

PROJECT DIRECTOR MOBILE DIAGNOSTIC SERVICES FOR BREAST CANCER IN SINDH & IMEDICAL SUPERINTENDENT SINDH GOVT. HOSPITAL KORANGI KARACHI.

TENDER DOCUMENT

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SUPPLY OF MOBILE DIAGNOSTIC UNITS EQUIPPED WITH MEDICAL EQUIPMENTS INCLUDING MAMMOGRAPHY MACHINE IN SINDH

DATE OF OPENING: 15TH OCTOBER, 2015.

Tender PART – 1 (Vehicle)

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<u>Procurement of Vehicle for Mobile Diagnostic Services for Breast Cancer in Sindh</u> for the Financial year 2015-2016 (Under ADP Scheme no.)

TENDER ENQUIRY: PD/MDSBC/1050-54/- DUE ON: 15-10-2015.

Time of receipt of Tender 11:00 AM Time of opening of Tender 12:00 NOON

Offer shall remain open for 180 days from the date of opening. The Tenderer shall quote their prices (C.I.F Price) for complete Medical Equipment. Price should be quoted in Figure & words failing which the offer will be ignored.

ltem no.	Description of Stores/Specification	Qty
	<u>Vehicle</u> required for Mobile Diagnostic Services for Breast Cancer in Sindh	05 Nos.

Type of Bidding:

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 As per SPPRA Rule 15 (a) "International Competitive Bidding" will be govern in this tender.

Bidder should have a joint venture/consortium with local firm for supply of vehicle and proper back up support during and after warranty.

Local firm/s (in joint venture) should be capable enough to execute such projects. Local Firm must have a full fledge setup (workshop with qualified Engineers) to provide after sale service during and after warranty.

2. As per SPPRA Rule 46(2), Single Stage-Two Envelope Procedure shall be followed. This is as follows:

i. The bid shall comprise of a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal. The envelopes shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion.

- ii. Initially, only the envelope marked "TECHNICAL PROPOSAL" shall be opened.
- iii. The envelope marked as "FINANCIAL PROPOSAL" shall be retained in the custody of the procuring agency without being opened.
- iv. The procuring agency shall evaluate the technical proposal as per tender terms and condition without reference to the price and reject any proposal which does not conform to the specified requirements

- v. During the technical evaluation no amendments in the technical proposal shall be permitted.
- vi. After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted bids only. The financial proposal of bids found technically nonresponsive shall be returned un-opened to the respective bidders.
- vii. The bid found to be the lowest evaluated bid shall be accepted.

Bidding Details

- All the bids must:
 - Be accompanied by a bid security of 2 % quoted price in form of pay order/demand draft /call deposit/bank guaranty in the favor of Project Director, Mobile Diagnostic Services for Breast Cancer in Sindh.
 - be submitted along with the complete required documents as per tender terms and condition, bid security etc.,
 - be delivered on 15-10-2015 at 11:00 AM
- ii. The Technical bids will be publicly opened on 15-10-2015 at 12:00 NOON.
- iii. Bidders must submit bids on the basis of complete Mobile Unit including Medical Equipment. Failure to meet this condition will cause disqualification of the bidder. Bidders shall submit bids which comply with the Bidding Documents. Alternative bids will not be considered.
- iv. The Purchaser will not be responsible for any costs or expenses incurred by bidders in connection with the preparation or delivery of bids.

Scope and Requirements

Supply of Mobile Diagnostic Services for Breast Cancer in Sindh Specification and Quantity attached Annexure "A" Note- A sample layout plan attached.

Evaluation

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Evaluation of Technical Proposals

- i. Technical Proposal will be evaluated as per tender specification, required documents and tender terms and conditions.
- ii. Evaluation will be done based on documentation submitted and product demonstrations/presentations

Evaluation of Financial Proposals

The financial proposals of only the bidders short listed on the basis of technical evaluations will be opened and compared in terms of cost effectiveness. The bid found to be the lowest evaluated bid shall be accepted.

GENERAL TERMS & CONDITIONS:

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Following General Terms & Conditions should be followed.

- Original purchase receipt must be enclosed with the technical offer.
- ii. Copy of bid security without price must be attached with the technical offer. Failing which the offer will be ignored.
- iii All DDP prices quoted must include all custom duties & Taxes applicable, such as GST, Income Tax, etc.
- iv. Bidder may form a joint venture for medical diagnostic equipment/computers etc. of two or more local firms. An Agreement Deed to that effect, legally executed and signed by all the partners shall be submitted with the Technical proposal.
- v. The main bidder should be authorized to, be in charge, incur liabilities, receive payments and receive instructions for and on behalf of any or all partners. A power of attorney to that effect, legally executed, signed by all the partners shall be submitted with the technical proposal.
- vi. Offer must be complete in all respect as per mentioned specification and details of work.
- vii. Offer should complete in all respects and equipment should be compatible with the mobile vehicle for mobile diagnostic purpose.
- viii. Installation of equipment in the Mobile Unit its maintenance during warranty will be responsibility of the bidder.
- ix. Warranty and undertaking regarding availability of spare parts for next ten years may also be confirmed by the bidder.
- x. The operational manual and original catalogue must accompany all quoted Medical equipment.
- xi. The successful bidder (including all firm in joint venture) will bound to train nominated technical personnel to operate the installed equipment in the Mobile Diagnostic unit.
- xii. Profile of bidder (all firm in joint venture) with details of technical staff, address of the Bio-Medical workshop in Karachi past work experience.
- xiii. Complete details of quoted Medical Equipment including technical specification, Manufacturer's details and country of origin.

- xiv. List of bidder's major national clientele must be attached with the technical proposal.
- x1. Company registration certificate (all firms in joint venture) must be attached with technical proposal.
- xvi. Audited report of last three years or Copy of Income Tax Returns of last three years of main bidder must be attached with technical proposal.
- xvii. The main bidder should furnish bank certificate showing their financial capability to execute the project and must have done business of medical equipment more than Rs. 250 million in the last year.
- xviii In case if one bidder is quoting for the medical equipment and vehicle then Financial proposal should have separate quote in separate sealed envelopes for
 - i. Vehicle (vehicle and its fabrication) as per specification and five years maintenance warranty.
 - ii. Medical Equipment (as per specification and five years maintenance warranty).

These two envelops shall be placed in an outer envelope marked as Financial proposal. The total of both financial proposal (vehicle and Medical Equipment) will be considered as total bid price.

