



Tender No. 14/2023

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 **07.09.2023** at **11:00 AM** in the Cholistan University of Veterinary & Animal Sciences, Bahawalpur.
- 3.

Lot No.	Description	Bid Security Rs.
01	Lab Equipment - Department of Animal Reproduction	635860/-
02	Lab Equipment - Department of Animal Breeding and Genetics	180260/-

4. The Technical proposals will be opened on **07.09.2023 at 11:30 AM.** in Administration Block, Treasurer Office, Meeting Room, 1st Floor, Cholistan University of Veterinary and Animal Sciences, Bahawalpur.
5. The offered price should be inclusive of all taxes.
6. The rate must be quoted only in Pakistani Rupees.
7. Quoted rates must be valid for minimum **90** days.
8. 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.
9. 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.
10. The sample may be provided as & when required by Technical Committee.
11. Applicable Govt. levies will be deducted at source from the bill.
12. 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.
13. 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.
14. 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.

15. 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.
16. 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.
17. The bidding documents should be dropped in Tender Box in the office of the treasurer, 1st Floor, CUVAS, Bahawalpur, during five working days till the last date mentioned in tender notice.
18. Bids must be quoted on company's letter pad duly signed stamped by the bidder
19. Please attach NTN, GST and professional tax certificates with bidding documents.
20. Please attach the copy of your FBR Active taxpayer serial Number list for the current financial year.
21. Please read, sign all the tender documents, terms and conditions carefully and attached with your bidding documents.
22. Any further information if required can be obtained from Purchase Cell, CUVAS, Bahawalpur.
23. 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.
24. 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.
25. All pages of the tender document should be signed and stamped by the bidder.
26. CUVAS reserves the right to decrease /increase the quantity without consultation as and when required as per requirement and available budget.
27. CUVAS may ask the lowest bidder for any clarification/providing of documents for satisfactory evaluation of offer.
28. 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.
29. 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, 062-9255731



TECHNICAL PROPOSAL

TENDER NO. 14 / 2023

TENDER DOCUMENTS

LABORATORY EQUIPMENT

Sr. #	Name of item	Qty	Specifications	Origin/Make	Offered Specification with Make / Model and Origin
LOT 1: Department/Section of Animal Reproduction					
1	Electro-ejaculator	2	<p><u>A- Electro ejaculator Large</u> Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Electro ejaculator probe, Ø: 2/5" / 6.35 cm; length: 40 cm; 3 electrodes Manual adjustable pulse/pause ratio/pulsator, Control unit for pulse adjustment, Probe cable, Power supply cable, Remote control with cable, Power output with 4 different types of curves enabling balanced setting, according to the animal size and sensitivity, Probes insulation, for highest safety for the operator and the animal, Emergency power cut off system, Whole unit with robust plastic carry case for each part for mobile use Digital power control with microprocessor, 3-digit digital display for the indication of the power output (display values from 0–20 with a resolution of 0.5 units), Semen collection funnel and holder according to the large animal along with AV cone, Operational on 220 volts 12 V extended power supply source Connecting cable for external battery Time delay stabilizer</p> <p><u>B- Electro ejaculator Large</u> Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Electroejaculator probe, Ø: 1" / 2.54 cm; length: 16 cm; 3 electrodes Manual adjustable pulse/pause ratio/pulsator, Control unit for pulse adjustment, Probe cable, Power supply cable, Remote control with cable Power output with 4 different types of curves enabling balanced setting according to the animal size and sensitivity, Probes insulation, for highest safety for the operator and the animal, Emergency power cut off system, Whole unit with robust plastic carry case for each part for mobile use</p>	USA/Europe/Germany or Equivalent	

			<p>Digital power control with microprocessor, 3-digit digital display for the indication of the power output (display values from 0–20 with a resolution of 0.5 units), Semen collection funnel and holder according to the rams/bucks along with AV cone</p> <p>Operational on 220 volts, 12 V extended power supply source</p> <p>Connecting cable for external battery</p> <p>Time delay stabilizer</p>		
2	Artificial Insemination Accessories	1	<p>-Embryotomy Instruments set (Made up of stainless steel and containing the following items; Smellie Perforator, Beacham, Green Armlage, Braun, Braun Crainioclast, Kelly, Simpson Braun, Sims) for large and small animals one each</p> <p>-Vaginal Clamps (large and small)</p> <p>Thermos flask (Stainless steel and maintain the temperature for at least 6 hours)</p> <p>-Nose tongs made up of stainless steel</p> <p>-Wooden stand for LN containers (6ft x 3.5ft x 1ft)</p> <p>-Rinsing cans (Plastic cans 19L)</p> <p>-Holmes needles</p> <p>-Metal funnels for pouring LN into containers</p>	USA/Europe/Germany or Equivalent	
3	Artificial Vagina for buck	15	<p>(A) Artificial Vaginas for Bucks/ Rams: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Outer core of \approx 18-20 cm, Inner liner imported (Four rough neoprene inner liner and one plain neoprene inner liner), Valves and rings, AV cone (good quality latex), KY Jelly tube Pressure hand pump, Valves should not be loosen when hot water is to be injected in AV, Leather jacket for maintaining temperature of the AV accordingly</p> <p>(B) Artificial Vaginas for Bull: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Outer core of \approx 42-45cm cm, Inner liner imported (Four rough neoprene inner liner and one plain neoprene inner liner), Valves and rings, AV cone (good quality latex), KY Jelly tube Pressure hand pump, Valves should not be loosened when hot water is to be injected in AV, Leather jacket for maintaining temperature of the AV accordingly. With leather jacket</p>	USA/Europe/Germany or Equivalent	

