Mount (400x400 mm)  Display Resolution 3840 x 2160 Frequency 50/60 Horizontal resolution 3840.0 Bluetooth Internet connection Integrated WiFi Input voltage 220 – 240 Wireless Standard 802.11ac Operating System Type Tizen WiFi Full HD, HDMI Yes Display Type LED TV Ethernet Display, Screen Size 50 Inch HDTV 4K UHD  Connectivity Number of HDMI Ports 3.0 Technical Information  Aspect ratio 16:9</p> <p><b>4) Desktop computer:</b> Minitower case  Processor type: Core i3, 10th generation Ram: 4GB Hard drive size: 256 GB SSD Monitor: 1No. (minimum 19 inch) Key board: 1 No. Mouse: 1No. Smart Share FHD 1080P Auto Volume Lever 50-inch display Noise Reduction 2x HDMI</p>		
<b>Department/Section of Poultry Husbandry/Science</b>					
1	Egg grader Machine	1	<p><b>Specifications:</b>  1-Grading and packing eggs on weight  Min. capacity (eggs/hour) 1000 eggs  Min. capacity (cases/hour) 8.3  Footprint (L x W) 1540 x 1755 mm  Operators 1 or 2  Candling 2 x 23 Watt PL lamp + mirror  Grades 4 or 7  Accuracy ± 1 gram  Infeed conveyor Double row  Power supply 230V 1-phase, 50 or 60 Hz. (In case of 110V, an additional transformer is needed)</p> <p><b>Packing.</b>  Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea.  The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	Advance	
2	Chick Sexing Machine	1	<p><b>Specifications:</b>  The English or Japanese chick tester machine features  A blunt-ended endoscopic tube/probe, containing a camera with light.  The sexer inserts the tube/prob into the evacuated cloaca and with the help of the camera/light can identify either testis or ovaries.</p> <p><b>Packing.</b></p>	China/Advance	



			<p>Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea.</p> <p>The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>		
3	Egg Analyzer	1	<p><b>Specifications:</b>  An electronic scale measures the egg's weight  Ultrasound sensors measure the albumen height and yolk color without touching the egg  Automatically calculates and classifies the Haugh unit  Displays and prints measured values and calculated values  High measurement accuracy  Constantly stable measurement, not dependent on individual operators  Shortens the measurement time to approx.17 seconds per set  Proprietary software works with an external PC and allows:  Enhanced data storage and retrieval  Advanced data processing  Superior printing option  Characteristics:  Albumen height: 0mm - 30mm +/- 0.1mm  Yolk color: 1 - 16 according to the DSM (formerly Roche) Yolk color fan (support 16 colors, NEW)  Haugh unit: 0 - 130 HU  Stores, calculates and averages up to 1000 units of data  Displays results on LCD screen  Built-in printer (uses an off the shelf thermal paper)  Suitable to worldwide voltage supply: 90 - 230V, 50/60 Hz</p> <p>Proprietary software for external PC operation via USB communication cable  Dust Cover</p> <p><b>Packing.</b>  Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea.</p> <p>The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	Advance	
4	Model of Hen to explain Reproductive system	1	<p><b>Specifications:</b>  Chicken mockup, longitudinally segmented front, showing internal organs. The back shows the external morphology.  Show components and internal characteristics of chickens such as muscles, heart, liver, intestines, stomach, lungs, including reproductive system and eggs, etc.  The appearance of the model is a three-dimensional, realistic, natural color.</p>	Advance	

			<p>Each section has a different color for easy learning. and can disassemble 8 pieces</p> <p>Important organs are numbered. with documents explaining details in English</p> <p>Model made of good quality PVC, size about 35x40 cm.</p> <p>The model should have mounted on a strong and stable plastic base, size approx. 26x40 cm.</p> <p><b>Packing.</b></p> <p>Model should have wrapped in plastic film first before packing, which is to avoid moisture.</p> <p>The Model of hen putted in strong box case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>		
5	LED egg Candler	2	<p><b>Specifications:</b></p> <p>Application : Candling of Eggs</p> <p>Capacity: 88 chicken eggs, 221 quail eggs</p> <p>Voltage : 220v</p> <p>Strong LED light</p> <p>Weight: 35 kg</p> <p>Dimension(L*W*H) : 53*42*70cm</p> <p><b>Packing.</b></p> <p>Machines are wrapped in plastic film first before packing, which is to avoid moisture.</p> <p>The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	China/Advance	
6	Egg micrometer	5	<p><b>Specifications:</b></p> <p>Accuracy:<math>\pm[.00016" + .00004 (L/3)]</math> L = Max Range (Inch) (excluding quantizing error for digital models)</p> <p>Resolution*:<math>.0001"/0.001mm</math> (340-351-10: <math>.00005"/0.001mm</math>) Graduation**:<math>.001"</math> (104-165: is <math>.0001"</math>)</p> <p>Flatness: <math>.000024"</math> for models up to 12"  <math>.00004"</math> for models over 12"</p> <p>Parallelism:<math>.00008"</math> for models up to 3"  <math>.00012"</math> for models up to 6" <math>\pm[.00008" + .00004 (L/4)]</math> L= Max range (inch)</p> <p>Measuring faces: Carbide tipped (spindle only)</p> <p>Display*:LCD Battery*:SR44 (1 pc.), 938882</p> <p>Battery life*:Approx.1.2 years under normal use Dust/Water protection level*: IP65 *Digital models</p> <p><b>Packing.</b></p> <p>Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea.</p> <p>The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	China/Advance	
7	Egg shell thickness gauge	10	<p><b>Specifications:</b></p>	China/Advance	

			<p>Physical dimensions: W x H x D 63.5 mm (2.5") X 165.0 mm (6.5") X 31.5 mm (1.25")</p> <p>Weight: 0.383 kg (13.5 oz) with batteries</p> <p>Keyboard: Membrane switch pad with twelve tactile keys</p> <p>Operating temperature: -10°C to 60°C (14°F to 140°F)</p> <p>Case: Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed)</p> <p>Data Output: USB-C port. Windows® PC interface software</p> <p>Power Source: Three AA cells.</p> <p>– Alkaline – 35 hrs</p> <p>– Nicad – 10 hrs</p> <p>– NI-MH – 35 hrs</p> <p>Auto power off if idle for 5 minutes</p> <p>Battery status icon</p> <p>Measuring Range: 0.15 mm to 12.70 mm</p> <p>Resolution (selectable): +/-0.01 mm (.001 in.)</p> <p>Selectable units: Imperial &amp; Metric</p> <p>Display: 1/8 in. VGA grayscale display (240 x 160 pixels). Viewable area 2.4in x 1.8in (61.0 mm x 45.7 mm). EL backlit (on/off/auto)</p> <p>Memory: 4 GB internal SD card</p> <p>Complete kit: The Egg Shell Thickness Gauge should be supplied as a complete kit with the gauge, probe, stand, 4 oz bottle of coupling fluid, 2 AA batteries, NIST calibration certificate and operating instruction manual – all in a foam-fitted carrying case.</p>		
8	Automatic syringes	3	<p><b>Specifications:</b></p> <p>Fixed dosage : 0.1mL, 0.2mL, 0.25mL, 0.3mL, 0.5mL, 0.75ml</p> <p>No need to check setting during mass vaccination.</p> <p>Highly durable body.</p> <p>Very easy to clean.</p> <p>Cost-effective for poultry and small animals</p>	China/Adv ance	
9	Smartphone anemometer	2	<p><b>Specifications:</b></p> <p>Wind speed measurement range: 0,6 m/s - 50,0 m/s</p> <p>Wind speed resolution: 0,1 m/s</p> <p>Wind speed accuracy: 2,5 +/- %</p> <p>Wind direction measurement range: 0° - 359°</p> <p>Wind direction resolution: 1° +/- 2,5°</p> <p>Wind direction accuracy:</p> <p>Temperature measurement range: - 30°C...+60°C • Temperature resolution: 1 °C</p> <p>Data transmission rate: every sec 1</p> <p>Range: up to 100m</p> <p>Battery (changeable): 3,6 V AA lithium battery</p>	China/Adv ance	

			<p>Baery life: up to 2 years  Bearings: precision stainless steel ball bearings  Temperature operang range: -25 °C...+60 °C  Material - housing: AL/PVC -  cups (replaceable): PA (NYLON) -  vane : (replaceable)UV resistant plasc  Dimensions - WS sensor: Height 210 mm, overall diameter cup to cup 120 mm  Dimensions - WSD sensor: Height 250 mm, overall vane diameter 220 mm cup to cup 120 mm  Mounting: mounts on a pipe with ø 20 mm diameter</p>		
10	Laser thermometer	2	<p><b>Specifications:</b>  Measuring Range: -22°F to 716°F  IR Accuracy: ±2% of reading or ±4°F  Units: Centigrade or Fahrenheit  Emissivity: Factory set to 0.95, fixed value  Distance/Target Ratio: 8:1 (1" target diameter at 8" distance)  Battery: 9v battery, included</p>	China/Adv ance	
11	Multiplex Elisa	1	<p><b>Specifications:</b>  <b>Automation Compatibility;</b>  BioStack ,BioSpa, BenchCel, 3rd-party  <b>Environment Control;</b>  Condensation Control, CO2, O2 Control ,4-Zone Incubation to 70 °C  <b>Filter Detection Modes;</b>  Fluorescence Intensity,  Fluorescence Polarization, BRET, Luminescence, TR-FRET, Time Resolved Fluorescence (Laser), Alpha (Laser)  <b>Imager/Reader Options;</b> Barcode reader, Reagent injectors  <b>Instrument Control;</b> Computer Software  <b>Monochromator detection modes:</b>  UV-Vis Absorbance, Fluorescence Intensity (variable bandwidth)  <b>Shaking:</b> Double-orbital, Linear, Orbital  <b>Supported Labware:</b> 6 to 1536-well plates, Take3/Take3 Trio, Petri/Cell culture dishes</p>	China/Adv ance	
12	Student Microscope	1	<p><b>Specifications:</b>  Stand: Single mold sturdy with anti rust material. Extended base with hand-rest.  Viewing Bodies: Height adjustable Sie dentopf Binocular / Trinocular tube, 30 o inclined, 360o rotatable, Interpipullar y distance 48-75mm.  Eyepieces: Wide field focusable paired eyepiece WF 10x/20mm, with foldable eye guard, antifungus coating.  Nosepiece: Reverse angle quadruple n osepiece (Ball bearing type) with click</p>	China/Adv ance	