- xix. Quality standards. USA/western Europe/Japan with their respective standards MDD (CE) compliance/MHLW Japan/FDA 510K approved.
- xx. The rates should be written in figures as well as in words.
- xxi. The Tender shall be checked for any arithmetic errors which shall be rectified, as follows:
 - a. If there is a discrepancy between the amount in figures and the amount in words shall govern.
 - b. If there is a discrepancy between the unit rate and the total price the unit rate as quoted shall govern and the total price shall be corrected.
- xxii. The successful bidder should complete the delivery of Medical Equipment within 120 days from the date of award of contract.
- xxiii. Tenders must be filled in with Blue or black ink in the column provided and on separate letterhead duly signed.
- xxiv. The tenders must be free from erasing, cutting and over writing. In case of erasing, cutting and over writing, authorized person should initial it.

Purchaser's right to vary quantities at time of award.

The purchaser reserves the right to increase/decrease or delete the quantities of goods etc at the time of award of contract and also reserves the right to enhance the quantity by 25% of goods and services originally specified in the schedule of requirements without any change in unit price of other terms and conditions of goods at any time during contract period.

Notification of Award/Advance contract:

Prior to the expiration of the period of bid validity, the purchaser will notify the successful bidder in writing, delivery by hand or by register letter by cable to be confirmed in writing by register letter that is bid has been accepted.

The notification of award will constitute the formation of the contract.

Award of contract and contract agreement

Subject to the fulfillment of all codal formalities, the purchaser will award the contract to the successful bidder whose bid has been determined to be qualified to perform the contract satisfactory.

Performance Security

The successful Tenderer will have to deposit with the purchase security deposit as under in shape of call deposit/pay order/bank guaranty at the rate of 2.5% of the value of contract.

Starp Duty for Award of Contract:

Service charges @ 0.35% of the value of the contract will realized /charged by the AG Sindh, while making payment to the contractors for award of each contract

Undertaking

That I/We agree whether our tender accepted for total, partial or enhanced quantity for all or any single item. I/We also agreed to supply and accept the said item at the rates for the supply of contracted quantity within the stipulated period shown in the contract.

IAVe undertake that; if any of the information submitted in accordance to this tender enquiry found incorrect our contract may be cancelled at any stage on our cost and risk.

CERTIFICATE

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We guarantee to supply the stores exactly in accordance with the requirement specified in the invitation to this tender.

Description	YES/NO/Deviation
Mobile Diagnostic Services for Breast Cancer	
The vehicles/bus chassis shall conform to motor vehicle Construction and Use Regulation Road Vehicles Lighting and Vehicles Rear Fog Lamps Regulations	
BASE VEHICLE/ BUS CHASSIS	
300bhp /220KWMinimum for base vehicle /207hp,210 PS minimum for bus chassis EURO2/3 Diesel Engine Specification Manual gear box Long range fuel tanks 10001200 Liters preferred Air Conditioned preferred Cab to Seat 5 persons minimum/ Bus chassis	
Body Construction Length of Body should be 10,000mm to 11600mm Width of Body should be 2450 to 3,000mm Height of completed solution should be 2450mm to 4000mm Body designed to cope with climatic extremities should be - 15to +50°C	
All additional steel fabrication should be galvanized	-
Air Suspension required as clinic should be used over UN-even, Road surfaces and special addition of air suspension.	
DesignThe Mobile Mammography and General Clinic should be designed with a single entrance, which should further split into two separate, examination rooms.One room to be equipped as a mammography and other examinationClinic with X-ray (as per PNRA standards of radiation protection lead lining glass etc.) And the second as a general clinic capable of general examination of patients with the added benefit of Gynecological examinations.SkeletonThe skeleton of superstructure and body frame should be made of galvanized channel, mild steel sheet and square or rectangular galvanized steel tube.Insulation	
	Mobile Diagnostic Services for Breast Cancer The vehicles/bus chassis shall conform to motor vehicle Construction and Use Regulation Road Vehicles Lighting and Vehicles Rear Fog Lamps Regulations BASE VEHICLE/ BUS CHASSIS 4x4 or 4X2 chassis minimum 18000 GVW 300bhp /220KWMinimum for base vehicle /207hp,210 PS minimum for bus chassis EURO2/3 Diesel Engine Specification Manual gear box Long range fuel tanks 10001200 Liters preferred Air Conditioned preferred Cab to Seat 5 persons minimum/ Bus chassis Right Hand Drive Body Construction Length of Body should be 10,000mm to 11600mm Width of Body should be 2450 to 3,000mm Height of completed solution should be 2450mm to 4000mm Body designed to cope with climatic extremities should be -15to +50°C All additional steel fabrication should be galvanized Air Suspension required as clinic should be used over UN-even, Road surfaces and special addition of air suspension. Design The Mobile Mammography and General Clinic should be designed with a single entrance, which should further split into two separate, examination rooms. One room to be equipped as a mammography and other examination examination Clinic wi

TECHNICAL SPECIFICATION

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	resistant composite material sheets /Marine MDF dual side	1
	lamination after sandwich construction with glass wool or pu	
	foam insulation. Celling & walls also should be made of same	
	sandwich construction material.	9
	ACESS	
	3 doors should be provided i.e. driver + patient + emergency.	
	Two or three tool boxes under the deck for generator, AC	
	Generator and water and disseltants at 5-2-2	
	Generator and water and diesel tanks etc. Front and rear body	
	of bus should be made of GRP/ABS. patient entrance door	
	should be wide enough to allow wheel chair with hydraulic	
	door closer.	
	WHEEL CHAIR RAMP	
	Bi-fold deluxe wheelchair ramp with made of aluminum sheet	
	*with carry handle	
	*With 4 casters	
	*Usable width: 70cm	
	*Outside Width: 77cm	
	*Length: 2'-8'	
	*Ramp should be in Heavy duty design,	
	Entrance step & window	
	Entrance steps should be covered with aluminum chequered	
	plate. Wind screen & windows should be triple curved glasses.	
	Side window should be made of aluminum window frame and	
	fitted with tinted toughened glasses.	
	A listing of equipment is provided for in this document	
D	Roof and floor construction, thickness etc.	
	Roof :	
	Roof should be constructed from a 97mm panel, a composite	
	panel made up of GRP, marine grade plywood and high	
	density insulation / Roof should be constructed from a 97mm	
	panel with sandwich type galvanized material of body	
	skeleton, a composite panel made up of GRP/ABS/Composite	
	material, marine grade plywood and high density insulation(PU	
	or glass wool)	
	3mm outer skin GRP /1.6 mm galvanized mild steel sheet	
	12mm marine grade waterproof plywood	
	67mm Styrofoam/PU foam/glass wool sheet	
J.	12mm marine grade waterproof plywood	
	3mm Inner skin GRP/ABS/Composite fire and heat resistant/	
	material	
	Roof should be painted in two pack commercial grade paint	
	to reflect heat and corrosion resistant	
	to reflect heat and corrosion resistant Floor : Base of floor	
	Floor : Base of floor	