			compatible to artificial vagina and collection vial cover		
4	Cold cabinet	1	<p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Horizontal cold cabinet customized for refrigerated workspace for frozen semen straw production. The worktable should be useable to house the semen straw filling and sealing system, or for the equilibration of straws. The horizontal cold cabinet should be used to conveniently lower the temperature of a workspace to refrigeration 4°C temperature at least. Ergonomic design for ample, easy access from all sides that can be completely covered with easy-to-use rolling covers. It should be easily movable from one to other place. With semen straw stainless steel racks (N=30) With stainless steel bubbler dish stand (N=3)</p>	USA/Europe/ Germany or Equivalent	
5	incubator temp control	1	<p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Temperature range ambient +5°C to 60 °C * 0.1 °C resolution, temp control, thermostat digital Incubator interior and exterior stainless steel Highly sensitive microprocessor PID-Temp control Extremely accurate, ideal for all applications with temperatures. Ambient +5 °C to +70 °C with natural convection, digital LED display of set and actual temperature Double door interior Glass and exterior stainless steel with integrated auto diagnostic system, integrated digital timer (1 minute up to 99 hours 59 minutes) Capacity 75 liters Complete with two stainless steel shelves operated on 220 V.</p>	USA/Europe/ Germany or Equivalent	
6	Automatic straw printing, filling and sealing machine	1	<p>A) Automatic Semen Straw printing Machine: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent) Should print the straw with advanced high adhesion ink Easy readable & affordable coding</p>	USA/Europe/ Germany or Equivalent	

			<p>Easy adjustable micrometric print – head fixture for top & bottom, front & back positioning of print-head for accurate results</p> <p>Should have automatic straw counting unit</p> <p>Printing capacity of 1 to 3 lines per straw</p> <p>Printing of barcodes, logos and special characters</p> <p>Clean and odorless working</p> <p>Print speed: approx. 3400-8000 straws/hour</p> <p>Electrical connection: 110/230 V, 50-60 Hz</p> <p>Unmatched neat and clear printing on 0.5- and 0.25-ml straws</p> <p>Up to 3 lines with a total of about 200 characters, even on Mini Straws</p> <p>Printing of barcode signs, logos and specific characters</p> <p>Immediately non-abrasive print</p> <p>Control via PC by a clear and user-friendly software</p> <p>Sequential numbers can be printed on straws</p> <p>Adjustable character fonts and graduations from micro to macro</p> <p>Freely eligible number of lines and of printing positions</p> <p>B) Straw Semen Filling Machine: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent)</p> <ul style="list-style-type: none"> -Filter and Vacuum Pump - Pump connection tube - 20 straws Clip 0.25ml - 15 straws Clip 0.5ml - 0.25ml filling nozzle with 15 pins - 0.5ml filling nozzle with 15 pins - 0.25ml bubbler with filling nozzle - 0.5ml bubbler with filling nozzle -straw comb (N=150) - bubbler dishes (N=500) <p>C) Semen Straw Sealing Machine: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent)</p>		
7	Liquid Nitrogen Cylinder	1 set each	<p>A) Should be of advanced country</p> <ul style="list-style-type: none"> -Made up of stainless-steel having capacity of 10-20L -Having six canisters according to container size -Six goblets of high quality that can bear the -196°C temperature -Goblets should be compatible to canister size -Daily Evaporation (0.10 L/Day) 	USA/Europe/ Germany or Equivalent	

			<ul style="list-style-type: none"> -Static Holding Time (93 Day) -Dynamic Holding Time (93 Days) -Max Capacity of 0.25 ml straw 1560 -Max Capacity of 0.5 ml straw 720 <p>B) Should be of advanced country</p> <ul style="list-style-type: none"> -Made up of stainless steel having capacity of 47-50L (N (Narrow neck)=2 and N (wide neck)=3) -Daily Evaporation rate 0.27 lit / day -With 10 Nos of Canisters Stainless Steel (double straw placement) -Static holding time : 180 Days, Maximum Capacity for 0.5 MI Straw 7300 -Twenty goblets of high quality that can bear the -196°C temperature -Goblets should be compatible to canaster size <p>C) Should be of advanced country</p> <ul style="list-style-type: none"> -Made up of stainless-steel having capacity of 100-150 liter and wide neck 18 inch and above (N=1) -Daily Evaporation rate 0.27 lit / day -With 6 Nos of Canisters Stainless Steel (double straw placement) -Static holding time : 30-60 Days, Maximum Capacity for 0.5 MI Straw 6000 -Goblets should be compatible to canaster size -SS stands for straw rack vapor freezing 		
8	Power Backup	1	<p>A) 5-10 KVA Generator</p> <p>60 Hz Power Rating: Standby Power Rating: 12 kVA / 10 kW Prime Power Rating: 11 kVA / 9 kW</p> <p>50 Hz Power Rating: Standby Power Rating: 10 kVA / 8 kW Prime Power Rating: 9 kVA / 7 kW</p> <p>The control panel, service doors and canopy board should adopt a waterproof design and effectively stop rain and dust intrusion</p> <p>There should be anti-vibration mountings between the engines, alternators and the base that significantly reduce the vibrations during operation, ensuring stable operation.</p> <p>The machines should be equipped with monitoring system, helping monitor the operation at real time.</p> <p>There should be the double protection for the cable connection</p>	USA/Europe/ Germany or Equivalent	