			<p>stops and rubber grip, antifungus coating. 5) Objectives: RP series DIN Infinity Corrected Plan Achromatic Objectives – 4x, 10x, 40x (spring loaded), 100x (spring loaded, oil)</p> <p>Mechanical Stage: Rackless X-axis, double plate mechanical stage, plate size 200 x 160mm, X/Y travel range - 78 x 54 mm. Low drive movement controls. Hard coated surface for scratch resistance.</p> <p>Condenser: Substage Abbe condenser NA 1.25 with aspheric lens and Iris diaphragm. Rack and pinion movements on stainless steel guides. Day light blue filter.</p> <p>Focusing: Co-axial coarse and fine focusing on ball drive system for smooth operation.</p> <p>Illumination: Halogen 6V-20W illumination with variable illumination control</p> <p>Power supply: Input 220v – 240v AC</p>		
<b>LOT No. 4</b>					
<b>Department/Section of Livestock Management</b>					
1	Wool diameter measuring gauge	1	<p>Measures samples between 15 and 25 <math>\mu</math>m with accuracy better than 0.8 <math>\mu</math>m</p> <p>More than 500 measurements should be taken from a fully charged battery</p> <p>Carry case along with a comb, scissors, ACDC charger, sample holders, USB cable, operating manual and cd</p> <p>Power Input: 100~240VAC or 12VDC</p> <p>Warranty – 12 months</p>	Local/Imported	
2	Creep	1	<p>For feeding of lambs/kids</p> <p>Dimension: 4*4 feet</p> <p>Walled by Galvanized iron pipe</p> <p>Covered manger inside</p> <p>Equiped with feeding implements like Feeders (for hay, grain, fodder) and drinker</p>	Local/Imported	
3	Body measurement taps	3	<p><b>Large ruminants (cattle, buffalo) measuring tap (1 No.)</b></p> <p>Tape should be thick, durable, vinyl coated fiberglass that accurately estimates the weight of cattle in pounds or kilograms.</p> <p>The total length of the body/weight measuring tape is 2.5 meters. The weight range for beef cattle is 268kg to 1080kg and for dairy cattle is 35kg to 1000kg.</p> <p><b>Small ruminants (sheep and goat) measuring tap (2 Nos.)</b></p> <p>Tape should be thick, durable, vinyl coated fiberglass that accurately estimates the weight of sheep and goat)</p>	Local/Imported	
4	Hoof Trimmer (Large+ Small)	5	<p>Hoof trimmer large and small</p> <p>For trimming hooves of cattle sheep, goat (farm animals)</p> <p>sharp hoof shears and a hoof knife</p> <p>Length: 20.5cm, Hand grip: 12.5cm, Mouth grip 2.5cm</p> <p>High quality galvanized iron</p>	Local/Imported	

5	Fodder Cutter	1	Heavy duty toka machine with sharp blades with electric 2-3 Hp motor fitted, 5 Foot length stand material iron and metal used can cuts more than 1000 kg per hours Best for Buffalo, cows and Goat Farms,	Local	
6	Spray race equipment	1	<b>sprinkler gate</b> 3-line sprinkler auto sensor system. With Monoblock Pump. Lowara European made. Hunter Sprinklers USA 12 Popup 06 <b>Chute</b> 3 line shoot 1½" pipe 14 gauge Post 2" pipe 12 gauge. Zinc coated 0.5micron coated sheet 20sft x 3ft x 6ft	Local/Imported	
7	Electric Shearer	1	Use for goat, sheep Electric type Special wool cutter with leaser sharp steel knife Cordless Rechargeable 750W 2800rpm Thermal overload switch US/European made	Local/Imported	
8	Milking Machine	1	Single Bucket, Double Cluster 40ltr bucket. Weighing scale Pneumatic pulsator. Electrostatic frame (current proof) USA/European/Equivalent origin	Local/Imported	
9	Cattle Crush	1	Square rod 14 gauge. Head auto-locking system Side exit gate on one side. Zinc coated 0.6micron Foot washing floor.1	Local	
<b>Department/Section of Livestock Products Technology and Dairy Technology</b>					
1	Gerber's Centrifuge	1	Multipurpose centrifuge for all types of butyrometers with digital LED display indicating the speed, time and temperature, Stainless steel housing, Programmable rotor speed from 600 to 1130 rpm, Programmable heater up to 68C, Programmable centrifugation time from 1 to 99 min, automatic interlocking safety lid, automatic shutdown in case of unbalance, automatic brake, Power supply:230V/50 ...60 Hz/1200 VA, Empty weight 26 kg, Total height with lid 460 mm, Warranty: 2 years Accessories: Head A: Centrifuge head (radius 260 mm) for a maximum of 36 butyrometers buckets and 18 Babcock buckets. butyrometers bucket and Babcock bucket, butyrometer stand. Head B: Centrifuge head (radius 190 mm) for a maximum of 8 Majonnier tubes, Majonnier tubes and stand. Head C: Centrifuge head (radius 190 mm) for a maximum of 6 buckets for	Imported	

			<p>solubility index tubes. Bucket for solubility index tubes, solubility index tubes.</p> <p>Water bath: Temperature range: up to 100°C, Connection value: 230 V/50 Hz, Capacity: 10-12 L, digital display of temp. Warranty: 2 years</p> <p>Butyrometers: Milk butyrometers (6 No): 0-10%, Cream butyrometers (6 No): 0-60%, Cheese butyrometers (6 No): 0-40%. Babcock bottle for cream (6 No):0-20%, Babcock bottle for cheese (6 No):0-60%. Corks for butyrometer: 50</p>		
2	Gerber's Tubes	1	<p>Gerber tubes: Milk butyrometers (1 No): 0-10%, Cream butyrometers (1 No): 0-60%, Cheese butyrometers (1 No): 0-40%.</p>	Imported	
3	Peeler	1	<p>Body made of SS square pipes, Drum made of SS with abrasive material applied on its inner surface, Peeler material inside the walls should be Emery stone, Rotating disc at the bottom of the drum, Opening for removal of the product after peeling, Water spray arrangement from the top, Suitable drive mechanism to rotate the disc. Feed hopper &amp; discharge hopper made in SS, Top lid, water and waste discharge pipe etc. Control Panel with timer for operation of the machine.</p>	Local/imported	
4	Baking Oven	1	<p><b>3 deck gas baking oven:</b> Each deck should work separately with separate control, Forced air convection, Chamber capacity mini. 60 liters, Stainless steel interior, Housing: stainless steel, LED digital display, Power failure control system, Real time clock, Voltage : 220V/50Hz, Power: 400W, Temperature : 0-300°C, mini Tray size : 400×600×300 mm, mini Product size: 1800×890×1890 mm, mini weight : 316 kg, Gas pressure : 2800. Warranty: 2 years Accessories: Dough making machine, proofer chamber, stainless steel moulds for bread, cakes, muffins, biscuits and pizza trays etc.</p>	Local/imported	
<b>Department of Meat Technology</b>					
1	Automatic scalar	1	<p><b>Specifications:</b> Function: An automatic machine that removes scales from fish Portable Material: Stainless steel/ Aluminum alloy Capacity: 30-50 fish at once <b>Packing:</b> The machine should be wrapped in plastic film first before packing to avoid moisture.</p>	China/ Pakistan	

			Machines should be put in a strong iron case/wooden case, and lined with metal wire if necessary.		
2	Feather plucking machine	1	<p><b>Specifications:</b>  Function: Removal of feathers of poultry birds  Material: Stainless steel/ Galvanize steel  Motor Power: 1500W-2200W  Voltage: 110-220V ((In case of 110V, an additional transformer is needed)  Weight: 40-60 kg  Capacity: 3-8 Chickens  Rotation Speed: 1400 r/Min  Fingers: 90-185 rubber fingers  <b>Packing:</b>  The machine should be wrapped in plastic film first before packing to avoid moisture.  Machines should be put in a strong iron case/wooden case, and lined with metal wire if necessary.</p>	China/ Pakistan	
3	Meat Slicer	1	<p><b>Specifications:</b>  Meat slicing machine and a freezer  Function: Use to slice frozen meat  Material: Stainless steel/ Aluminum alloy  Power: 600-800W  Voltage: 110-220V  Cutting thickness: 0-18mm  Blade diameter: 300-350mm  Cutting Speed:30-50 piece / minute  1 Deep freezer  <b>Packing:</b>  The machine should be wrapped in plastic film first before packing to avoid moisture.  Machines should be put in a strong iron case/wooden case, and lined with metal wire if necessary.</p>	China/ Pakistan	
4	Butchering sets (knives etc.)	1	<p><b>Specifications:</b>  8 pieces butchering knife set  Material: stainless steel blades  8-10 Piece Cutlery Roll  Cut-resistant glove (level 5)  1 weighing scale with 50-70 kg capacity</p>	China/ Pakistan	
5	Display Chiller	1	<p>Volume (Litres): 1000-1500  Operating Temperature: 0°C to +4°C  No. of SS Hooks (pcs): 3-5  No. of Adjustable Shelves: 4-5  Cabinet Lighting LED  Controller: Mechanical  Refrigerant: R-134a  Compressor: 1/2 HP  Voltage Supply: 220-240V  50/60Hz  Gross Weight (Kgs): 175-190  Container Loading (20'/40'):  13/27</p>	Local/Impo rted	



6	Smoking unit	1	Automatic Meat smoking unit with automatic Controller, 500-700 Cooking Area, Meat Probes, Rain Cover for Outdoor	Local/Imported	
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#### Technical Evaluation Criteria

The Technical proposals shall be evaluated by the technical evaluation committee in the light of following evaluation criteria:

Category	Description	Points
Legal (Mandatory)	Certificate of Company/Individual / Firm Registration/Incorporation under the laws of Pakistan.	Mandatory
	Valid Income Tax Registration.	Mandatory
	Valid General Sales Tax Registration (Status = Active with FBR as on the date of submission)	Mandatory
	Submission of undertaking on legal valid and attested stamp paper that the firm is not black listed by any of Provincial or Federal Government Department, Agency, Organization or autonomous body or Private Sector.	Mandatory
Eligibility Criteria	Organization anywhere in Pakistan. Must have 3 Years' Experience	Mandatory
	Compliance to the technical specifications of all items to be procured.	Mandatory

#### **Mandatory Note:**

- Verifiable documentary proofs for all above requirements are mandatory.
- Vendor/ Supplier will be responsible for installation and configuration of the supplied equipment in client environment as per client's requirements (where necessary)
- Brand and Model Number of quoted equipment must be mentioned. (Where applicable)
- Technical Brochures of quoted equipment must be attached. (Where applicable)

**PROCUREMENT OF LABORATORY EQUIPMENT**  
**TECHNICAL PARAMETERS**

Category	Description		Marks
Relevant Experience (Max points 15)	3 to 8 years		5
	9 to 14		10
	15 and above		15
Financial (Max points 25)	Annual Turnover	Rs. 1 million	5
		Rs. 2 million	10
		Rs. 3 Million and above	15
	Audited Financial Reports	For the Past 3 Years	5 (1.67 per year)
	Income Tax Returns	For the Past 3 Years	5 (1.67 per year)
Relevant Projects in Govt. public sector university and Semi Govt. Departments  (Minimum 03 Projects)	Cost of 3 Projects in the Past 5 Years  Each project carries 10 Marks	Rs. 3 million and above	30
Human Resource (Max points 20)	Total Number of Employees including minimum 3 Designer / Professional	0 – 10	10
		20 – 30	15
		31 and above	20
Company Website	Accomplished with Complete Products and Details		5
At least 1 Repair / After Sale Service Satisfactory Certificate from Semi Government / Government Departments			5

Note:

- Verifiable documentary proofs for all above requirements are mandatory.
- Vendor/ Supplier will be responsible for transportation and installation of equipment in client environment as per client's requirements. (Where applicable)
- Sample may be provided within 7 working days if required.
- Passing marks will be 50 for technical qualification.