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	sheet covered by imported Marine ply wood and finally	/
	inished with imported vinyl flooring having antibacteria	
	property.	
	Top surface should be coated in self levelling rubbersised	
	waterproot non slip paint/equaling material	
	12mm marine grade waterproof plywood	
	30mm styrofoam	
	10 mm marine grade plywood	
E	2mm outer GRP skin / vinyl flooring	
L	Internal Requirement	
	Walls, floor and ceiling cladding should be robust, easy to	
	clean and highly durable.	
	Lighting should be suitable for purpose with easy changeable	
	bulbs / LED lights and fittings if required.	
	All electrical and data cables should be fitted into the wall	
	panels with an emphasis on keeping the cables separated to	
	eliminate cross interference	
	Radiation protection should be mounted inside the vehicle to	
 F	meet scatter radiation requirements	
	Internal Partition walls thickness, construction	
	Internal partitions should be fabricated in mild steel and	13
	painted in an anti-corrosion paint, preferably black.	
	The bulkheads should be mechanically fixed to the exterior	
	body panels to support to the external structure and be the basis for the internal partitions.	
	The partitions should be lined with insulation and cover with	
	12mm composite ply panels finished with cleanable white	
	laminate or GRP/ ABS/Composite fire and heat resistant material.	
	Internal Dividing wall thickness should be 50mm with the be bifurcation of :	
	2 mm facing GRP/ABS/composite material panel for ease of maintenance /3 mm Aluminum sheet material.	
	40mm Sound proofing insulation with PU foam / jumbo loan sheet	
	3mm aluminum sheet material / 2mm facing GRP	
3	panel/ABS/Composite material for ease of maintenance	
	Internal doors, thickness construction , locks , number code or key	
	The internal doors should be manufactured in a composite	
	structure finished with a wipe clean white finish.	
	The doors should be fitted with bigh quality door further with	
	The doors should be fitted with high quality door furniture which	
	should have number of options for locking including	
	mechanical or electronic locking using either keys or numeric keypads.	
	Combination of both electronic and standard locks should be	
	fitted for staff safety and general usage	
	uage	

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	External Entrance Ways
	The unit should be with separate entrance ways
	The external doors should be manufactured from a PVC
	coated aluminum panel system/ABS/Composite material
	Doors should have five point security locking system enabling
	to be locked both internally or externally with retaining catch
	side access door with internal stairwell compliant with current
	EU Health and Safety Standards or equivalent from suppliers
	outside of the EU
	The doors should be designed with integral insulation to stop
	the transfer of heat gain from outside the vehicle.
	External Doors construction:
	50 mm overall thickness.
	inner skin PVC coated/ABS/Composite material
	10mm Aluminum box section, framework / galvanized mild
	steel pipe
	Styrofoam 40 mm thick for insulation Aluminum coated for heat
	deflection/PU foam.
	5 point locking system for maximum security
	External non slip steps with handrail should be provide for easy
	access from ground level to enter the vehicle
	Rear of vehicle should be fitted with a hydraulically operated
	tail lift system up to 500kg lift capability for wheel chair or
	patient trolley use.
	External under floor locker systems for storage is required or
	there should be foldable ramp made of aluminum under the
	main door of wheel chair.
	A stabilizing leveling system is required for when the clinic is in
	use to reduce body rock to a minimum with hydraulically
	operated.
	Double glazed anti shatter windows with privacy glass should
	be used in each examination room.
	Window blinds should be fitted
	An external side awning should be fitted 6.00 x 3.00m with side
	curtains, water proof fabric, preferably white in color, above
	the side entrance with a manual winding operation.
	Safety cage is required for the Mammogram and x-ray area.
	The external panel system should be designed with integral
	shielding built within the wall to suit the type of equipment
	fitted.
	The room housing the x-ray system should be designed to
	provide adequate safety for the staff operating the
	equipment. This should include a lead lined tabard for the
	operator or a dedicated area for operation of the equipment.
	Internal Layout
	Design
1	The Mobile Mammography and General Clinic should be

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	designed with a single entrance for patient, which will further	
	split into separate partition	
	Driver compartment	
	Mammography room	
	 Wash room/staff wet room 	
	Ultrasound room	
	Laboratory room	
	X-ray room	
	 small kitchenette 	
	Design of Clinic	
	The Mobile Mammography and General Clinic should be	
	designed with a single entrance, which should further split into	
	separate, examination rooms.	
	One room should be equipped as a mammography	
	examination room.	
	Clinic with X-ray should be designed as per PNRA standards of	
	radiation protection lead lining glass etc. And the second as a	
	general clinic capable of general examination of patients with	1
	the added benefit of Gynecological examinations.	
	All equipment should be installed in the mobile clinic properly	
	as per requirement and as per standard.	
	Doctor room	
	On entering the vehicle via the external steps into a central	
	lobby access should be given to either of the Clinics.	
	Mammography, clinic door should be of maximum of 1m wide	
	approx. The forward mammography screening room should be	
	fitted out with medical equipment suitable for purpose plus	
	storage. A staff wet room with toilet and small kitchen facility	
	with hot/ cold water are also required.	
J	Clinic Room	
	Fully adjustable patient bed / couch with head and foot side	
	adjustable.	
	Easy access to medical equipment and medical consumables	
	Compatible Small Sink	
	Proper fittings for Pharmacy Fridge , Autoclave , Patient	
	Monitor	
	Defibrillator, Triple, medical gas valve outlets etc.	
	To be robust in construction the clinic room will have	
	rubberized painted floors / antibacterial nonskid vinyl flooring	
	2mm.	
	All doors and doorways in brushed aluminum finish or match	
	with interior.	
	All internal furniture fabricated from a co-polymer plastic / all	
	tables and counters top should have corian material.	
	For ease of cleaning and durability	
	Lighting	
	The interior should be fitted with LED /SMD/COB lighting	