			<p>panel that lowers the probability of leakage caused by unintended touch or water intrusion and three-dimensional CABLING design for all the generator cables, providing reasonable, accurate and perfect protection.</p> <p>Automatic turn-on circuit breaker with under-voltage protection system inside maximally avoids mistakes. The radiator and high-voltage parts should be guarded to avoid accidents caused by touch.</p> <p>The control panel should be lockable and current changeover switch, voltage regulator and circuit breakers should be installed behind the door. Anti-vibration rubber mounts should be installed in the two sides of the doors to avoid damage to the machines when open the doors.</p> <p>There should be outer filling fuel port and lockable fuel-filling cap and micro-processor cored digital system.</p> <p>Connected with mains through ATS, which can help realize automatic transfer between the mains and the generators. There should be 8-12 hours based fuel tank in soundproof generator sets.</p> <p>B) UPS 6KVA with lithium Batteries and Solar Panel (N=1):</p> <p>C) CCTV cameras</p> <p>-UHD IP cameras, 5MP, (N=16) with NVR, LED (50 inches) and connection cables (250 meters)</p>		
9	Hot air oven	1	<p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). <u>-Stainless steel interior</u></p> <p>Volume ≈ 449 L</p> <p>Width 1040 mm</p> <p>Height 720 mm</p> <p>Depth 600 mm</p> <p>Max no. of grids 7-8</p> <p>Max loading grid per shelf ≈ 30 kg</p> <p>Max loading of chamber ≈ 300 kg</p> <p>Max. loading per slide-in drip tray ≈ 8 kg</p> <p>Max. loading per bottom-in drip tray ≈ 8 kg</p> <p><u>-Stainless steel exterior</u></p> <p>Textured stainless steel exterior</p> <p>Width ≈ 1224 mm</p> <p>Height ≈ 1247 mm</p> <p>Depth 784 mm</p> <p>Stainless steel grids electropolished</p> <p>Working temperature range should be ambient to +300°C</p>	USA/Europe/Germany or Equivalent	

			<p>Setting accuracy Up to 99.9: 0.1 / from 100: 0.5 °C Electrical load 220 Volts Full sight glass doors Door with lock Stainless steel grids with electropolished Power cable Time delay system stabilizer</p>		
10	Spectrophotometer	1	<p>Photometer for Sperm concentration measurements -Spectral range: 430 - 680 nm -Filter: 546 nm -LED light source -10 mm macro cuvettes -Analysis time: 2 seconds/sample -Digital display: result in billions of sperm/ml -Print out includes the following data: sperm quality and quantity, volume of diluent required and sperm per dose -Electrical connection: 110-230 V/50-60 Hz -Programs for semen concentration measurement of semen of several species and for extinction of light -Automatic calculation of extender volume and number of doses -Large touch screen, easy handling</p>	USA/Europe/Germany or Equivalent	
11	Semen Analyzer with Monitor	1	<p>Computer Assisted Semen Analyzer (CASA) with monitor Real time analysis of live images and video files. Very high sperm count per field. Highly efficient particle filter for accurate sperm differentiation. Research module having analysis profiles for many species including bovines, ovine, caprine and mice etc. Life time licensed. Should have complete range of software modules including motility, concentration, morphology, acrosome integrity, vitality mitochondrial activity, DNA integrity, DNA fragmentation. Compatible with common slides. Tripple band filter. Flexible display of results Languages: English Individually designed analysis reports with photos Easily transfer the data with USB port with PC (minimum 8 GB Ram, 500 GB SSD, 1TB External and 32 inch LED monitor) and accessories (mouse. Keyboard and cables etc.) Equipped with fluorescence and camera HAVING 200 frames per second.</p>	America/Canada/Europe/Japan origin or equivalent	