Convener Technical Committee



# FINANCIAL PROPOSAL

TENDER NO. 15 / 2023

**FINANCIAL PROPOSAL**

**LABORATORY EQUIPMENT**

Sr. #	Name of item	Qty	Specifications	Origin/ Make	Unit price inclusive all taxes (M)	Total price inclusive all taxes (M)
<b>LOT No. 1</b>						
<b>Department of Veterinary Anatomy and Histology</b>						
1	Rib cutter	3	Packing 1 Quantity Per Pack 1 Finishing MAT Automation Grade Manual Material Grade 410 Material Steel Is It Portable Portable Finish MAT Grade 410 Sterilization YES	Local/ China		
2	Rib shear	3	Low maintenance Robust structure Excellent strength User friendly Simple design Enhanced durability	Local/ China		
3	Rotary Microtome with accessories	1	Section Thickness 0.5-60 µm Total Horizontal specimen feed: 25mm Vertical specimen stroke; 59mm Microtome Razor Stainless Steel Specimen orientation XY- ±8 Power Source Electricity/manual Accessories All accessories, 200 Microtome S.S blades	Germany/ Equivalent		
4	Automatic knife processor	1	Usage: Knife resharpener machine Brand: well-reputed Type: Automatic Grinding Material: Metal	China/Local		
5	Hone with surfaces	1	Hone length capacity (power stroke) 305 mm Honing speed (general) 80 & 160 Rpm Honing speed (with inverter) step less 0 to 160 Rpm Max Cylinder block length 1000 mm Electric motor 2 hp (3 phase) Stroking speed 0-60 SPM	China/ Local		

6	Stropping leather	2	Use for sharpening of lab instruments	China/ Local		
7	Hollow organs (animal models)	1	Canine torso model with complete organs	Advanced countries		
8	Dissection microscopes	1	Magnification Zoom objective 7X-45X Eyepiece Optional Eyepiece 15X/15mm, 20X/10mm, 25X/9mm, 30X/8mm Main Body Binocular head, 45° inclined, 360° rotatable, can be locked in any position desired. Objective 0.7X-4.5X stereo zoom; Zoom Ratio:6.4:1 Focusing Mount Focusing mount with vertical working distance 50mm Stand Vertical Post: 240mm ; Diameter: φ32mm; With φ95mm B/W Plastic & Perspex Plate and Paired Clips; Base Size: 200x255x60mm Illumination Transmitted and reflected 12v/15w halogen; *LED illumination C-Mount SZM 1X C-Mount; *SZM 0.5X C-Mount; SZM 0.3X C-Mount Accessories: Yes	Advanced countries		
9	Specimen slides of histology and embryology (2 of each organ)	1 each	Set of 100 prepared microscopic veterinary histology and embryology slides for veterinary medicine education study with Hematoxylin and Eosin (HE) stained samples (preferably equine, canine, caprine, chicken)	USA/ Europe/ Germany/ China/ local / Equivalent		
10	Specimen of some major zoo animal's skeleton, etc.)		Deer, Lion, Bear	Local/ Imported		
11	Meat saw	1	Material Stainless Steel Blade Size 8-inch blade Motor Powe 0.5 hp	Advanced Countries /Imported		
12	Side warmers (hot plate)	1	Voltage 220 V A.C Power Source Electric Shape Rectangular Condition New Feature High Quality Temperature Range 80-140 Degree Celsius	Advanced Countries		
13	Slide cabinet 5000 slides	1	Material: Wooden Usage: to keep microscope slides safe No. of Slide: 5000 Finish: Painted	Local/ Imported		
<b>Department/Section of Veterinary Physiology</b>						
1	Wintrob's sets.	12	Reusable blood sedimentation tubes suitable for determining sedimentation rates and the volume of packed red blood cells. Thick walled, cylindrical, and 11 with internal bore diameter of 2.5 mm Graduations from 0-10 in both upward and downward direction	Must be of reputed brand		

			Provided with wintrobe stand			
2	Stimulators	1	A part of Kymograph	USA/ Japan/France/Germany		
3	Catheters (solstice)	12	Feline Catheter, Equine Catheter Mare: 8.0 mm X 700 mm, -PVC, Sterile, Luer Hub, Plastic, Catheter, Mare Equivet, 8.0 mm Stallions: Catheter, Stallion Equivet, 6.5 mm, 6.5 mmX1350 mm, -transparent PVC, -sterile, -Luer hub, Canine Catheter, Description: Canine urinary catheters, 3,3X600 mm	Must be of reputed brand		
4	Electrocardiogram (portable)	1	Animal Portable electrocardiogram appreciable: Frequency 25-50Hz 1. Sync sampling, digital signal processor, gets better quality ECG waveform by ECG signals filtering through the power frequency filter, baseline filter and EMG filter. 2. Display 3/6/12-lead ECG waveform, and states of print mode, sensitivity, paper speed, filter, etc. in one screen, convenient for contrastively diagnosing. 3. Multi-print mode and format: manual and automatic 4x3, auto 3x4+1, auto 3x4, auto 2x6+1, auto 2x6, auto 3-2+1, auto 3-2, auto 1x12+1, auto 1x12, rhythm 4, rhythm 3 and rhythm2, etc. Waveform length can be adjusted and timing print function is available, which meets the need of different applications. 4. Built-in high-capacity memorizer can store up to 1000 cases, which is convenient for doctor's review and statistic. 5. The interface languages including: English	USA/ Japan/France/Germany		
<b>Department/Section of Biochemistry</b>						
1	Refractometer	1	Measurement range nD: 1.32000-1.58000 Accuracy nD ( $\pm$ ): 0.0002 Repeatability nD ( $\pm$ ): 1e-005 Measurement range Brix: 0-100 % w/w Accuracy Brix: 0.014 % w/w Temperature control range: 5 °C – 75 °C Temperature control accuracy ( $\pm$ ): 0.03 °C Minimum Sample volumes: 0.50 mL (0.5 mL) Measurement Scales: Refractive Index, Sugar (Brix and more), Acid/Base, Chemical, Freezing Point, Salt, Others; Up to 30 user-defined concentration tables (can be entered as tables or formulas).	USA/ Japan/France/Germany/China		

			<p>Built-in Measurement Scales: Others; Chemicals, acids, bases and freezing point tables; Refractive Index; Brix / Sugar tables</p> <p>Connectivity: HDMI (Terminal); USB client (PC Software); Ethernet (Network and PC Software); 3 x USB host (printer, memory stick, barcode reader, hub, keyboard, mouse); RS232 (Automation units); CAN (Multiple LevelSens)</p> <p>Product Type: Benchtop refractometer</p> <p>Compliance/Data Ssecurity: Audit Trail (requires LabX software); Data integrity (requires LabX software); 21 CFR part 11 / EU Annex 11 (requires LabX software)</p>			
2	Polari meter	1	<p>Principle: Automatic digital polarimeter with symmetric angular oscillation using the optical-null balance method</p> <p>Light Source: Tungsten-Halogen lamp (Wl), Sodium lamp (Na), Mercury lamp (Hg) (Up to two light sourcess can be installed.)</p> <p>Modulator: Faraday cell</p> <p>Wavelength: 253, 280, 296, 313, 302, 325, 334, 365, 405, 436, 546, 578, 589, 633, 880 nm</p> <p>Aperture: 1.8, 3 and 8 mm diameters</p> <p>Angular Range: <math>\pm 90^\circ</math></p> <p>Response Speed: <math>6^\circ/\text{sec}</math></p> <p>Measurement Accuracy: <math>\pm 0.002^\circ</math> (up to <math>1^\circ</math>)</p> <p>Repeatability: <math>\pm 0.2\%</math> (larger than <math>1^\circ</math>)</p> <p>Resolution: <math>0.0001^\circ</math></p> <p>Integration Time: 1-100 sec</p> <p>Detector: Photomultiplier tube (1P28-01) (R928 - option)</p> <p>Readout Modes: Optical rotation, optical specific rotation, concentration, sugar scale Z, Brix purity, optical purity</p> <p>Temperature Measurement Range: <math>0\text{--}40^\circ\text{C}</math> (minimum display temperature: <math>0.1^\circ\text{C}</math>)</p> <p>Power Requirement: AC100~240V <math>\pm 10\%</math>, 50 or 60 Hz, 80 - 300 W</p> <p>Dimensions: 653 (W) x 249 (D) x 364 (H) mm</p> <p>Weight: Approx. 30 kg</p>	USA/ Japan/Fra nce/Germa ny/China		
<b>Department/Section of Veterinary Pharmacology</b>						
1	Colter Counter	1	<p>Particle size range of 0.3 to <math>10\mu\text{m}</math>, Lightweight and ergonomic design, 10 hours of standard-use battery life, 10,000 records stored, View data in traditional tabular or trend graph, Configurable display, sample methods, &amp; alarm setting, Data export to USB or PC, Internet-enabled and meets ISO, JIS, and CE standards</p>	Local/Imp orted		
2	Anesthetic Monitor	1	<p>12.1" inch colored display, parameters: SpO<sub>2</sub>, ECG, NIBP, TEMP, RESP, Suitable for dogs, cats, and horses, 72 hours of graphic and tabular trends, 32</p>	Local/Impo rted		

			seconds full-disclosure waveform review, Built-in rechargeable lithium battery, Power supply: AC85~265V/50Hz/60Hz			
3	Manometers, catheters, etc.		<p><b>Manometer</b> Pressure of 0 to 100 mmHg. Accuracy of <math>\pm 0.5</math> mmHg and a precision of <math>\pm 0.1</math> mmHg, with a resolution of 0.01 mmHg. Calibration, portability, and durability are essential, along with safety features. The manometer should be user-friendly and compatible with research accessories.</p> <p><b>Equine Catheter</b>, Mare: 8.0 mm X 700 mm, -PVC, Sterile, Luer Hub, Plastic. Canine Catheter, Canine urinary catheters, 3,3X600 mm. They should have radiopacity for visualization</p>	Local/Imported		
4	physio graph with recorder		<p>ECG electrodes with Bio Potential Junction Box, EMG disc electrodes and EEG Paste as accessory. Coloured TFT for display: 15.5 x 9.5 cm. channel width should be not less than 80mm. Sensitivity: 50,100,200,500 uv/cm and 1,2,5,10,20,50,100 mv/cm. Data Sampling Frequency: should be more than 250Hz. CMRR: &gt; 80-85 db.</p> <p>The physiograph with a recorder designed for pharmacological research must capture diverse physiological signals such as ECG, EMG, and blood pressure. It should provide multiple channels, adjustable amplification and filtering, high signal resolution, and variable sampling rates. Real-time display, data storage, export, and analysis</p>	Local/Imported		
5	Isolated heart perfusion apparatus		<p>UP-100IH Core System, Basic: 73-4384 (115V) or 73-4385 (230V) UP-100IH Core System, Advanced: 73-4386 (115V) or 73-4387 (230V) Includes:</p> <p>6. UP-100 Base Unit • Heart Chamber and Holder to UP-100 System • UP-100 Addition for Langendorff (with cannulae for rat/guinea pig)</p> <p>7. Thermocirculator • Analog Roller Pump • Compliance Chamber (Windkessel)</p> <p>8. Perfusion Pressure Measurements ° Pressure Transducer ° TAM-D PLUGSYS Transducer Amplifier Module</p> <p>9. PLUGSYS Basic System Case (Core System 6 Slot Units) - UP-100IH Basic: PLUGSYS 601 Case, 10 Slot Units* - UP-100IH Advanced: PLUGSYS 603 Case, 20 Slot Units</p> <p>10. Left Ventricular Pressure Measurement ° Pressure Transducer °</p>	Local/Imported		