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	The lighting should able to be dimmed for certain medical	
	procedures.	
	Ceiling mounted fire rated IP66 Dimmable LED/SMD/COB	
	Down lights should be fitted.	
	Entrance passage should have standard on off facility	
	628Lumens	
	Dimming range 0-100%	
	Beam angle 50 degrees	
	Fire Rated 60 minutes	
	Daylight white 5500 Kelvin	
K	Mammography Clinic	
	Proper fitting for Analog Mammography System with CR, film	
	printer, Mobile X-ray, work station etc.	
	Operator Booth	
	The operator's booth should have at least 7.5 square feet of	
	unobstructed floor space in the booth. The booth may be of	
	any shape with minimum dimension of 2 feet to avoid direct	
	begm and up attonuated direct spatter rediction to appareter	
	beam and un attenuated direct scatter radiation to operator. <u>Structural Requirements of booth</u>	
	Booth should be at least 78 inches / 198cm high and	
	permanently fixed. A door or panel that is permanently part of	
	the booth must be interlocked. Sufficient shielding should be	
	provided to prevent occupational limits from being exceeded.	
	Clinic should have radiation protection lead lining glass etc (as	
	per PNRA standards)	
	Control Placement	
	The X-ray control should be fixed within the booth at least 40	
	inches / 101cm from the edge of the booth wall closest to the	
	examining table.	
	The placement of the control should allow the operator to use	
	most of the viewing window.	
	Viewing requirements	
	The booth must have a window that should allow the operator	
	to view any occupant in the room and any entry into the	
	room. Access doors that cannot be viewed by the operator	
	must be interlocked.	
	The window should have an area of at least 1 square foot / 30	
	sq cm with the lower edge at least 4.5 feet / 137cm from the	
	floor. The edge of the window should be at least 18 inches /	
	46cm from the edge of the booth. The glass should have the	
	same lead equivalency as the walls of the booth.	
	External	
	There has to be an illuminated X-ray sign visible to all parties	
	stating when it is clear or not clear to enter the room	
	External lockers,	
	construction, locks, hinges,	
	The external lockers system should be manufactured from	

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	aluminum to reduce the chance of corrosion	
	The external locker faces should be painted in a two pack	
	commercial paint colour match the body color.	
	The locker doors should be provided on Polial Hinges to suppor	t
	to the locker door. The locker doors should be held up with gas	
	rams	
	All external lockers doors should be of 6 mm Aluminum Sheet	
	Painted in 2 pack commercial paint.	
	2 locks per compartment	
	Flush facing for added security	
	No visible hinges	
	Gas ram stays for ease of use	
	Lighting	
	The interior should be fitted with LEDSMD/COB lighting	
	The lighting should be designed to be able to be dimmed for	
	certain medical procedures.	
	Ceiling mounted fire rated IP66 Dimmable LED Down lights	
	should fitted.	
	Entrance passage should have standard on off facility	
	628Lumens	
	Dimming range 0-100%	
	Beam angle 50 degrees	
	Fire Rated 60 minutes	
	Daylight white 5500 Kelvin	Notes the sector and the sector and
L	Staff Facilities	
	A wet room should be provided with toilet, shower and sink	
	with locking door for use by male and females	
	A small kitchenette opposite the wet room / with in the	
	laboratory should house a small fridge, storage facility and	
	Microwave.	
M	Air Conditioning	
	Provision for a fully air conditioned environment.	
	Two units required one for each examination area each	
	individually controlled with dust and air filters /4 Units RV AC	
	ductless roof mounted minimum 13000 BTU	
	The clinic room should have a positive air change system with	
	an anti-bacterial filter.	
	The Mammography clinic requires a dedicated air	
	conditioning solution providing a stable environment 24 hrs a	
	day with roof mounted ductless AC (Subject to	
	mammography system requirements)	
N	Power Requirements	
	Vehicle electric requirement	
	external electrical equipment & accessories	
	There should be provided frond head lights(4 no sealed beam	
	light),Indicators(2 no at front and 2 no at rear)side indicators(4	
	no at wheel arch)rear &back lights(2 no stop & tail lights with	

reflectors)roof indicators lights(2 no at front & 2 no at rear) &	Τ
fog lamp. Wipers at front with wind shield washers electrically	
operated.	
Internal Electrical Equipment & Accessories	
All lights should be SMD & COB (24 volt DC & 220 volt AC)	
installed in the celling. All wiring should be carried out with fire	
proof wires having connector system with no tapping and	
joints, having color coding for easy tracking sufficient switches,	
sockets, power plug and light plug with electric control panel should be provided. Refrigerator and computer system with all	
accessories should also be provided.	
The mobile clinic should have an on board generator capable	
of provide 120% of the maximum power output of all	
equipment being used simultaneously.	
A dedicated electricity supply for the mammography unit is	
required	
Power supply should be flexible to allow for mains connection	
or self-support	
Diesel powered generator should be fuelled from either main vehicle tank or separate Generator tank.	
Battery Backup System, providing emergency power for	
lighting from an on board battery	
Bank and battery charging system should be provided to	
support the battery bank.	
Park up supply of 16amps required to, supply onboard	
batteries for emergency lighting and generator start up.	
Power lines to be minimum 15m in length Mains power cables to be armored with Ceeform IP66 rated	
waterproof sockets	
Power to be fed to an internal mains power distribution board.	
Each piece of electrical equipment to be individually	
protected	
OR	
Distribution Panel	
There should be 3 power sources for clinic.	
 WAPDA SOLAR SYSTEM 	
 SOLAR SYSTEM DIESEL GENERATORS 	
There should be provided a distribution panel for electricity	
control. All electrical control in the panel including breakers,	
ups, solar, generator and also should be installed double	
change over system, one for wapda generator and one for	
ups and wapda. Also should be provided 30 meter of electric	
cable with load calculation for wapda connection if available.	
WAPDA	
There should be provided a main inlet for outside source of	

There should be provided a main inlet for outside source of

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electric like wapda in main distribution control panel. Solar System

There should be provided a 2000 VA solar solution with complete unit including batteries, panel, controller, system etc. for lighting and fans of clinic with backup of minimum 4 hours. GENERATORS

There should have installed two separate diesel generators each of 20 kva and 15 kva minimum. These should be having alternator and engine of renowned European /Japanese companies.

Intercom System

There should be provided 6 lines intercom system including intercom handsets with exchange system.

Sound System

A sound system should be provided for public address with complete in all accessories including one amplifier and 2 mic and 4 speakers which built in the mobile clinic bus/vehicle for external addressing.

IP Security Cameras

There should be provided 4 CCTV cameras with LCD display and DVR system minimum of one week recording.

One camera for rear side of the clinic for back view traffic and Second for Side View, a small LCD of 7 inch minimum for viewing near driver on dashboard in driver cabin.