			<p>Preferably should also compatible with Nikon Phase contrast microscope (Eclipse Ci-L,709703 100-240v, 0.2A, 50/60Hz). Automatic calculation of the number of doses. Slide warmer. printer Should provide disposable slides, kits, staining for at least 1000 samples Combined with phase contrast microscope. Position nose piece with objective lenses plain semi apochromate 10-100X, Phase contrast lense objective-10-100X-Optional. DSLR high resolution camera for imaging with 32 GB card and accessories-optional. Should provide after sale service free of cost up to 2 years after installation.</p>		
12	Whelping sets	1	<p>Made up of stainless steel and surgical grade and should also have round tipped scissor 4.5 inches (n=2), Haemostates 6-1/4 inches (n=4), puppy colors (n=24), umbalical cord cutter (n=2), umbalical cord clamp (n=2), nitrile gloves packs (n=2), whelping box (n=2), digital thermameter (n=2), bulb syringe (n=2), POH Unwaxed dental floss (n=2), Allies forecep (n=2), Sponge forecep (n=2).</p>	Local/Imp orted (surgical grade) or equivalent	
13	Kelver training cow	1	<p>Kelver training cow for intrauterine (I.U.) therapy and artificial Insemination (A.I.) etc.</p>	Imported or equivalent	
14	Ultrasound Machine	1	<p>ultrasound machine should have. 17" or more High resolution rotatable LED monitor (preferably with touch screen). Built in image storage. Further data storage and image exchange transfer options (i.e. USB etc.) should be available At least 2 Probe connections (all active) Multi frequency 2.8-5.0 MHz Convex probe (compatible for both large and small ruminants).. Multi frequency 5.0-10 MHz Rectal/Linear Probe (compatible for both large and small ruminants). Measurement: distance, circumference, area, volume, heart rate, gestational week and EDD etc. Formula can be converted/editable to edit in measurements according to different animal species.</p>	America/ Canada/E urope/Jap an or equivalent	

			<p>Display mode: B, B+B, B+M, , M etc.</p> <p>User friendly backlight keyboard and with controls i.e. freeze, magnification etc.</p> <p>Option should be available to attach complete OPU assembly at later stages.</p> <p>Accessories- moveable trolley with option of height adjustment and have Cutout compatible to ultrasound machine (1No.), battery with battery charger (1No.), AC adopter and power cord (1No.), gel-10 liter, carrying bag (1No.), extension wire (1No.), briefcase for probes (2 No.).</p> <p>Optional:</p> <p>Complete OPU assembly (OPU probe, needles, suction unit etc.).</p> <p>OPU/TVA Probe (5-9Hz)-Slim design, easy and quick functioning, all metal needle/needle bushing accurate guidance, Instant needle visualization, needle track in the middle of the screen (graduated Biopsy line) (2mm follicles visualization), Compatible with short and long needles (12g – 20g Biopsy), Usable on many species: bovine, ovine, caprine, equine and wild life animals, Easy and fast cleaning and disinfection.</p> <p>Color Doppler preferable</p> <p>Digital thermal printer.</p> <p>UPS with at least 30-45 minutes backup.</p> <p>Stabilizer.</p>		
15	Instrument sterilizer	1	<p>Stainless Steel Electric Instrument Sterilizer (n=4)</p> <p>Size: 205 X 100 X 90(mm)</p> <p>Phase: Single Phase</p> <p>Voltage: 220 Volt</p> <p>Frequency: 50 Hz</p>	Local/ Imported or equivalent	
16	CCTV Camera	1	<p>UHD IP cameras, 5MP (N=5) with NVR, LED (50 inches), connection cables and installation in department.</p>	Imported or Equivalent	
LOT – 2: Department of Animal Breeding and Genetics					
1	QPCR Equipment	1	<p>The instrument is to be designed to complete a 40 cycle real-time PCR reaction in under <30 minutes.</p> <p>The Block should have insulations between each segment (3 or more segments)/3 zones for premium temperature accuracy.</p> <p>Instrument should must be cloud enabled to monitor real time results.</p> <p>The instrument can be monitored remotely from another mobile/laptop wirelessly (Real time)</p>	America/ Canada/ Europe/ Japan origin or equivalent	

			<p>The instrument should be compatible for 96 well block (0.2 ml), 8X12 strips or 96 well plates.</p> <p>Excitation/detection range: 450–600 nm/500–630 nm</p> <p>The instrument should must have Bright white LED multi-excitation source & decoupled (4 Decoupled Filters or better).</p> <p>Dye compatibility FAM™/SYBR™ Green, VIC™/JOE™/HEX™/Tet,ABY, /NED™/TAMRA™/Cy™3,jun, ROX™/Texas Red™</p> <p>Volume Range:10-100 ul</p> <p>Completely open system</p> <p>Max Ramp rate:6.5 C/S</p> <p>Remotely monitoring of runs, analyze sophisticated data sets in minutes, store data in a secure space, and sharing of results online, with Web browser–based software.</p> <p>The instrument software will should allow both TaqMan® and SYBR® chemistries in the same run by collecting different filter colors for PCR versus melt curve stages.</p> <p>The instrument can be run in standalone mode, without a computer attached and should have built in screen to view real time results on the instrument.</p> <p>The instrument should contain on-board storage capability with capacity of >2,000 standard absolute quantification run files and is designed for maximum run protection in case of network or power outage.</p> <p>Accessories:</p> <p>One Latest Version Branded Laptop/Desktop PC connected with UPS system</p>		
2	Nano drop spectro photometer	1	<p>Origin Should be USA/Europe</p> <p>Sample input should be minimum 0.3 - 2 µL or better,</p> <p>Absorbance Range: 0.1 to 150 A</p> <p>Stray light < 2% @ 240 nm using NaI</p> <p>System should have display of 7 in. Glove Compatible Touchscreen, 1024 x 600 pixels.</p> <p>Connections: 2x USB A, USB B, HDMI, Ethernet, WiFi</p> <p>Detection range dsDNA 5 ng/µL - 7,500 ng/µl</p> <p>Detection range BSA 0.15 mg/mL - 217 mg/ml</p>	America/ Canada/ Europe/ Japan origin or equivalent	