			TAM-A PLUGSYS Transducer Amplifier Module * If your chosen options require more than 10 Slot Units you will need to choose the UP-100IH Advanced system. For a working unit, the core system requires the addition of a selection of one of the options UP-MOUSE or UP-RAT/GP.			
6	Tracheal cannula		Tracheal cannula designed for laboratory animals Accommodate various animal sizes, made from biocompatible materials for easy insertion. Secure attachment mechanisms, an external port for connection, and controlled airflow capabilities. Sterilization compatibility, durability, and anatomical fit are essential, considering animal welfare.	Local/Imported		
7	Arterial cannula		Tracheal cannula designed for laboratory animals Accommodate various animal sizes, made from biocompatible materials for easy insertion. Secure attachment mechanisms, an external port for connection, and controlled airflow capabilities. Sterilization compatibility, durability, and anatomical fit are essential, considering animal welfare.	Local/Imported		
8	Automatic dispenser		Automatic dispenser designed for laboratory animals in pharmacological research Precise dosing accuracy across a wide range of substances. Reliable delivery mechanism multiple dosing channels and programmable settings. Real-time monitoring, compatibility with different substances, and user-friendly controls are crucial. Data logging, alarms, and sterility considerations	Local/Imported		
9	Percolators (glass)		Capacity should be 1000-1500 ml, shape should be conical, constructed from heat-resistant borosilicate glass efficient filtration system, graduated volume markings, and an airtight seal. Compatibility with heating equipment, easy assembly, and stability are crucial. The glass should be chemically inert, transparent, and have multiple inlets/outlets if needed. Stainless steel with steel sieve on 3 leg	Local/Imported		
10	Isolated tissues bath with accessories		Chamber Capacities 5, 10, 25 or 50 ml Coil Capacity 180 ml Temperature Range +3°C to 50°C (Protection); Resolution 0.1°C Room Temperature	Local/Imported		

			Temperature Stability $\pm 0.1^{\circ}\text{C}$ in the Whole Water Heat Tank Power Supply 115-220 V, 50-60 Hz; Consumption 1000 W.			
11	Observation cages for rats and mice		Cages designed for rats and mice in pharmacological research Should proper in size, be constructed from durable and non-toxic materials, and have proper ventilation, lighting, and environmental controls. Integration of observation equipment, provide cage enrichment, and facilitate waste collection.	Local/Imported		
12	Surgical Instruments for a pack		Scalpel handles, forceps, scissors, needle holders, suture materials, hemostatic instruments, and tissue retractors.	Local/Imported		
13	Glass Desiccator with Pump		Desiccator, Glass, 12" 17 X 16 X 13 (IN), Vacuum, UNSPSC: 4.1123e+007. Compatible with a vacuum pump, offer adjustable pressure control, and include a vacuum gauge. An observation port, shelving system, and moisture indicating mechanism. Vacuum pump	Local/Imported		
<b>Department/Section of Veterinary Microbiology</b>						
1	Sites filter (assemble including sites filters etc.	1	Sites filter filters are asbestos pads provided with metal holder and assembly system with vacuum pump, EK-grade which retains bacteria, for separation of viruses from bacteria, Approximate size of the virus, Sterilization of certain thermo-labile material, vacuum pump	USA/Europe/Equivalent		
2	Freeze Dryer Machines (with oxyflame sealer, complete set for small vials)	1	LCD touch screen, drying chamber transparent, shelve stainless-steel, Freeze-Drying Area 0.12 m <sup>2</sup> , tray 4 pcs, height between trays 50 mm, Cold trap temperature $\leq -56/-80^{\circ}\text{C}$ , Cold trap capacity 9.5L, Cold trap size (diameter*h), $\Phi 215*260\text{mm}$ , Vacuum degree $<10\text{ Pa}$ , Water capture capacity 4 Kg/24h, Tray size (d*h) $\Phi 200*20\text{mm}$ , Freeze drying time 24h, Loading capacity/shelf (liquid) 0.3L, Total loading capacity (liquid) 1.2L, Drying, chamber size (diameter*h) $\Phi 260*450\text{mm}$ , Total qty. Of vial $\phi 22$ (260), Total qty. Of vial $\phi 16$ (480), Total qty. Of vial $\phi 12$ (920), Refrigerant R600a+R290+R23, Cooling system Air cooling, Power supply 220V/50Hz,60Hz (single phase), Power consumption 1.3/1.8KW With Vacuum pump 2L/S, 8m <sup>3</sup> /h, Accessories; Temperature controlled equipment (Air Conditioner, Voltage controlled Stabilizer, UPS, extra freeze drying trays, vacuum pump liquid etc.)	USA/Europe/Equivalent		
3	Sonicator	1	LCD touch screen display, Storage capacity: 20 groups of program data, Temp, monitor: over-temperature	USA/Europe/Equivalent		

			protection, Other functions: automatic tracking the frequency, fault alarm, Frequency(KHz), 19.5~20.5, Crushing Capacity(ml), 1~1000, Standard Amplitude-change Pole 20 mm, Optional Amplitude-change Pole 10.15,20, 22,25 mm, Consumption 12-1200 (W), Power Supply, AC220V±10%, 50/60Hz(Standard); AC110V, Package Size (W*D*H), 350*350*550mm(acousticchamber), 470*305*430mm(main body), 29 kg Gross Weight with electric stabilizer			
4	Punch for AGPT	1	Punches for gel cutting with suction 3.5 mm circular junks out of gel to prepare wells for antigen-antibody interaction-based agar gel precipitation test	USA/Europe/ Equivalent		
<b>LOT No. 2</b>						
<b>Department of Veterinary Parasitology</b>						
1	Dissection microscope	3	Binocular viewing head, inclined at 45°, 360° rotatable, Inter pupillary adjustment distance 54-76mm, left Eye piece WF 10/20 mm, magnification 20x, 40x, Working distance 100mm, head mount 76mm, dual light	Advance Country		
2	McMaster Counting Chamber	12	For counting worms eggs, suitable for solid media, dimensions: approx.. 75 X 25-32 mm, cover glass with 2 counting grids approx.. 10 X 10mm (divided into 10 parts) affixed on 3 supports, distance between bottom plate and cover glass: approx.. 1.5mm, Gride size:10mm X 10mm, WD: Requires at least 0.5mm working distance	Advance Country		
3	Slides of various parasites	50	Parasitology microscopic slides for various parasites	Imported/Local		
4	Dark field microscope	1	LED Illumination, Binocular tube, a pair of eye piece, 10 X FN20, revolving quadruple nose piece, right – handle double- plate stage, abbe condenser, plan achromat objectives ( )4, 10, 40, 100 X, including AC adapter, Darkfield central stop, Power cord, Immersion oil	USA/ Germany/ China		
5	Insect rearing boxes	10	To rear insects/parasites	Local/Imported		
<b>Department of Veterinary Pathology</b>						
1	Specimen slides of various histopathological lesions. (100 slides)	1	Set of 100 prepared microscopic veterinary pathology slides for veterinary medicine education study Different cases with a confirmed diagnosis Slides with Hematoxylin and Eosin (HE) stained samples	USA/Europe / Germany/ China/ equivalent		
2	Heavy duty rotary/autopsy saw for large animal P.M with assembly	1	<b>A)- Heavy duty rotary/autopsy saw</b> The autopsy can work with both AC and DC power. Watertight High-quality stainless-steel blades. Simple and convenient in operation, safe and lightweight. Flexible silicon hood for improved visibility	USA/Europe/ Germany/equal/ equivalent		

			<p>Chargeable with charging time: min 4 hour.</p> <p>Easy blade rotation and fixation Extra blades of different sizes.</p> <p><b>B)- Rotatory automatic tissue processor.</b></p> <p>User can set up different programs.</p> <p>Delayed start function, 10x reagent beakers, 2x electrically heated paraffin beakers, 1x transport basket (120 cassettes, stainless steel), Reagent beakers: Standard: 2000 ml, white, Paraffin beakers, 2000 ml, aluminum, double walled transport basket: Standard: 1x Stainless steel, Delayed Start time: up to 99 hours</p>			
3	Microtome, blade (100), Tissue castes/rings, S.S L mold	1	<p><b>Microtome, blade (500)</b> High quality S.S blades (500 blades) for rotary microtome</p> <p><b>Tissues cassettes/Rings (5000)</b> 3 × 2.5 × 0.4 cm Plastic tissues cassettes (5000) for tissues processing</p> <p><b>S.S L mold (100)</b> Different size stainless steel mold (100), non-stick with Nano-layer coating for faster cooling</p> <p><b>Dissecting Board (05)</b> For tissue cutting</p>	Local/impo rted		
4	Dark field illumination with projecting units	1	<p><b>C. Darkfield Contrast</b> All projecting units Head: Trinocular rotatable Eyepieces: 10x/22mm Both focusing Nosepiece: Quadruple/5 Place Nosepiece Objectives: Plan Phase E Plan 4x, 10x, 20x, 40x, 100x Oil Stage: Graduated mechanical XY Condenser: Darkfield Oil or Darkfield Dry Condenser, Phase turret condenser - brightfield, ph1, ph2, ph3, darkfield Focusing: Coarse &amp; Fine Illumination: Halogen w/ blue filter. High quality microscopic camera with software. Inbuilt energy backup preferred Warranty: 5 Year.</p> <p><b>D. Phase contrast</b> Trinocular 10x/20mm eyepieces Nosepiece Phase objectives, 10x, 20x, S40x &amp; S100x oil. High resolution images 100x, 200x, 400x and 1000x magnification remain perfectly in focus when changing magnification.</p>	Imported/U SA/Europe / Germany/ equivalent		