Two cameras for security point of view should be installed on appropriate places, one should be installed on X-ray Room and second in main lobby for inside view and both cameras display should be in doctor room or laboratory which ever required. All cameras should be IP Based and control through Internet.

Internet facility

Internet facility of 3G-4G or equivalent with Wi-Fi router system Should be installed.

GPS Tracker should be install for MHU tracing.

LED for Health Education

50" to 55" LED should be installed on the right side of the main Entrances outside of the MHU for Educate the People through Health Education Videos, two speakers and Microphone with amplifier should also be installed.

Fire & Safety

In the MHU / vehicle should be provided 2 no of fire extinguishers ,one should be 2 KG and other one should be 6 kg DCP and also should be installed a first aid medical box and

	should be filled with first aid accessories.	
0	Exterior Finish The Vehicle should be prepared in a single nonmetallic commercial twopack paint	
P	VEHICLE SCHEDULE (To be completed by Supplier submitting offers)	
	Vehicle Make Model	
	Gross Vehicle Weight in kg	
	Weight of Chassis in kg	
	Overall Length (maximum) in mm	
	Overall Width (maximum) in mm	
	Overall Height in mm	
	Wheel Base in mm	
	Engine Make & Model	
	Engine Displacement	
	Number of Cylinders	
	Number of Valves	
	Maximum Output SAE net BHP or KW/rpm	
	Fuel System	
	Capacity of Fuel Tank	
	Tyre Size	
	Brake Type Front	
	Brake Type Rear	
	Carbon Emissions (fully laden , in city areas) g/km	
	All literature and additional material on the vehicle(s) are to be attached to this Schedule	
	Vehicle is to be delivered in an "on the road ready to use" condition".	
	The fabricator or will coordinate with the supplier of the equipment to make suitable installation. Hard point for the installation of Mammography, X-Ray Machine, Ultrasound and other medical equipment's. All movable items should have parking place with parking belts.	
	Mandatory Certification and Testing Requirements ISO 9001 Quality Management systems Certification ISO 14001 Environmental Management Systems Certification Full European DDA compliance documentation or equivalent from country origin Full temperature testing of the vehicles from15 to +48	

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degrees. This will be required to be undertaken at the cost of	
the supplier with facilities and test equipment provided by the supplier	
Full electrical tests to meet IEE regulations or equivalent from	
the country of origin	
Medical equipment installation to be fitted in accordance with	
MEIgAN standards or equivalent from the country of origin	
covering radiation scatter	
Minimum 5 year experience in MHU	
Full road test of vehicles, including tilt test and road handling	
test to be undertaken by the supplier and their expense	
Pre shipment quality control inspection to be undertaken by	
purchaser prior to hand over and shipment at purchasers	
discretion confirm Acceptability	
All quality and safety standards to meet with European, USA ,	
Australian or Japanese laws that cover those countries or	
territories that are covered by the same laws	

Signature of tenderer: ______ Name & Designation: _____ Address: _____

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Tender PART – 2 (Medical equipment)

<u>Procurement of Medical Equipment for Mobile Diagnostic Services for Breast</u> <u>Cancer in Sindh for the Financial year 2015-2016</u> <u>(Under ADP Scheme no.)</u>

TENDER ENQUIRY: PD/MDSBC/1050-54/- DUE ON: 15-10-2015.

Time of receipt of Tender 11:00 AM Time of opening of Tender 12:00 NOON

Offer shall remain open for 180 days from the date of opening. The Tenderer shall quote their prices (C.I.F Price) for complete Medical Equipment. Price should be quoted in F gure & words failing which the offer will be ignored.

Item no.	Description of Stores/Specification	Qty
	Medical equipment required for Mobile Diagnostic Services for Breast Cancer in Sindh	05 Nos.

Type of Bidding:

- 1. As per SPPRA Rule 15 (a) "International Competitive Bidding" will be govern in this tender. Bidder tender will not be evaluated any further if does not submit the below mentioned documents (Clause a to d) along with the technical bid.
- a Exclusive sole Agency Certificate for Pakistan.
- b Letter of satisfaction from atleast three reputable end-users/hospitals of Sindh where its equipment is working satisfactorily for the last three years and uptime was maintained as per terms and conditions.
- c. Evidence of valid registration with Pakistan Nuclear Regulatory Authority for sale of x-rays related diagnostic equipment in Pakistan.
- d. Details of workshop/setup with qualified Engineers atleast in Karachi to provide after sale service during and after warranty.
- As per SPPRA Rule 46(2), Single Stage-Two Envelope Procedure shall be followed. This is as follows:
- i. The bid shall comprise of a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal. The envelopes shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion.
- ii. Initially, only the envelope marked "TECHNICAL PROPOSAL" shall be opened.

- The envelope marked as "FINANCIAL PROPOSAL" shall be retained in the iii. custody of the procuring agency without being opened.
- The procuring agency shall evaluate the technical proposal as per tender terms iv. and condition without reference to the price and reject any proposal which does not conform to the specified requirements
- During the technical evaluation no amendments in the technical proposal shall be V. permitted.
- After the evaluation and approval of the technical proposal the procuring agency, vi. shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted bids only. The financial proposal of bids found technically nonresponsive shall be returned un-opened to the respective bidders.
- The bid found to be the lowest evaluated bid shall be accepted. vii.

Bidding Details

- All the bids must: i.
 - Be accompanied by a bid security of 2 % quoted price in form of pay order/demand draft /call deposit/bank guaranty in the favor of Project Director, Mobile Diagnostic Services for Breast Cancer in Sindh.
 - be submitted along with the complete required documents as per tender terms and condition, bid security etc.,
 - be delivered ON 15-10-2015 at 11:00 AM.
- The Technical bids will be publicly opened on 15-10-2015 at 12:00 NOON. ii.
- Bidders must submit bids on the basis of complete Mobile Unit including Medical iii. Equipment. Failure to meet this condition will cause disqualification of the bidder.
 - Bidders shall submit bids which comply with the Bidding Documents. Alternative bids will not be considered.
- The Purchaser will not be responsible for any costs or expenses incurred by iv. bidders in connection with the preparation or delivery of bids.

Scope and Requirements

Supply of Mobile Diagnostic Services for Breast Cancer in Sindh Specification and Quantity attached Annexure "A"

Evaluation

Evaluation of Technical Proposals

- Technical Proposal will be evaluated as per tender specification, required i. documents and tender terms and conditions.
- Evaluation will be done based on documentation submitted and product ii. demonstrations/presentations

Evaluation of Financial Proposals

The financial proposals of only the bidders short listed on the basis of technical evaluations will be opened and compared in terms of cost effectiveness. The bid found to be the lowest evaluated bid shall be accepted.