		<p>Minimum sample Size 0.3 μL Measure time for full scan range: 2.5 - 4.0 seconds Preprogrammed applications for (labeled) nucleic acids (DNA, RNA, oligos), (labeled) proteins, protein assays (Bradford, BCA), kinetics, OD600 and manual methods System should must have Auto Sample function starts automatically once sample arm is closed System should be Recalibration-free due to True Path Technology™ Independent from surface tension of sample due to Sample Compression Technology™ Sample Control and Blank Control for analysis of sample quality and identification of contaminants Control options: Onboard with built- in 7" Touchscreen, Computer and Tablet In & Output Ports 2x USB A, USB B, HDMI, Ethernet, Wi-Fi Built-in file server LIMS integration through REST API Light source Xenon flash lamp</p>	
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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. 10 million and above each	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. 14 / 2023

TENDER DOCUMENTS

LABORATORY EQUIPMENT

Sr. #	Name of item	Qty	Specifications	Origin/ Make	Unit price inclusive all taxes (M)	Total price inclusive all taxes (M)
LOT 1: Department/Section of Animal Reproduction						
1	Electro-ejaculator	2	<p align="center"><u>C- Electro ejaculator Large</u></p> <p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Electro ejaculator probe, Ø: 2/5" / 6.35 cm; length: 40 cm; 3 electrodes</p> <p>Manual adjustable pulse/pause ratio/pulsator, Control unit for pulse adjustment, Probe cable, Power supply cable, Remote control with cable, Power output with 4 different types of curves enabling balanced setting, according to the animal size and sensitivity, Probes insulation, for highest safety for the operator and the animal, Emergency power cut off system, Whole unit with robust plastic carry case for each part for mobile use</p> <p>Digital power control with microprocessor, 3-digit digital display for the indication of the power output (display values from 0–20 with a resolution of 0.5 units), Semen collection funnel and holder according to the large animal along with AV cone, Operational on 220 volts</p> <p>12 V extended power supply source</p> <p>Connecting cable for external battery</p> <p>Time delay stabilizer</p> <p align="center"><u>D- Electro ejaculator Large</u></p> <p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Electroejaculator probe, Ø: 1" / 2.54 cm; length: 16 cm; 3 electrodes</p> <p>Manual adjustable pulse/pause ratio/pulsator, Control unit for pulse adjustment, Probe cable, Power supply cable, Remote control with cable</p> <p>Power output with 4 different types of curves enabling balanced setting according to the animal size and sensitivity, Probes insulation, for highest safety for the operator and the animal, Emergency power cut off system, Whole unit with robust plastic carry case for each part for mobile use</p> <p>Digital power control with microprocessor, 3-digit digital display for the indication of the power output (display values from 0–20 with a resolution of 0.5 units), Semen</p>	USA/Europe/ Germany or Equivalent		

			collection funnel and holder according to the rams/bucks along with AV cone Operational on 220 volts, 12 V extended power supply source Connecting cable for external battery Time delay stabilizer			
2	Artificial Insemination Accessories	1	-Embryotomy Instruments set (Made up of stainless steel and containing the following items; Smellie Perforator, Beacham, Green Armlage, Braun, Braun Crainioclast, Kelly, Simpson Braun, Sims) for large and small animals one each -Vaginal Clamps (large and small) Thermos flask (Stainless steel and maintain the temperature for at least 6 hours) -Nose tongs made up of stainless steel -Wooden stand for LN containers (6ft x 3.5ft x 1ft) -Rinsing cans (Plastic cans 19L) -Holmes needles -Metal funnels for pouring LN into containers	USA/Europe/ Germany or Equivalent		
3	Artificial Vagina for buck	15	(C) Artificial Vaginas for Bucks/Rams: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Outer core of \approx 18-20 cm, Inner liner imported (Four rough neoprene inner liner and one plain neoprene inner liner), Valves and rings, AV cone (good quality latex), KY Jelly tube Pressure hand pump, Valves should not be loosen when hot water is to be injected in AV, Leather jacket for maintaining temperature of the AV accordingly (D) Artificial Vaginas for Bull: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Outer core of \approx 42-45cm cm, Inner liner imported (Four rough neoprene inner liner and one plain neoprene inner liner), Valves and rings, AV cone (good quality latex), KY Jelly tube Pressure hand pump, Valves should not be loosened when hot water is to be injected in AV, Leather jacket for maintaining temperature of the AV accordingly. With leather jacket compatible to artificial vagina and collection vial cover	USA/Europe/ Germany or Equivalent		
4	Cold cabinet	1	Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Horizontal cold cabinet customized for refrigerated workspace for frozen semen straw production. The worktable should be useable to house	USA/Europe/ Germany or Equivalent		