			<p>All optics anti-fungus treated and anti-reflection coated for maximum light throughput in every contrast method. Coaxial coarse and fine focus adjustment Phase Contrast Condenser &amp; Illumination Height adjustable for 10x/20x/S40x and S100X objectives, High quality microscopic camera with software.</p> <p><b>Accessories</b> Polarisation filter Cordless use with optional rechargeable batteries. Warranty: 5 Year.</p>			
5	Wintrob's pipettes	1	<p>Additional attributes: Self Zeroing Disposable/reusable/reposable: Disposable Graduation: Graduated Material : Glass/Polystyrene Primary LWH: 150mm (Quantity : 100/Box) CLIA Complexity: Waived</p>	Imported/Local		
6	Hemocytometer	10	<p>Reusable hemocytometer cell counting chamber for counting cell densities Cell depth: 0.100 mm Volume: 0.1 Microliter Ruling Pattern: Improved Neubauer, 1/400 Square mm Include 100 22x22 mm glass cover slips</p>	Imported/Local		
7	Hemoglobin meter	10	<p>Digital Hemoglobin meter Time to Results: &lt; 15 seconds Memory : 1,000 tests with date/time and ID number Specimen Type: Capillary and Venous whole blood Power Source: Batteries / Adapter Include 100 strips</p>	Imported/USA/Europe / Germany/ equivalent		
8	Slide cabinet 5000 capacity with histopathology slides	1	<p><b>A)- Slide cabinet 5000</b> Material: Wooden Usage: to keep microscope slides safe No. of Slide: 5000 Finish: Painted <b>B)- Slide Box (50 boxes)</b> Material: Wooden Usage: to keep microscope slides safe No. of Slide: 100 Finish: Painted</p>	Local/Imported		
9	Cold Room	1	<p>Cold Storage room Portable having capacity to freeze large animals (cow, buffalo, horse). Dimensions: Height: 10 feet, Width: 10 feet Length: 10 feet Door size 4.5 feet X 7.5 feet Temperature Range -10°C to 25°C</p>	Imported/Local		
10	Protective wear (gloves, rubber, apron goggles gum boots,	1	<p>Positive pressure protective suits/space suits/moon suits/blue suits" (02) Disposable surgical caps(1000)</p>	Imported/Local		

	masks & cap etc.)		Disposable Surgical Gloves (1000 pairs) Rubber Gloves (50 pairs) Disposable Face mask (1000) Ear plugs (100 pairs) Laboratory aprons (24) Laboratory coats (12) Laboratory Goggles (12) Plastic safety Gum boots (12 pairs) Disposable Shoes cover (1000 pairs) Disposable Shoes cover auto boxes (05)			
11	Automatic Microtome with accessories	1	<b>Automatic microtome</b> For tissue sectioning Section Thickness Range: 1 - 60 µm Trimming Thickness Range: 5 - 500 µm Power source Electricity/Manual Slice precisely, reliable and quiet. Blade carrier can use both of High profile blade and Low profile blade. The LCD screen for showing slice and trimming thickness, section counter. keyboard with controls for thickness, mode and speed Special function of specimen retraction. Hand wheel for manual work easily Sample orientation Universal cassette clamp and standard specimen clamp Standard <b>Accessory</b> 2 types Clamp 1 Blade Carrier (for disposable blade) 5 Dissecting Board 1 Waste Tray, 10 pcs Tissue Molds 500pcs Cassettes, 2 pcs Fuse. Automatic Electric/manual Knife Sharpener	Imported/USA/Europe / Germany/ equivalent		
<b>Department/Section of Veterinary Medicine</b>						
1	Phonandoscopes	1	Chestpiece Machined Stainless Steel Two-sided Binaurals Single Lumen. Tunable Diaphragm. Headset Material Alloy. Length min. 28 in/71 cm Diaphragm Diameter min.1.75 in/4.4 cm Bell Diameter min. 1.25 in/3.2 cm	Local/imported		
2	Blood-pressure monitors	1	Oscillometric (Veterinary) Blood Pressure Range: Systolic: 40 – 265mmHg Diastolic: 20 – 200mmHg Mean Arterial Pressure: 27 – 222mmHg Heart Rate: 25 – 300BPM Pulse Rate Range:25 to 300 BPM (Beats Per Minute) Cuff Deflate Rate: Deflation variable step size. Initial Inflation Pressure:180 mmHg (default). Subsequent initial inflation: previous Systolic + 30 mmHg Transducer accuracy:±3mmHg between 0 mmHg and 300 mmHg Operating Conditions:0°C to 50°C, 15% to 90% non-condensing humidity Power: Lithium-Ion battery.	Local/imported		

			A/C Power Adapter - Input:100-240v ~ 47-63Hz 0.48A Max, Output: 5.9V 3A 17.7W Max with battery			
3	Otosopes with Accessories	1	The ear specula of 3 different sizes 2,3,4 diameter at tip. Illuminating device with condensing lens and a 2 times magnifying glass.	Local/imported		
4	Laryngoscopes	1	with fibre optic light source on either side. Sealed LED light source Waterproof handle Complete set with handle and 5 blades. blades available in 300 mm (12") and 350 mm (14") (for large dogs, sheep, goats and zoo animals)	Local/imported		
5	Oesohogoscopes	1	Fiber optics ring of light with no reflections, no obstructions. autoclavable stainless steel Graduated tube with removable and cleanable tip. Oesophagoscope min. Length 45cm Dia 16mm	Local/imported		
6	Travis with noise protection.	1	Height at sides: 1400 mm Height of rear gate: 850 mm Width: 800 - (700 mm internal) Length: 1850 - (1800mm internal)	Pakistan		
7	Deionizers	1	Metal plate made laboratory water deionizer Dimensions: 34*55*53cm Tap water feeding 220V/50Hz Capacity: 5 litre per hour Built in RO membrane Timing automatic flush procedure Manual Ro membrane cleaning button Sterile water tank Single process RO system Output of pure water: !0 litre per hour TOC: <20ppb Absorbance: less than or equal to 0.001 Heay metal <0.01ppm TDS < 200ppm	China		
8	Dark field microscope	1	LED Illumination, Binocular tube, a pair of eye piece, 10 X FN20, revolving quadruple nose piece, right – handle double- plate stage, abbe condenser, plan achromat objectives ( )4, 10, 40, 100 X, including AC adapter, Darkfield central stop, Power cord, Immersion oil	USA/ Germany/ China		
9	Pleximeters and percussion hammers	1 set	Reflex hammer Percussion hammer Stainless steel 20 cm	Canada/equivalent		
10	Ophthalmoscopes	1	Ophthalmoscope Indirect Ophthalmoscope binocular	USA		
11	Electrocardiograms	1	Human Portable electrocardiogram appreciable: Frequency 25-50Hz 1. Sync sampling, digital signal processor, gets better quality ECG waveform by ECG signals filtering through the power	USA/ Japan/France/Germany		

			<p>frequency filter, baseline filter and EMG filter.</p> <p>2. Display 3/6/12-lead ECG waveform, and states of print mode, sensitivity, paper speed, filter, etc. in one screen, convenient for contrastively diagnosing.</p> <p>3. Multi-print mode and format: manual and automatic 4x3, auto 3x4+1, auto 3x4, auto 2x6+1, auto 2x6, auto 3-2+1, auto 3-2, auto 1x12+1, auto 1x12, rhythm 4, rhythm 3 and rhythm2, etc. Waveform length can be adjusted and timing print function is available, which meets the need of different applications.</p> <p>4. Built-in high-capacity memorizer can store up to 1000 cases, which is convenient for doctor's review and statistic.</p> <p>5. The interface languages including: English</p>			
12	Tracheo-scopes	3 Sets	<p>Small animal endoscopy Oto/vagino/rhinocopy/Lapro/Arthroscopy/Bronchoscopy/AI instrument Wireless or without wireless/Gastroscopy wireless or without wireless/Laparoscopy along with Laparotomy equipment</p> <p><input type="checkbox"/> Equine/Camel endoscopy of the nose, larynx, Bronchoscope and gastroscopy wireless or without wireless</p> <p><input type="checkbox"/> Endoscopy accessories (light source with light guide cables, video camera, suction and irrigation Pump/CO2, HF/RF devices, Hygiene, care, transportation and cleaning material, biopsy obtaining instruments (brush, biopsy wire, alligator forceps for grabbing material from nose, trachea, stomach and colon)</p>	Imported/Local		
13	Fiberoptic endoscope	1	<p><input type="checkbox"/> Small animal endoscopy Oto/vagino/rhinocopy/Lapro/Arthroscopy/Bronchoscopy/AI instrument Wireless or without wireless/Gastroscopy wireless or without wireless/Laparoscopy along with Laparotomy equipment</p> <p><input type="checkbox"/> Equine/Camel endoscopy of the nose, larynx,</p>	USA/Europe/Japan,		



			<p>Bronchoscope and gastroscopy wireless or without wireless</p> <p>□ Endoscopy accessories (light source with light guide cables, video camera, suction and irrigation Pump/CO2, HF/RF devices, Hygiene, care, transportation and cleaning material, biopsy obtaining instruments (brush, biopsy wire, alligator forceps for grabbing material from nose, trachea, stomach and colon)</p>			
14	Slings	1 set	<p>Two (10' X 2") Large Ratchet Straps</p> <p>Two Equine Lifting Hobbles (for surgery)</p> <p>Tow Strap with a 2" snap hook and "D" ring</p> <p>Rescue Straps - (12' X 4") (14' X 4") (16' X 4") (18' X 4") with flat loop design {Available in Custom Lengths}</p> <p>AARNet (Rescue Net) - The net is made from high strength, rip stop mesh with a 1 and 3/4" 6000 lb webbing.</p> <p>Nylon Webbing (20' X 1") - for emergency cut away</p> <p>1" Colored Webbing - 2 of each length (25' black, 20' red, 15' blue, 12' yellow, 5' green)</p> <p>Large (3/8" x 57") Steel Directional J-Hook- Powder Coated Safety Yellow</p> <p>Small (1/4" x 46") Steel Directional J-Hook- Powder Coated Safety Yellow</p>	USA/europe/equivalent		

**LOT No. 3**

**Department/Section of Veterinary Surgery**

1	Pedestal Surgical lights	1	<p>5-reflector OT light mobile with stand.</p> <p>Illuminance: 735- 50000Lux</p> <p>Color Temperature: 4300±200k</p> <p>Color rendering index: Ra≥90</p> <p>Rated Voltage of Bulb: 24V</p> <p>Diameter of luminous spot: 100-250mm</p>	Local/Imported		
2	Dressing drum small	1	<p>Domed top and bottom with sliding removable band, and drop down-hasps</p> <p>Size approx. 6" (Dia.) X 6" (Height).</p>	Local/Imported		
3	Dressing drum large	1	<p>Domed top and bottom with sliding removable band, and drop down-hasps</p> <p>Size approx. 11" (Dia.) X 9" (Height).</p>	Local/Imported		
4	Orthopedic Instruments, large animal	1	<p>Human Hard tissue kit is also appreciable</p> <ol style="list-style-type: none"> <li>Senn miller Retractor 16 cm blunt</li> <li>Army Navy orthopedic retractor with three hooks</li> <li>Mallet blunt ended 8 X 12 mm and 13 X 45 mm</li> <li>Hohmannsmall, medium and large curved tip</li> </ol>	Local/Imported		