GENERAL TERMS & CONDITIONS:

Following General Terms & Conditions should be followed.

- i. Original purchase receipt must be enclosed with the technical offer.
- ii. Copy of bid security without price must be attached with the technical offer. Failing which the offer will be ignored.
- All DDP prices quoted must include all custom duties & Taxes applicable, such as GST, Income Tax, etc.
- iv. Bidder may form a joint venture for medical diagnostic equipment/computers etc. of two or more local firms. An Agreement Deed to that effect, legally executed and signed by all the partners shall be submitted with the Technical proposal.
- v. The main bidder should be authorized to, be in charge, incur liabilities, receive payments and receive instructions for and on behalf of any or all partners. A power of attorney to that effect, legally executed, signed by all the partners shall be submitted with the technical proposal.
- vi. Offer must be complete in all respect as per mentioned specification and details of work.
- vii. Offer should complete in all respects and equipment should be compatible with the mobile vehicle for mobile diagnostic purpose.
- viii. Installation of equipment in the Mobile Unit its maintenance during warranty will be responsibility of the bidder.
- ix. Warranty and undertaking regarding availability of spare parts for next ten years may also be confirmed by the bidder.
- x. The operational manual and original catalogue must accompany all quoted Medical equipment.
- xi. The successful bidder (including all firm in joint venture) will bound to train nominated technical personnel to operate the installed equipment in the Mobile Diagnostic unit.

xi. Profile of bidder (all firm in joint venture) with details of technical staff, address of the Bio-Medical workshop in Karachi past work experience.

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- xiii. Complete details of quoted Medical Equipment including technical specification, Manufacturer's details and country of origin.
- xiv List of bidder's major national clientele must be attached with the technical proposal.
- xv. Company registration certificate (all firms in joint venture) must be attached with technical proposal.
- xvi. Audited report of last three years or Copy of Income Tax Returns of last three years of main bidder must be attached with technical proposal.
- xvii. The main bidder should furnish bank certificate showing their financial capability to execute the project and must have done business of medical equipment more than Rs. 250 million in the last year.
- xviii. In case if one bidder is quoting for the medical equipment and vehicle then Financial proposal should have separate quote in separate sealed envelopes for
 - i. Vehicle (vehicle and its fabrication) as per specification and five years maintenance warranty.
 - ii. Medical Equipment (as per specification and five years maintenance warranty).

These two envelops shall be placed in an outer envelope marked as Financial proposal. The total of both financial proposal (vehicle and Medical Equipment) will be considered as total bid price.

- xix. Quality standards. USA/western Europe/Japan with their respective standards MDD (CE) compliance/MHLW Japan/FDA 510K approved.
- xx. The rates should be written in figures as well as in words.
- xxi. The Tender shall be checked for any arithmetic errors which shall be rectified, as follows:
 - a. If there is a discrepancy between the amount in figures and the amount in words shall govern.
 - b. If there is a discrepancy between the unit rate and the total price the unit rate as quoted shall govern and the total price shall be corrected.
- xxii. The successful bidder should complete the delivery of Medical Equipment within 120 days from the date of award of contract.

- xxiii Tenders must be filled in with Blue or black ink in the column provided and on separate letterhead duly signed.
- xxiv. The tenders must be free from erasing, cutting and over writing. In case of erasing, cutting and over writing, authorized person should initial it.

Purchaser's right to vary quantities at time of award.

The purchaser reserves the right to increase/decrease or delete the quantities of goods etc at the time of award of contract and also reserves the right to enhance the quantity by 25% of goods and services originally specified in the schedule of requirements without any change in unit price of other terms and conditions of goods at any time during contract period.

Notification of Award/Advance contract:

Pricr to the expiration of the period of bid validity, the purchaser will notify the successful bidder in writing, delivery by hand or by register letter by cable to be confirmed in writing by register letter that is bid has been accepted.

The notification of award will constitute the formation of the contract.

Award of contract and contract agreement

Subject to the fulfillment of all codal formalities, the purchaser will award the contract to the successful bidder whose bid has been determined to be qualified to perform the contract satisfactory.

Performance Security

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The successful Tenderer will have to deposit with the purchase security deposit as under in shape of call deposit/pay order/bank guaranty at the rate of 5 % of the value of contract.

Stamp Duty for Award of Contract:

Service charges @ 0.35% of the value of the contract will realized /charged by the AG Sindh, while making payment to the contractors for award of each contract

Undertaking

That I/We agree whether our tender accepted for total, partial or enhanced quantity for all or any single item. I/We also agreed to supply and accept the said item at the rates for the supply of contracted quantity within the stipulated period shown in the contract.

I/We undertake that; if any of the information submitted in accordance to this tender enquiry found incorrect our contract may be cancelled at any stage on our cost and risk.

CERTIFICATE

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We guarantee to supply the stores exactly in accordance with the requirement specified in the invitation to this tender.

Signature of Tenderer:

Name & Designation: _____

Address: _____

TECHNICAL OFFER

S.No.	Des	cription	YES/NO/Deviati
R	Med	lical Equipment for Mammography & General Clinic	
	with	the below mentioned specifications or better	
	i.	All equipment should be brand new and come with manufacturer's warranties and in country service support.	
	ii.	All equipment mentioned below in the list should come with Warranty period of five years starting from date of full functional commissioning including consumable part i.e. X-ray tubes of mammo and mobile x ray (unlimited exposures in five years).	
	III.	Maintenance of the machine / equipment during the whole period of warranty shall be responsibility of the vendor failing which, the vendor will have to pay down time penalty as indicated in terms and condition.	
	iv.	An annual optimal uptime of 90% is considered as an acceptable level of performance. Uptime shall be defined as time available to user for data acquisition and processing on all working days (excluding holidays) throughout the year.	
	V.	If the uptime percentage for the measurement period shall fall short of 90% annually, the following formula will be applied to determine additional days in the warranty / service contract period:	
	vi.	100 – 90% No penalty.	
	vii.	89 - 70% the warranty period will be extended by 01 times the	
	viii.	number of days as extra down time. Below 69% the warranty period will be extended by 02 times the number of days as extra down time.	
	ix.	Down time is defined as the failure in the equipment operation to acquire or process the data, resulting in inability to carry out the required procedure properly.	
	Χ.	Down time will start as the end user notifies the designated service / facility verbally or in writing. The response time 24 hours will be considered as normal depending upon the location of unit.	
	xi.	Down time will end when satisfactory repairs have been affected and the system is again fully functional with all parameters available for clinical use.	
	xii.	The scheduled preventive maintenance shall not be	