			<p>the semen straw filling and sealing system, or for the equilibration of straws.</p> <p>The horizontal cold cabinet should be used to conveniently lower the temperature of a workspace to refrigeration 4°C temperature at least.</p> <p>Ergonomic design for ample, easy access from all sides that can be completely covered with easy-to-use rolling covers.</p> <p>It should be easily movable from one to other place.</p> <p>With semen straw stainless steel racks (N=30)</p> <p>With stainless steel bubbler dish stand (N=3)</p>			
5	incubator temp control	1	<p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). Temperature range ambient +5°C to 60 °C * 0.1 °C resolution, temp control, thermos state digital</p> <p>Incubator interior and exterior stainless steel</p> <p>Highly sensitive microprocessor PID-Temp control</p> <p>Extremely accurate, ideal for all applications with temperatures.</p> <p>Ambient +5 °C to +70 °C with natural convection, digital LED display of set and actual temperature</p> <p>Double door interior</p> <p>Glass and exterior stainless steel with integrated auto diagnostic system, integrated digital timer (1 minute up to 99 hours 59 minutes)</p> <p>Capacity 75 liters</p> <p>Complete with two stainless steel shelves operated on 220 V.</p>	USA/Europe/ Germany or Equivalent		
6	Automatic straw printing, filling and sealing machine	1	<p>A) Automatic Semen Straw printing Machine: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent)</p> <p>Should print the straw with advanced high adhesion ink</p> <p>Easy readable & affordable coding</p> <p>Easy adjustable micrometric print – head fixture for top & bottom, front & back positioning of print-head for accurate results</p> <p>Should have automatic straw counting unit</p> <p>Printing capacity of 1 to 3 lines per straw</p> <p>Printing of barcodes, logos and special characters</p> <p>Clean and odorless working</p> <p>Print speed: approx. 3400-8000 straws/hour</p> <p>Electrical connection: 110/230 V, 50-60 Hz</p>	USA/Europe/ Germany or Equivalent		

			<p>Unmatched neat and clear printing on 0.5- and 0.25-ml straws Up to 3 lines with a total of about 200 characters, even on Mini Straws Printing of barcode signs, logos and specific characters Immediately non-abrasive print Control via PC by a clear and user-friendly software Sequential numbers can be printed on straws Adjustable character fonts and graduations from micro to macro Freely eligible number of lines and of printing positions</p> <p>B) Straw Semen Filling Machine: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent)</p> <ul style="list-style-type: none"> -Filter and Vacuum Pump - Pump connection tube - 20 straws Clip 0.25ml - 15 straws Clip 0.5ml - 0.25ml filling nozzle with 15 pins - 0.5ml filling nozzle with 15 pins - 0.25ml bubbler with filling nozzle - 0.5ml bubbler with filling nozzle -straw comb (N=150) - bubbler dishes (N=500) <p>C) Semen Straw Sealing Machine: Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent)</p>			
7	Liquid Nitrogen Cylinder	1 set each	<p>D) Should be of advanced country -Made up of stainless-steel having capacity of 10-20L -Having six canasters according to container size -Six goblets of high quality that can bear the -196°C temperature -Goblets should be compatible to canaster size -Daily Evaporation (0.10 L/Day) -Static Holding Time (93 Day) -Dynamic Holding Time (93 Days) -Max Capacity of 0.25 ml straw 1560 -Max Capacity of 0.5 ml straw 720</p> <p>E) Should be of advanced country -Made up of stainless steel having capacity of 47-50L (N (Narrow neck)=2 and N (wide neck)=3) -Daily Evaporation rate 0.27 lit / day -With 10 Nos of Canisters Stainless Steel (double straw placement) -Static holding time : 180 Days, Maximum Capacity for 0.5 Ml Straw 7300 -Twenty goblets of high quality that can bear the -196°C temperature</p>	USA/Europe/ Germany or Equivalent		

			<p>-Goblets should be compatible to canaster size</p> <p>F) Should be of advanced country</p> <p>-Made up of stainless-steel having capacity of 100-150 liter and wide neck 18 inch and above (N=1)</p> <p>-Daily Evaporation rate 0.27 lit / day</p> <p>-With 6 Nos of Canisters Stainless Steel (double straw placement)</p> <p>-Static holding time : 30-60 Days, Maximum Capacity for 0.5 MI Straw 6000</p> <p>-Goblets should be compatible to canaster size</p> <p>-SS stands for straw rack vapor freezing</p>			
8	Power Backup	1	<p>D) 5-10 KVA Generator</p> <p>60 Hz Power Rating: Standby Power Rating: 12 kVA / 10 kW Prime Power Rating: 11 kVA / 9 kW</p> <p>50 Hz Power Rating: Standby Power Rating: 10 kVA / 8 kW Prime Power Rating: 9 kVA / 7 kW</p> <p>The control panel, service doors and canopy board should adopt a waterproof design and effectively stop rain and dust intrusion</p> <p>There should be anti-vibration mountings between the engines, alternators and the base that significantly reduce the vibrations during operation, ensuring stable operation.</p> <p>The machines should be equipped with monitoring system, helping monitor the operation at real time.</p> <p>There should be the double protection for the cable connection panel that lowers the probability of leakage caused by unintended touch or water intrusion and three-dimensional CABLING design for all the generator cables, providing reasonable, accurate and perfect protection.</p> <p>Automatic turn-on circuit breaker with under-voltage protection system inside maximally avoids mistakes.</p> <p>The radiator and high-voltage parts should be guarded to avoid accidents caused by touch.</p> <p>The control panel should be lockable and current changeover switch, voltage regulator and circuit breakers should be installed behind the door.</p> <p>Anti-vibration rubber mounts should be installed in the two sides of the doors to avoid damage to the machines when open the doors.</p>	USA/Europe/ Germany or Equivalent		