			<p>5. Gelpi Perinal and orthopedic retractor</p> <p>6. Finochietto cardiovascular chest retractor</p> <p>7. Weitlaner retractor</p> <p>8. Balfour abdominal retractor 180 mm</p> <p>9. Lambert Rongeur 158mm</p> <p>10. Bone Plate modification equipment (2 types)</p> <p>11. Curette small, medium and large sized</p> <p>12. Electric Cast Cutter (Oscillating Saw)</p> <p>13. Lane Bone holding forceps</p> <p>14. Reduction bone holding forceps</p> <p>15. Lewin Bone holding forceps</p> <p>16. Wolford bone holding forceps</p> <p>17. Periosteal elevator small, medium and large size</p> <p>18. Chisel small, medium and large</p> <p>19. Gigli saw wire</p> <p>20. Jacob's Chuck with Key &amp; guard</p> <p>21. Orthopedic Hammer</p> <p>22. Pin Cutter small, medium and large</p> <p>23. Wire Cutter</p> <p>24. Wire Twister</p> <p>25. Electric / Battery Driven Drill Machine</p> <p>26. Drill Bits (2.5, 3.2- &amp; 4.5-mm Diameters)</p> <p>27. Drill Sleeve for 2.5, 3.2- &amp; 4.5-mm Drill Bits</p> <p>28. Drill Sleeve with external diameter of 4.5mm</p> <p>29. Cortical Bone Taps 3.5 &amp; 4.5 Diameter (T-Handle)</p> <p>30. Cancellous Bone Tap 6.5mm Diameter (T-handle)</p> <p>31. Tap Sleeve for 3.5- &amp; 4.5-mm Bone Taps</p> <p>32. Depth Gauge</p> <p>33. Counter-Sink for 3.5- &amp; 4.5-mm Cortical Screws</p> <p>34. Screw Driver for screw driver mentioned below diameter Cortical Screws</p> <p>35. Load Guide for 2.5- &amp; 3.2-mm Drill Bits</p>			
5	Endoscope, small animal	1	<p>Clinical Veterinary Purpose: Small animal endoscope (Including scope, light source with light guide cables, processor, suction and irrigation pump, metal trolley, and Monitor 27 inch)</p>	Local/Imported		
6	X-ray accessories cassettes and different Chemical	1	<p>X-ray Cassettes with appropriately sized 100 film packs:  Small: 3" (7.6 cm) H x 4" (10.2 cm) W x 10" (25.4 cm) L  Medium: 5" (12.7 cm) H x 7" (17.8 cm) W x 15" (38.1 cm) L  Large: 7" (17.8 cm) H x 11" (27.9 cm) W x 24" (60.9 cm) L  Suitable SS clips, 3 tanks of 5gallons</p>	Local/Imported		

			developing tanks with lid, safelight, Developer & fixer solution.			
7	Emasculator for equines	1	Emasculator Double Crush (Whites or Serra) sized around 12.5". Must simultaneously perform clamping, crushing and cutting of spermatic cord.	Local/Imported		
8	Trephine	1	Galt Skull Trephine, with adjustable centering point and detachable 19mm cross-bar handle	Local/Imported		
9	Otoscope	1	Human Otoscope is also applicable. The ear specula are supplied in 3 different sizes 2,3,4 diameter at tip. Inexpensive basic model with low-reflection, direct illumination with a 2.7 V vacuum bulb (2500 K) or halogen illumination (3000 K)	Local/Imported		
<b>Department/Section of Animal Nutrition</b>						
1	Photometer	1	Double beam spectrophotometer (UV-Vis) with wide and color LCD screen. Spectral Bandwidth should be 0.5, 1, 2, 4nm. Wavelength Range 190 – 1100nm. Detector Solid Silicon Photodiode, Light Source Tungsten Halogen/Deuterium Lamp. Wavelength Setting should be automatic, Wavelength Accuracy should be $\pm 0.3\text{nm}$ , Wavelength Repeatability should be $\leq 0.2\text{nm}$ . The instrument should show various scanning curves and charts for users to complete various tests without computers. Support USB storage and different data formats such as Excel, txt and image. The instrument should have advanced hardware and processor. The equipment should have long-life socket type tungsten-halogen and deuterium lamps which can work up to 2000 hours, can switch the lamps according to test needs and record its working time automatically. The instrument can be connected to printer directly and output test charts and data. All allied accessories for installation. Laser printer should be supplied with spectrophotometer	USA/Europe/Germany/equivalent		
2	Bomb calorimeter	1	Bomb calorimeter: Heat capacity (14000~15000) J/K Resolution 0.001 K Measurement accuracy $\leq 60\text{J/g}$ Display LCD Printer Yes Repeatability error $\leq 0.2\%$ (Grade C) Pressure endurance of bomb 20 MPa Power $\leq 150\text{W}$ , stainless steel inner water cylinder Equipped with electric stirrer in the water tank Double-layer external container High uniformity of water temperature to meet the requirement of test. Temperature: 5-40 degree centigrade, Measuring range: 5 MJ/kg to 40 MJ/kg, Testing time: 8-15 minute,	USA/Europe/Germany/equivalent		

			<p>Power supply: 220 volts, Power: 1.5 KW, Oxygen supply: Automatic, Bomb Firing: Automatic/ Button press, Calculations: Automatic, Data storage: Through computer, Whole material: Stainless steel with external water jacket should be double layered, A computer should be attached for data storage, all accessories along with fittings and dust cover. Pellet machine with 50-100 kg/hour Capacity having three phase/Single phase motor original copper. Pellet size should be 3 mm or 4 mm with cutter, Die size 8 inches, 2 Roll Steel die+ roll material, Complete machine with all accessories and installation.</p>			
3	Particles Separator	1	Set of 4 sieves (19mm, 8mm, 3mm and 1.20mm diameter) with tray as base and cover similar to Pen state particle separator	Local made		
4	Silo pits/towers/bunkers models	1	Model of silage Bunkers, silage Trench and silage Tower made up of MS Steel: Bunkers having the dimension of 4x4 feet base divided into 3 parts having the height of wall of bunkers 1.3 foot, Trench having the dimension of 4x3 feet from outer while the inner trench dimension is 3x2 feet and having the collar of ½ foot, , Towers having the dimension of 2.5x3 feet with circumference of 2 feet with lid at the top of tower and opening at the base.	Local made		
5	Feed formulation Software	2	<p><b>C- Dairy Feed formulation software</b></p> <p>Dairy feed formulation software: Registered Windows 08/ 10, also OS apple supporter, should programmed in Microsoft C™ 32 or 64-bit Microsoft or OS Windows applications and were programmed in Microsoft Visual Basic 6.0 or 8.0™ and Microsoft C++ 6.0or 8.0™ with a Microsoft Access 2000™ database capability to store input and output values.</p> <p>Work under Mathematical nutrition model that computes dairy cattle requirements energy and nutrients based on characteristics of the animal, environment and the physicochemical composition of the feeds under diverse production states.</p> <p>Designed as a steady-state model to use rates of degradation of feed carbohydrate and protein and the rate of passage to estimate the extent of ruminal fermentation, microbial growth, and intestinal digestibility of carbohydrate and protein fractions in computing energy and protein post-rumen absorption, and the supply of metabolizable energy/net energy and protein to the animal. Facilitate the characterization of individual feeds and a sub-model to predict ruminal</p>	Local/imported		

		<p>metabolism and intestinal absorption of long chain fatty acids.</p> <p>Can calculates a least cost formula. It should have advanced features like, Para metrics, Formula comparison, Cost Summary (Profit/loss Managed by adding Sale price, Overhead charges etc.), Nutrients Ratio's (Lysine to other Amino Acids). Formula Report available in Notepad, Excel, Word, and pdf format. Amino Acid Calculator (Total and Digestible) just select ingredient and add Crude protein Value). Energy Calculator, just select ingredient and add values of Proximate analysis on a singal click it calculate Metabolizable Energy/net energy. Shoul be compatible with Window 10, 64-Bitt.</p> <p>A computer with Processor i5, 10<sup>th</sup> generation, Ram 8 GB, Storage 256 SSD to run the software.</p> <p><b>D- Computer with Poultry Feed formulation software</b></p> <p>The software should be least cost formulator and evaluator. Auto calculate ingredients without leaving stored formula screen, Change plant codes easily, Export data to tables, Database of feed ingredient and cost, Show nutrient composition on percentage of dry matter and fresh matter, It defines the nutrient level required in the formula and feed ingredient inclusion level, Click to copy data from one plant to all plants within same source plant, Click to delete a nutrient from all ingredients, Compare nutrients in new vs. stored formula, Changes from 0 are marked in red, Formula stored date" on optimization main screen,</p> <p>The software should be easy and friendly to useful for poultry Poultry Feed. Multi-plants (Each plant having specific Ingredients, Nutrients, Formulas store and Ingredients Prices) It should have power to handle unlimited numbers of Ingredients (Ingredients values also automatically set on Moisture Basis on a single click) and Nutrients A high-quality interface to set Ingredients and Nutrients Values and limits. Can import and Export database (ingredients, Nutrients, Composition and Price) between computer. Can calculates a least cost formula. It should have advanced features like, Para metrics, Formula comparison, Cost Summary (Profit/loss Managed by adding Sale price, Overhead charges etc.), Nutrients Ratio's (Lysine to other Amino Acids). Formula Report available in Notepad, Excel, Word, and pdf format. Amino Acid Calculator (Total and Digestible)</p>			
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			<p>just select ingredient and add Crude protein Value). Energy Calculator, just select ingredient and add values of Proximate analysis on a single click it calculate Metabolizable Energy. Should be compatible with Windows 10, 64-Bit.</p> <p>A computer with Processor i5, 10<sup>th</sup> generation, Ram 8 GB, Storage 256 SSD to run the software.</p>		
6	2D/3D digital video microscope with computer and 50 inch LCD	1	<p>1) Digital video Microscope  2) Color Printer  3) LCD 50" inches  4) Desktop computer  <b>1) Digital video Microscope:</b> 2D and 3D observing USB fluorescence magnifier camera microscope, Lens parameter: Optical magnification 0.6-5.0X, Total Magnification 11-95X base of 12.5" monitor, Working distance 2D:100mm 3D:75mm  Ratio 1:8.3 Field of View 24*13.5-2.88*1.62mm  Lens Mount Standard C mount, 2D/3D viewer, Support 2D/3D observing 360 °rotation, 45 objective viewing angle  Camera Parameter: Image Sensor 1/2", Max magnification 1920 x 1080, Pixel Size 3.75µm x 3.75µm  White Balance Manual and auto  Brightness control Manual and auto,  Memory function Take photo or video to U disk, Output HDMI TYPE,  Monitor Parameter: Size 24.0" Type IPS Resolution 1920*1080, Color display 16.7M  Brightness 300 cd/m<sup>2</sup> (Typ.)  Contrast 1000:1 (Typ.)  Power supply DC : 12V 2A  Input HDMI and VGA Stand Alone stand,  Light Source Parameter: Light Control 4 zones control. Brightness adjust Light color White Quantity of LED 208PCS LED Intensity 15000 Lux  Wavelength 455-457.5nm  Output voltage 12V  Output power 8-10W  Working distance 35-110mm  Material Aluminum alloy  Diameter Inner diameter 40mm, outer diameter 106mm, height 19mm,  Stand Parameter:  Focus Coarse focus Base size 330*300mm Height 318mm</p> <p><b>2) Color Printer:</b> Type: New Flatbed Inkjet Printer, Wi-Fi Accesses, Automatic, USB Accesses, Multicolor, A3-A4 simple Paper Printer, Label Printer  Voltage: AC 220 V - 240 V, Print speed: BK-30 ppm; Colors-4color</p>	Imported	