		considered as down time and shall not be more than two days.	
	xiii.	Manufacturer / supplier will be responsible for preventive maintenance of the system as per service manual every 12 to16 weeks and record should be provided to the Department.	
	xiv.	Vendor will mention the rate of service charges with parts for the complete system, after the expiry of five years warranty period on yearly basis along with the bid. This should also include price of x-ray tubes and ultrasound probes CR cassettes.	
	xv.	Manufacturer / supplier will guarantee the availability of spare parts and accessories for the system for at least ten years.	
	xvi.	Two Protection lead aprons 0.5 mm Pb equivalent light weight.	
	xvii. xviii.	Two Desktop computers of latest technology and two Laser Black & White Printer for reporting of mammo x-ray ultrasound and data recording.	
	xix.	Manufacturer and supplier shall be responsible for rectifying all problems at their own expense and manage any defect or fault in the system developing at any time during installation and commissioning and warranty period.	
R-i	XX.	Country of origin should be USA/ Western Europe /Japan with standards MDD (CE) compliance / MHLW Japan / FDA 510k	
	menti	g Mammography System with CR system with the below oned specifications or better	
	mount availat A micr Large Small	g Mammography machine should have the capability to be ed / placed on a mobile vehicle. It must be compatible with the ole power supply of the vehicle and fully function on vehicle. oprocessor control high frequency x-ray generator. focus 100 mA or more focus maximum 35mA or more ange 5 - 640mAs	
	Built in	automatic line voltage compensation.	
		ng anode	
	Anode Heat st	rotation speed 9000 rpm or more. torage 300KHU or more	
	Focal s	spot : small 0.1mm or better , Large : 0.3mm or batter	
	Filters	ter 30 μm Mo and 0.35 mm Al or more	
		atic LED illumination and built-in collimator	

	Compression	
	Motorized compression with selectable speed	
	Automatic and manual release of compression	
	Digital display of compression force and breast thickness/breast	
	exerted pressure.	
	Adjustable compression force limit and digital display.	
	Bucky	
	Microprocessor controlled precise grid movement.	
	5:1 grid ratio or better	
	Manual cassette loading and unloading, potter bucky for 2 different	
	types of cassettes size i.e. 18 x 24 and 24 x 30cm with grid OR one	
	flexible potter bucky with grid to have both sizes.	
	Control panel and C-Arm.	
	Single/Dual control buttons for parameter selections and display	
	C-arm rotation range minimum from -140~+180deg.	
	Vertical travel of c-arm minimum 80cm or better up to 125cm or	
	better.	
	System complete with foot switches, exposure switch assembly,	
	carbon fiber magnification platform, spot paddle assembly,	
	compression device, auto load of bucky etc	
	CB System for Mommon second with the heless mentioned	
	CR System for Mammography with the below mentioned	
	specifications or better 12 bits	
	Image plates size: 18 x 24 cm and 24 x 30cm. Through put: 80 plates/hour	
	45um or less resolution for mammography.	
R-ii	(five Years warranty for all image plates)	
K-11	X- Ray system	
	High frequency Mobile X-Ray Machine	
	Out power 8kW or more.	
	Touch screen display	
	Auto diagnostic system kVp range: 40 to 125 kVp	
	mA range : 5- 100mA	
	mAs range : 0.1- 250mAs	
	Exposure time :0.001 – 10 sec	
	X-ray tube heat capacity : 76,000HU	
	Manual collimator centering light indicator	
	SID measuring tape	
	Automatic line power detection system	
	Digital indicator of selection parameters	
	Anatomical programs	
	Anatomical programs	
	CR System for general radiography with the below mentioned	
	specifications or better	
	12 bits	
	Rigid Image plate with cassettes for general radiography: 8 x 10, 10 x	
	12, 14 x 17 inches.	
	Through put: 80 plates/hour at 14 x 14 inches.	

	A Firms on loss of the first of	-
	45um or less resolution for mammography.	
R-i i	(five Years warranty for all image plates)	
18-11	Two Dry Film Printers One for Mammography and one for X-Ray	
	Dual trays printing system	
	Geometrical: 320dpi or 78.6um.	
	Output gradation: 14 bits	
	Processing Capability: 90 Sheets/hour or more.	
	Sizes: 8 x 10 inch 10 x 12 inch 11 x 14 inch 14 inch	
	Sizes: 8 x 10 inch, 10 x 12 inch, 11 x 14 inch, 14 x 14 inch and 14 x 17 inch.	
	Within the quoted price of dry film bidders will supply bidder will supply 30 Packets of Dry films 10x12 inch size and fil	
	supply 30 Packets of Dry films 10x12 inch size every year for	
	next five will means total 150 packets in five years.	
R-iv	Ultrasound	
	16000 or more processing Channels	
	Digital beam former Color Doppler system with 12 Bit A/D Convertor	
	with advanced ultrasonic Doppler techniques.	
	With obstetric, gynecology, cardiology, urology, vascular, small parts	
	measurement packages.	
	DICOM compatible.	
	Modes: B, 2B/4B, THI, M, color, DPI , PW with HPRF Doppler Trapezoidal/Wide View and compound imaging.	
	-Tissue Harmonic Imaging with 3 or More THI Frequencies	
	-Pulse Inversion/Pulse Subtraction/Differential Tissue Harmonic	
	Imaging for better contrast resolution and more penetration.	
	- Auto Image optimization / Quick scan for automatic STC / Gain and	
	Doppler spectrum adjustment for optimal Image Quality.	
	- Live Measurement for Doppler Spectrum.	
	- Needle Tip Enhancement software for Biopsy Needle Visualization.	
	- Auto Nuchal thickness measurement software	
	- 3 active transducer connector excluding of pencil transducer	
	Scanning: Curved array, linear and phased array 450 frames or more for B-Mode	
	256 gray shade	
	Scanning depth 35cm or more	
	2 or more ports for USB, Built-in CD/DVD burner	
	Cine memory 4000 frames or more	
	Patient management system with Built-in 500GB hard disk drive for	
	image storage and future up gradation of soft ware's.	
	19" anti-flicker LCD monitor with Resolution 1280X1024 PIXELS.	
	Compatible cine wave UPS	
	2-6 Multi frequency convex probe for B/M/CDI/PW	
	5-11Mhz Multi frequency linear probe for B/M/CDI/PW	
	4-11 MHz Multi frequency Endocavitory probe for transvaginal	
	Studies. for B/M/CDI/PW	
	3-6Mhz Multi frequency 4D Volume convex probe for breast imaging	
	with Rendering Modes(including volume rendering, Maximum	