			<p>There should be outer filling fuel port and lockable fuel-filling cap and micro-processor cored digital system. Connected with mains through ATS, which can help realize automatic transfer between the mains and the generators. There should be 8-12 hours based fuel tank in soundproof generator sets.</p> <p>E) UPS 6KVA with lithium Batteries and Solar Panel (N=1):</p> <p>F) CCTV cameras</p> <p>-UHD IP cameras, 5MP, (N=16) with NVR, LED (50 inches) and connection cables (250 meters)</p>			
9	Hot air oven	1	<p>Should be from advanced countries (America/ Canada/Europe/Japan origin or equivalent). <u>-Stainless steel interior</u></p> <p>Volume ≈ 449 L Width 1040 mm Height 720 mm Depth 600 mm Max no. of grids 7-8 Max loading grid per shelf ≈ 30 kg Max loading of chamber ≈ 300 kg Max. loading per slide-in drip tray ≈ 8 kg Max. loading per bottom-in drip tray ≈ 8 kg</p> <p><u>-Stainless steel exterior</u></p> <p>Textured stainless steel exterior Width ≈ 1224 mm Height ≈ 1247 mm Depth 784 mm Stainless steel grids electropolished Working temperature range should be ambient to +300°C Setting accuracy Up to 99.9: 0.1 / from 100: 0.5 °C Electrical load 220 Volts Full sight glass doors Door with lock Stainless steel grids with electropolished Power cable Time delay system stabilizer</p>	USA/Europe/ Germany or Equivalent		
10	Spectrophotometer	1	<p>Photometer for Sperm concentration measurements</p> <p>-Spectral range: 430 - 680 nm</p> <p>-Filter: 546 nm</p> <p>-LED light source</p> <p>-10 mm macro cuvettes</p> <p>-Analysis time: 2 seconds/sample</p> <p>-Digital display: result in billions of sperm/ml</p> <p>-Print out includes the following data: sperm quality and quantity, volume of diluent required and sperm per dose</p> <p>-Electrical connection: 110-230 V/50-60 Hz</p> <p>-Programs for semen concentration measurement of semen of several species and for extinction of light</p>	USA/Europe/ Germany or Equivalent		

			-Automatic calculation of extender volume and number of doses -Large touch screen, easy handling			
11	Semen Analyzer with Monitor	1	<p>Computer Assisted Semen Analyzer (CASA) with monitor Real time analysis of live images and video files. Very high sperm count per field. Highly efficient particle filter for accurate sperm differentiation. Research module having analysis profiles for many species including bovines, ovine, caprine and mice etc. Life time licensed. Should have complete range of software modules including motility, concentration, morphology, acrosome integrity, vitality mitochondrial activity, DNA integrity, DNA fragmentation.</p> <p>Compatible with common slides. Tripple band filter. Flexible display of results Languages: English Individually designed analysis reports with photos Easily transfer the data with USB port with PC (minimum 8 GB Ram, 500 GB SSD, 1TB External and 32 inch LED monitor) and accessories (mouse. Keyboard and cables etc.) Equipped with fluorescence and camera HAVING 200 frames per second. Preferably should also compatible with Nikon Phase contrast microscope (Eclipse Ci-L,709703 100-240v, 0.2A, 50/60Hz). Automatic calculation of the number of doses. Slide warmer. printer Should provide disposable slides, kits, staining for at least 1000 samples Combined with phase contrast microscope. Position nose piece with objective lenses plain semi apochromate 10-100X, Phase contrast lense objective-10-100X-Optional. DSLR high resolution camera for imaging with 32 GB card and accessories-optional. Should provide after sale service free of cost up to 2 years after installation.</p>	America/Canada/Europe/Japan origin or equivalent		
12	Whelping sets	1	Made up of stainless steel and surgical grade and should also have round tipped scissor 4.5 inches (n=2), Haemostates 6-1/4 inches (n=4), puppy colors (n=24), umbalical cord cutter (n=2), umbalical cord clamp (n=2), nitrile gloves packs (n=2), whelping box (n=2), digital thermameter (n=2), bulb syringe (n=2),	Local/Imported (surgical grade) or equivalent		