			<p>CMYK, Printing Resolution 5760 * 1440dpi, Paper capacity: 100 sheets, Warranty of core components: 1 Year, With All accessories; Two boxes of all kinds of printer ink.</p> <p><b>3) LCD 50" inch:</b> TV Type Smart TV  USB Port 2.0 Remote Control  Audio systems Dolby Digital Remote Control Type Wattage per Speaker Channel (RMS) 10 W x 2 Built-in speakers Standby Power Consumption 0.3 W Package weight in KGs 17.5 Kgs Processor Type Quad Core VESA Mount (400x400 mm) Display Resolution 3840 x 2160 Frequency 50/60 Horizontal resolution 3840.0 Bluetooth Internet connection Integrated WiFi Input voltage 220 – 240 Wireless Standard 802.11ac Operating System Type Tizen WiFi Full HD, HDMI Yes Display Type LED TV Ethernet Display, Screen Size 50 Inch HDTV 4K UHD  Connectivity Number of HDMI Ports 3.0 Technical Information Aspect ratio 16:9</p> <p><b>4) Desktop computer:</b> Minitower case Processor type: Core i3, 10th generation Ram: 4GB Hard drive size: 256 GB SSD Monitor: 1No. (minimum 19 inch) Key board: 1 No. Mouse: 1No. Smart Share FHD 1080P Auto Volume Lever 50-inch display Noise Reduction 2x HDMI</p>			
<b>Department/Section of Poultry Husbandry/Science</b>						
1	Egg grader Machine	1	<p><b>Specifications:</b>  1-Grading and packing eggs on weight  Min. capacity (eggs/hour) 1000 eggs  Min. capacity (cases/hour) 8.3  Footprint (L x W) 1540 x 1755 mm  Operators 1 or 2  Candling 2 x 23 Watt PL lamp + mirror  Grades 4 or 7  Accuracy ± 1 gram  Infeed conveyor Double row  Power supply 230V 1-phase, 50 or 60 Hz. (In case of 110V, an additional transformer is needed)</p> <p><b>Packing.</b>  Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea.  The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	Advance		
2	Chick Sexing Machine	1	<p><b>Specifications:</b>  The English or Japanese chick tester machine features  A blunt-ended endoscopic tube/probe, containing a camera with light.  The sexer inserts the tube/prob into the evacuated cloaca and with the help of</p>	China/Advance		

			<p>the camera/light can identify either testis or ovaries.</p> <p><b>Packing.</b> Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea. The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>			
3	Egg Analyzer	1	<p><b>Specifications:</b> An electronic scale measures the egg's weight Ultrasound sensors measure the albumen height and yolk color without touching the egg Automatically calculates and classifies the Haugh unit Displays and prints measured values and calculated values High measurement accuracy Constantly stable measurement, not dependent on individual operators Shortens the measurement time to approx.17 seconds per set Proprietary software works with an external PC and allows: Enhanced data storage and retrieval Advanced data processing Superior printing option Characteristics: Albumen height: 0mm - 30mm +/- 0.1mm Yolk color: 1 - 16 according to the DSM (formerly Roche) Yolk color fan (support 16 colors, NEW) Haugh unit: 0 - 130 HU Stores, calculates and averages up to 1000 units of data Displays results on LCD screen Built-in printer (uses an off the shelf thermal paper) Suitable to worldwide voltage supply: 90 - 230V, 50/60 Hz</p> <p>Proprietary software for external PC operation via USB communication cable Dust Cover</p> <p><b>Packing.</b> Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea. The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	Advance		
4	Model of Hen to explain Reproductive system	1	<p><b>Specifications:</b> Chicken mockup, longitudinally segmented front, showing internal organs. The back shows the external morphology. Show components and internal characteristics of chickens such as muscles, heart, liver, intestines,</p>	Advance		



			<p>stomach, lungs, including reproductive system and eggs, etc.</p> <p>The appearance of the model is a three-dimensional, realistic, natural color. Each section has a different color for easy learning. and can disassemble 8 pieces</p> <p>Important organs are numbered. with documents explaining details in English</p> <p>Model made of good quality PVC, size about 35x40 cm.</p> <p>The model should have mounted on a strong and stable plastic base, size approx. 26x40 cm.</p> <p><b>Packing.</b></p> <p>Model should have wrapped in plastic film first before packing, which is to avoid moisture.</p> <p>The Model of hen putted in strong box case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>			
5	LED egg Candler	2	<p><b>Specifications:</b></p> <p>Application : Candling of Eggs</p> <p>Capacity: 88 chicken eggs, 221 quail eggs</p> <p>Voltage : 220v</p> <p>Strong LED light</p> <p>Weight: 35 kg</p> <p>Dimension(L*W*H) : 53*42*70cm</p> <p><b>Packing.</b></p> <p>Machines are wrapped in plastic film first before packing, which is to avoid moisture.</p> <p>The machines are putted in strong iron sheet case/wooden case which is free of fumigation, lined with metal wire if necessary.</p>	China/Adv ance		
6	Egg micrometer	5	<p><b>Specifications:</b></p> <p>Accuracy:±[.00016" +.00004 (L/3)] L = Max Range (Inch) (excluding quantizing error for digital models)</p> <p>Resolution*: .0001"/0.001mm (340-351-10: .00005"/0.001mm) Graduation** : .001" (104-165: is .0001")</p> <p>Flatness: .000024" for models up to 12" .00004" for models over 12"</p> <p>Parallelism:.00008" for models up to 3" .00012" for models up to 6" ±[.00008" + .00004 (L/4)] L= Max range (inch)</p> <p>Measuring faces: Carbide tipped (spindle only)</p> <p>Display*:LCD Battery*:SR44 (1 pc.), 938882</p> <p>Battery life*:Approx.1.2 years under normal use Dust/Water protection level*: IP65 *Digital models</p> <p><b>Packing.</b></p> <p>Machines are wrapped in plastic film first before packing, which is to avoid moisture on the sea.</p> <p>The machines are putted in strong iron sheet case/wooden case which is free</p>	China/Adv ance		

			of fumigation, lined with metal wire if necessary.			
7	Egg shell thickness gauge	10	<p><b>Specifications:</b>  Physical dimensions: W x H x D 63.5 mm (2.5") X 165.0 mm (6.5") X 31.5 mm (1.25")  Weight: 0.383 kg (13.5 oz) with batteries  Keyboard: Membrane switch pad with twelve tactile keys  Operating temperature: -10°C to 60°C (14°F to 140°F)  Case: Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed)  Data Output: USB-C port. Windows® PC interface software  Power Source: Three AA cells.  – Alkaline – 35 hrs  – Nicad – 10 hrs  – NI-MH – 35 hrs  Auto power off if idle for 5 minutes  Battery status icon  Measuring Range: 0.15 mm to 12.70 mm  Resolution (selectable): +/-0.01 mm (.001 in.)  Selectable units: Imperial &amp; Metric  Display: 1/8 in. VGA grayscale display (240 x 160 pixels). Viewable area 2.4in x 1.8in (61.0 mm x 45.7 mm). EL backlit (on/off/auto)  Memory: 4 GB internal SD card  Complete kit: The Egg Shell Thickness Gauge should be supplied as a complete kit with the gauge, probe, stand, 4 oz bottle of coupling fluid, 2 AA batteries, NIST calibration certificate and operating instruction manual – all in a foam-fitted carrying case.</p>	China/Advance		
8	Automatic syringes	3	<p><b>Specifications:</b>  Fixed dosage : 0.1mL, 0.2mL, 0.25mL, 0.3mL, 0.5mL, 0.75ml  No need to check setting during mass vaccination.  Highly durable body.  Very easy to clean.  Cost-effective for poultry and small animals</p>	China/Advance		
9	Smartphone anemometer	2	<p><b>Specifications:</b>  Wind speed measurement range: 0,6 m/s - 50,0 m/s  Wind speed resolution: 0,1 m/s  Wind speed accuracy: 2,5 +/- %  Wind direction measurement range: 0° - 359°  Wind direction resolution: 1° +/- 2,5°  Wind direction accuracy:  Temperature measurement range: -30°C...+60°C • Temperature resolution: 1 °C  Data transmission rate: every sec 1</p>	China/Advance		

			<p>Range: up to 100m          Baery (changeable): 3,6 V AA lithium baery          Baery life: up to 2 years          Bearings: precision stainless steel ball bearings          Temperature operang range: -25 °C...+60 °C          Material - housing: AL/PVC -          cups (replaceable): PA (NYLON) -          vane : (replaceable)UV resistant plasc          Dimensions - WS sensor: Height 210 mm, overall diameter cup to cup 120 mm          Dimensions - WSD sensor: Height 250 mm, overall vane diameter 220 mm cup to cup 120 mm          Mounting: mounts on a pipe with ø 20 mm diameter</p>			
10	Laser thermometer	2	<p><b>Specifications:</b>          Measuring Range: -22°F to 716°F          IR Accuracy: ±2% of reading or ±4°F          Units: Centigrade or Fahrenheit          Emissivity: Factory set to 0.95, fixed value          Distance/Target Ratio: 8:1 (1" target diameter at 8" distance)          Battery: 9v battery, included</p>	China/Adv ance		
11	Multiplex Elisa	1	<p><b>Specifications:</b>  <b>Automation Compatibility;</b>          BioStack ,BioSpa, BenchCel, 3rd-party  <b>Environment Control;</b>          Condensation Control, CO2, O2 Control ,4-Zone Incubation to 70 °C  <b>Filter Detection Modes;</b>          Fluorescence Intensity, Fluorescence Polarization, BRET, Luminescence, TR-FRET, Time Resolved Fluorescence (Laser), Alpha (Laser)  <b>Imager/Reader Options;</b> Barcode reader, Reagent injectors  <b>Instrument Control;</b> Computer Software  <b>Monochromator detection modes:</b>          UV-Vis Absorbance, Fluorescence Intensity (variable bandwidth)  <b>Shaking:</b> Double-orbital, Linear, Orbital  <b>Supported Labware:</b> 6 to 1536-well plates, Take3/Take3 Trio, Petri/Cell culture dishes</p>	China/Adv ance		
12	Student Microscope	1	<p><b>Specifications:</b>          Stand: Single mold sturdy with anti rust material. Extended base with hand-rest.          Viewing Bodies: Height adjustable Sie dentopf Binocular / Trinocular tube, 30 o inclined, 360o rotatable, Interpipullar y distance 48-75mm.</p>	China/Adv ance		