	intensity projection(MIP), Multiple Plane rendering (MPR) and Cavity) also with Multi view(simultaneous coronal, sagittal, and oblique view), and full Volume view	
	14Mhz or better Multifrequency Linear Probe for Breast Imaging.	
	One Ultrasound black printer latest model.	
	Ultrasound printer rolls (B&W) 50 ultrasound printer rolls will be provided by the vendor every year for five years total of 250 rolls will be provided in five years. GENERAL CLINIC	
	GENERAL CEINIC	
R-v	Autoclave Drying and sterilization 0.2 µm HEPA air filter for sterile, bacteria-free air for drying Chamber Volume 22 Liter Cold Cycle Time 17 min. Hot short Cycle Time 11 min. Instrument loading capacity : 6Kg In built water conductivity meter Touch screen controller	
R-vi	Full Patient Monitor High resolution 12" touch screen display 6 simultaneous wave forms Measuring parameter: ECG, NIBP, SpO2, Resp, Temp. Compatible with HL-7 5 lead ECG RA-LL impedance respiration Automatic oscillating measurement NIBP Anti-motion SpO2 Oxy CRG, drug dose calculation, cascading ECG, Arrhythmia detection, ST segment Trend 70 hours or more. Accessories: ECG cable, NIBP cuff, SpO2 cable etc	
R-vii	Defibrillator AED Defibrillator with 5.5" or more color display. AED algorithm for adult and pediatric patients as per AHA requirement. Manual and semi automatic biphasic defibrillator up to 200 Joules. ECG and audio recording. ECG mode Rechargeable battery Equipment readiness and battery status indicator should be visible when the unit is switched Off. Electrode connection detector indicator	

	Adult and pediatric electrodes with LED indicator	
	Biphasic truncated exponential waveform.	
	Charging time: 5 seconds at 200 Joules with a completely charged	1
	battery.	
	Audio and visual guide.	
	Ventricular fibrillations and rapid ventricular tachycardia's defibrillable	
	rhythms. Accessories:	
	10 x disposable electrodes for Adults /Paeds ECG Cable	
R-viii	Pharmacy Fridge fridge 4to6 cubic feet.	
R-ix	Portable Sustian Duran autom	
N-17.	Portable Suction Pump system	
	Oil free, piston type suction unit High vacuum suction unit	
	Flow : 30L/min	
	Vacuum manometer from/to 0-100 kPa (0-760 mmHg)	
	Vacuum control knob.	
	Maximum vacuum between 84 kPa (630 mmHg)	
	Noise level: $55 \pm 10 \text{ dB}$ (AS) 1m.	
	Bacteria filter and suction hose	
	Water resistant ON/OFF switch.	
	1L PC1 Polycarbonate collection jars (autoclavable at 121 °C).	
	Overfill safety valve wall support	
R-x	Chemistry Analyzer	
	Open System, Automatic Chemistry Analyzer.	
	Random-Access.60 channels.	
	Throughput 180-Tests/hour without ISE.	
	Computer controlled, programmable for all chemistries.	
	Integrated parameters Cardiac enzyme, Blood Sugar, Urea,	
	Gas, Creatinine, special chemistry parameters: HbA1C, C3, C4,	
	Ferritin, CRP, Micro albumin, Apo Lipo A, ASO, RF, Transferrin,	
	Lipase etc.	
	Graphic Display Monitor. On board cooling of 2-10 deg. C.	
	Automatic Sample/Reagent dispensation separately. Dot matrix	
	/Laser printer. Unlimited data storage with minimum of 40 GB	
	hard disc. STAT mode of analysis. Complete with all standards	
	and accessories. UPS (imported) for backup of 30 minutes.	
R-xi	HEMATOLOGY ANALYZERS	
	Convergys® X3 features	
	• 20 parameters, including 3-part WBC differential: WBC, LYM#,	
	MON#, NEU#, LYM%, MON%, NEU%, RBC, MCV, HCT, HGB, MCH,	
	MCHC, RDW-CV, RDW-SD, PLT, MPV, PCT, PDW-CV, PDW-SD	
	results stored and displayed with histograms a part WRC applying	
	• 3 part WBC analysis	
	 integrated QC programme colour screen, built in Printer 	
	selectable units, languages	
	l solotiable units, ialiguages	

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	 internal database, USB ports fully automated sample-handling, measurement, clog-prevention open tube system 25 µl of whole blood Sample volume Max. 10 000 records including histograms DATA storage capacity RS232 or USB, Bar Code Reader(optional), PS/2 or USB keyboard (optional) 3 user level 60 Tests / Hour 	
R-x₁i	ECG 6 channel LCD display. 58 mm printouts. Battery & mains powered. Auto-adaptive filters for outstanding signal quality. Loose leads indicator. Auto, manual and user-defined profiles. Alpha-numeric keyboard. Pacemaker detection. Connection to PC software Connection to vacuum electrode system. Interpretations Alphanumeric and functional key board. <u>Printer:</u> Paper width (mm): 58. Paper type: roll. Paper speed (mm/s): 5, 10, 25, 50 <u>Signal Processing</u> 6 channel 12 lead. Sensitivity (mm/mV): 2.5, 5, 10, 20. Stored records (10-sec long strips):	
R-xiii	Biological Microscope Features Biological Microscope with Seiden top Binocular Head 30° Inclined, 360° Rotatable, Eye Piece WF10x18ml	
R-xiv	Centrifuge TDZ4-WS, Angle Rotor 10mlx18 Max speed: 16000 r/min Max capacity: 10ml×12 Feature: * Microcomputer control, LCD or LCD display * ABS and stainless steel chamber * Auto-open and lid safety device * Adopt motor without brush. * It accommodates various <u>tube</u> systems * Real- time conversion of RPM and RCF. * All working parameters are stored automatically. * Run up/ run-down time: Input of acceleration and braking ramps in levels 0-9	
R-xv	Appropriate UPS coverage required where ever necessary.	
	The bidder has to coordinate with the vehicle supplier to ensure spaces suitable installation. Hard point for the installation of Mammography, X-Ray Machine, Ultrasound and other medical equipment's and all movable items should have parking place with parking belts.	

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Signature of Tenderer:

Name & Designation: _____

Address: _____