			POH Unwaxed dental floss (n=2), Allies forecep (n=2), Sponge forecep (n=2).			
13	Kelver training cow	1	Kelver training cow for intrauterine (I.U.) therapy and artificial Insemination (A.I.) etc.	Imported or equivalent		
14	Ultrasound Machine	1	<p>ultrasound machine should have.</p> <p>17" or more High resolution rotatable LED monitor (preferably with touch screen).</p> <p>Built in image storage.</p> <p>Further data storage and image exchange transfer options (i.e. USB etc.) should be available</p> <p>At least 2 Probe connections (all active)</p> <p>Multi frequency 2.8-5.0 MHz Convex probe (compatible for both large and small ruminants)..</p> <p>Multi frequency 5.0-10 MHz Rectal/Linear Probe (compatible for both large and small ruminants).</p> <p>Measurement: distance, circumference, area, volume, heart rate, gestational week and EDD etc. Formula can be converted/editable to edit in measurements according to different animal species.</p> <p>Display mode: B, B+B, B+M, M etc.</p> <p>User friendly backlight keyboard and with controls i.e. freeze, magnification etc.</p> <p>Option should be available to attach complete OPU assembly at later stages.</p> <p>Accessories- moveable trolley with option of height adjustment and have Cutout compatible to ultrasound machine (1No.), battery with battery charger (1No.), AC adopter and power cord (1No.), gel-10 liter, carrying bag (1No.), extension wire (1No.), briefcase for probes (2 No.).</p> <p>Optional:</p> <p>Complete OPU assembly (OPU probe, needles, suction unit etc.). OPU/TVA Probe (5-9Hz)-Slim design, easy and quick functioning, all metal needle/needle bushing accurate guidance, Instant needle visualization, needle track in the middle of the screen (graduated Biopsy line) (2mm follicles visualization), Compatible with short and long needles (12g – 20g Biopsy), Usable on many species: bovine, ovine, caprine, equine and wild life animals, Easy and fast cleaning and disinfection. Color Doppler preferable</p> <p>Digital thermal printer.</p> <p>UPS with at least 30-45 minutes backup.</p> <p>Stabilizer.</p>	America/Canada/Europe/Japan or equivalent		
15	Instrument sterilizer	1	Stainless Steel Electric Instrument Sterilizer (n=4)	Local/Imported		

			Size: 205 X 100 X 90(mm) Phase: Single Phase Voltage: 220 Volt Frequency: 50 Hz	or equivalent		
16	CCTV Camera	1	UHD IP cameras, 5MP (N=5) with NVR, LED (50 inches), connection cables and installation in department.	Imported or Equivalent		
LOT – 2: Department of Animal Breeding and Genetics						
1	QPCR Equipment	1	<p>The instrument is to be designed to complete a 40 cycle real-time PCR reaction in under <30 minutes.</p> <p>The Block should have insulations between each segment (3 or more segments)/3 zones for premium temperature accuracy.</p> <p>Instrument should must be cloud enabled to monitor real time results.</p> <p>The instrument can be monitored remotely from another mobile/laptop wirelessly (Real time)</p> <p>The instrument should be compatible for 96 well block (0.2 ml), 8X12 strips or 96 well plates.</p> <p>Excitation/detection range: 450–600 nm/500–630 nm</p> <p>The instrument should must have Bright white LED multi-excitation source & decoupled (4 Decoupled Filters or better).</p> <p>Dye compatibility FAM™/SYBR™ Green, VIC™/JOE™/HEX™/Tet,ABY, /NED™/TAMRA™/Cy™3,jun, ROX™/Texas Red™</p> <p>Volume Range:10-100 ul</p> <p>Completely open system</p> <p>Max Ramp rate:6.5 C/S</p> <p>Remotely monitoring of runs, analyze sophisticated data sets in minutes, store data in a secure space, and sharing of results online, with Web browser–based software.</p> <p>The instrument software will should allow both TaqMan® and SYBR® chemistries in the same run by collecting different filter colors for PCR versus melt curve stages.</p> <p>The instrument can be run in standalone mode, without a computer attached and should have built in screen to view real time results on the instrument.</p> <p>The instrument should contain on-board storage capability with capacity of >2,000 standard absolute quantification run files and is designed for maximum run protection in case of network or power outage.</p>	America/ Canada/ Europe/ Japan origin or equivalent		

			<p>Accessories:</p> <p>One Latest Version Branded Laptop/Desktop PC connected with UPS system</p>			
2	Nano drop spectro photometer	1	<p>Origin Should be USA/Europe Sample input should be minimum 0.3 - 2 µL or better, Absorbance Range: 0.1 to 150 A Stray light < 2% @ 240 nm using NaI System should have display of 7 in. Glove Compatible Touchscreen, 1024 x 600 pixels. Connections: 2x USB A, USB B, HDMI, Ethernet, WiFi Detection range dsDNA 5 ng/µL - 7,500 ng/µl Detection range BSA 0.15 mg/mL - 217 mg/ml Minimum sample Size 0.3 µL Measure time for full scan range: 2.5 - 4.0 seconds Preprogrammed applications for (labeled) nucleic acids (DNA, RNA, oligos), (labeled) proteins, protein assays (Bradford, BCA), kinetics, OD600 and manual methods System should must have Auto Sample function starts automatically once sample arm is closed System should be Recalibration-free due to True Path Technology™ Independent from surface tension of sample due to Sample Compression Technology™ Sample Control and Blank Control for analysis of sample quality and identification of contaminants Control options: Onboard with built-in 7" Touchscreen, Computer and Tablet In & Output Ports 2x USB A, USB B, HDMI, Ethernet, Wi-Fi Built-in file server LIMS integration through REST API Light source Xenon flash lamp</p>	America/ Canada/ Europe/ Japan origin or equivalent		