			<p>Eyepieces: Wide field focusable paired eyepiece WF 10x/20mm, with foldable eye guard, antifungus coating.</p> <p>Nosepiece: Reverse angle quadruple nosepiece (Ball bearing type) with click stops and rubber grip, antifungus coating.</p> <p>5) Objectives: RP series DIN Infinity Corrected Plan Achromatic Objectives – 4x, 10x, 40x (spring loaded), 100x (spring loaded, oil)</p> <p>Mechanical Stage: Rackless X-axis, double plate mechanical stage, plate size 200 x 160mm, X/Y travel range - 78 x 54 mm. Low drive movement controls. Hard coated surface for scratch resistance.</p> <p>Condenser: Substage Abbe condenser NA 1.25 with aspheric lens and Iris diaphragm. Rack and pinion movements on stainless steel guides. Day light blue filter.</p> <p>Focusing: Co-axial coarse and fine focusing on ball drive system for smooth operation.</p> <p>Illumination: Halogen 6V-20W illumination with variable illumination control</p> <p>Power supply: Input 220v – 240v AC</p>			
<b>LOT No. 4</b>						
<b>Department/Section of Livestock Management</b>						
1	Wool diameter measuring gauge	1	<p>Measures samples between 15 and 25 <math>\mu</math>m with accuracy better than 0.8 <math>\mu</math>m</p> <p>More than 500 measurements should be taken from a fully charged battery</p> <p>Carry case along with a comb, scissors, ACDC charger, sample holders, USB cable, operating manual and cd</p> <p>Power Input: 100~240VAC or 12VDC</p> <p>Warranty – 12 months</p>	Local/Imported		
2	Creep	1	<p>For feeding of lambs/kids</p> <p>Dimension: 4*4 feet</p> <p>Walled by Galvanized iron pipe</p> <p>Covered manger inside</p> <p>Equiped with feeding implements like Feeders (for hay, grain, fodder) and drinker</p>	Local/Imported		
3	Body measurement taps	3	<p><b>Large ruminants (cattle, buffalo) measuring tap (1 No.)</b></p> <p>Tape should be thick, durable, vinyl coated fiberglass that accurately estimates the weight of cattle in pounds or kilograms.</p> <p>The total length of the body/weight measuring tape is 2.5 meters. The weight range for beef cattle is 268kg to 1080kg and for dairy cattle is 35kg to 1000kg.</p> <p><b>Small ruminants (sheep and goat) measuring tap (2 Nos.)</b></p> <p>Tape should be thick, durable, vinyl coated fiberglass that accurately estimates the weight of sheep and goat)</p>	Local/Imported		
4	Hoof Trimmer (Large+ Small)	5	Hoof trimmer large and small	Local/Imported		

			For trimming hooves of cattle sheep, goat (farm animals) sharp hoof shears and a hoof knife Length: 20.5cm, Hand grip: 12.5cm, Mouth grip 2.5cm High quality galvanized iron			
5	Fodder Cutter	1	Heavy duty toka machine with sharp blades with electric 2-3 Hp motor fitted, 5 Foot length stand material iron and metal used can cuts more than 1000 kg per hours Best for Buffalo, cows and Goat Farms,	Local		
6	Spray race equipment	1	<b>sprinkler gate</b> 3-line sprinkler auto sensor system. With Monoblock Pump. Lowara European made. Hunter Sprinklers USA 12 Popup 06 <b>Chute</b> 3 line shoot 1½" pipe 14 gauge Post 2" pipe 12 gauge. Zinc coated 0.5micron coated sheet 20sft x 3ft x 6ft	Local/Imported		
7	Electric Shearer	1	Use for goat, sheep Electric type Special wool cutter with leaser sharp steel knife Cordless Rechargeable 750W 2800rpm Thermal overload switch US/European made	Local/Imported		
8	Milking Machine	1	Single Bucket, Double Cluster 40ltr bucket. Weighing scale Pneumatic pulsator. Electrostatic frame (current proof) USA/European/Equivalent origin	Local/Imported		
9	Cattle Crush	1	Square rod 14 gauge. Head auto-locking system Side exit gate on one side. Zinc coated 0.6micron Foot washing floor.1	Local		
<b>Department/Section of Livestock Products Technology and Dairy Technology</b>						
1	Gerber's Centrifuge	1	Multipurpose centrifuge for all types of butyrometers with digital LED display indicating the speed, time and temperature, Stainless steel housing, Programmable rotor speed from 600 to 1130 rpm, Programmable heater up to 68C, Programmable centrifugation time from 1 to 99 min, automatic interlocking safety lid, automatic shutdown in case of unbalance, automatic brake, Power supply:230V/50 ...60 Hz/1200 VA, Empty weight 26 kg, Total height with lid 460 mm, Warranty: 2 years Accessories: Head A: Centrifuge head (radius 260 mm) for a maximum of 36 butyrometers buckets and 18 Babcock buckets.	Imported		

			<p>butyrometers bucket and Babcock bucket, butyrometer stand.</p> <p>Head B: Centrifuge head (radius 190 mm) for a maximum of 8 Majonnier tubes, Majonnier tubes and stand.</p> <p>Head C: Centrifuge head (radius 190 mm) for a maximum of 6 buckets for solubility index tubes. Bucket for solubility index tubes, solubility index tubes.</p> <p>Water bath: Temperature range: up to 100°C, Connection value: 230 V/50 Hz, Capacity: 10-12 L, digital display of temp. Warranty: 2 years</p> <p>Butyrometers: Milk butyrometers (6 No): 0-10%, Cream butyrometers (6 No): 0-60%, Cheese butyrometers (6 No): 0-40%. Babcock bottle for cream (6 No):0-20%, Babcock bottle for cheese (6 No):0-60%. Corks for butyrometer: 50</p>			
2	Gerber's Tubes	1	<p>Gerber tubes: Milk butyrometers (1 No): 0-10%, Cream butyrometers (1 No): 0-60%, Cheese butyrometers (1 No): 0-40%.</p>	Imported		
3	Peeler	1	<p>Body made of SS square pipes, Drum made of SS with abrasive material applied on its inner surface, Peeler material inside the walls should be Emery stone, Rotating disc at the bottom of the drum, Opening for removal of the product after peeling, Water spray arrangement from the top, Suitable drive mechanism to rotate the disc. Feed hopper &amp; discharge hopper made in SS, Top lid, water and waste discharge pipe etc. Control Panel with timer for operation of the machine.</p>	Local/imported		
4	Baking Oven	1	<p><b>3 deck gas baking oven:</b> Each deck should work separately with separate control, Forced air convection, Chamber capacity mini. 60 liters, Stainless steel interior, Housing: stainless steel, LED digital display, Power failure control system, Real time clock, Voltage : 220V/50Hz, Power: 400W, Temperature : 0-300°C, mini Tray size : 400x600x300 mm, mini Product size: 1800x890x1890 mm, mini weight : 316 kg, Gas pressure : 2800. Warranty: 2 years Accessories: Dough making machine, proofer chamber, stainless steel moulds for bread, cakes, muffins, biscuits and pizza trays etc.</p>	Local/imported		
<b>Department of Meat Technology</b>						
1	Automatic scalar	1	<p><b>Specifications:</b> Function: An automatic machine that removes scales from fish Portable</p>	China/ Pakistan		

			<p>Material: Stainless steel/ Aluminum alloy</p> <p>Capacity: 30-50 fish at once</p> <p><b>Packing:</b></p> <p>The machine should be wrapped in plastic film first before packing to avoid moisture.</p> <p>Machines should be put in a strong iron case/wooden case, and lined with metal wire if necessary.</p>			
2	Feather plucking machine	1	<p><b>Specifications:</b></p> <p>Function: Removal of feathers of poultry birds</p> <p>Material: Stainless steel/ Galvanize steel</p> <p>Motor Power: 1500W-2200W</p> <p>Voltage: 110-220V ((In case of 110V, an additional transformer is needed)</p> <p>Weight: 40-60 kg</p> <p>Capacity: 3-8 Chickens</p> <p>Rotation Speed: 1400 r/Min</p> <p>Fingers: 90-185 rubber fingers</p> <p><b>Packing:</b></p> <p>The machine should be wrapped in plastic film first before packing to avoid moisture.</p> <p>Machines should be put in a strong iron case/wooden case, and lined with metal wire if necessary.</p>	China/ Pakistan		
3	Meat Slicer	1	<p><b>Specifications:</b></p> <p>Meat slicing machine and a freezer</p> <p>Function: Use to slice frozen meat</p> <p>Material: Stainless steel/ Aluminum alloy</p> <p>Power: 600-800W</p> <p>Voltage: 110-220V</p> <p>Cutting thickness: 0-18mm</p> <p>Blade diameter: 300-350mm</p> <p>Cutting Speed:30-50 piece / minute</p> <p>1 Deep freezer</p> <p><b>Packing:</b></p> <p>The machine should be wrapped in plastic film first before packing to avoid moisture.</p> <p>Machines should be put in a strong iron case/wooden case, and lined with metal wire if necessary.</p>	China/ Pakistan		
4	Butchering sets (knives etc.)	1	<p><b>Specifications:</b></p> <p>8 pieces butchering knife set</p> <p>Material: stainless steel blades</p> <p>8-10 Piece Cutlery Roll</p> <p>Cut-resistant glove (level 5)</p> <p>1 weighing scale with 50-70 kg capacity</p>	China/ Pakistan		
5	Display Chiller	1	<p>Volume (Litres): 1000-1500</p> <p>Operating Temperature: 0°C to +4°C</p> <p>No. of SS Hooks (pcs): 3-5</p> <p>No. of Adjustable Shelves: 4-5</p> <p>Cabinet Lighting LED</p> <p>Controller: Mechanical</p> <p>Refrigerant: R-134a</p> <p>Compressor: 1/2 HP</p>	Local/Impo rted		

			Voltage Supply: 220-240V 50/60Hz Gross Weight (Kgs): 175-190 Container Loading (20'/40'): 13/27			
6	Smoking unit	1	Automatic Meat smoking unit with automatic Controller, 500-700 Cooking Area, Meat Probes, Rain Cover for Outdoor	Local/Imported		

Signature: \_\_\_\_\_

Designation: \_\_\_\_\_

Dated: \_\_\_\_\_

Stamp: \_\_\_\_\_