1. List of Goods and Delivery Schedule

[The Purchaser shall fill in this table, with the exception of the column "Bidder's offered Delivery date" to be filled by the Bidder]

Line Item N°	Description of Goods	Quantity	Physical unit	Final Destination (Project Site) as specified in BDS	Delivery (as per Incoterms) Date	
					Delivery Period	Bidder's offered Delivery date [*to be provided by the bidder*]
1.	Supply, Installation and Commissioning of Portable Ultrasound Machine with Doppler and standard accessories inclusive of Training and all applicable cost as per specifications at Section V.	1	unit	**DR. A.G. JEETOO HOSPITAL**	**Within 10 weeks as from Letter of Acceptance**	

Technical Specifications

Specification and Compliance Sheet

Procurement Reference Number: MHPQ/NP/EQ/ULTRAJEETOO/2017-2018/Q245

[Bidders should complete columns C and D with the Specification of the Goods offered. Also state "Comply" or "Not Comply" and give details of any non-compliance/deviation to the specification required. Attach technical literature if required. Authorise the specification offered in the signature block below]

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	***B***	***C***	***D***
	SPECIFICATION FOR SUPPLY, INSTALLATION AND COMMISSIONING OF PORTABLE ULTRASOUND MACHINE WITH DOPPLER AND STANDARD ACCESSORIES		
1.0	**General Description:** Fully digital portable ultrasound machine including provision of Doppler examinations.		
2.0	With removable lithium ion battery having autonomy of at least 60 minutes during scan time.		
3.0	FDA or CE approved.		
4.0	Equipment should have full package for General radiology including:		
4.1	Abdominal		
4.2	Pediatrics		

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	***B***	***C***	***D***
4.3	Urology		
4.4	Obstetrics &Gynaecology		
4.5	Small parts (neck, breast, scrotum, musculoskeletal, ocular)		
4.6	Neonatal cranial		
4.7	Peripheral Vascular Imaging		
4.8	Multiple preloaded as well as user configurable application presets should be available		
5.0	Equipment should have the following operating modes:		
5.1	B-Mode		
5.2	M-Mode		
5.3	Colour Doppler		
5.4	Pulse wave Doppler		
5.5	Continuous Wave Doppler		
5.6	Power Energy Doppler		
6.0	Controls for 2D mode: Total gain, Depth, TCG, Dynamic range, Acoustic power output.		
7.0	Controls for Colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.		

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	***B***	***C***	***D***
8.0	Controls for Pulsed Doppler: Variable sample volume size from 1 to 5 mm or more, steer, PRF, baseline, gain angle correction, spectral invert, duplex on/off.		
9.0	Measurements for 2D mode: Multiple distances, area and volume.		
10.0	Measurements for Doppler mode: stenosis quantification in area percentage, diameter, PSV, EDV, mean, PI, RI, acceleration time and index. Automatic and manual measurements and display of pulsed Doppler calculations should be possible.		
11.	Transducers:		
11.1	Convex Electronic Phase Array Transducer: 2 to 6 MHz (for abdominal imaging): Quantity 1 unit		
11.2	Linear Array Transducer: 5 to 12 MHz (for vascular and small parts imaging): Quantity 1 unit		
12.0	With a dynamic range of at least 150dB.		
13.0	Scanning depth up to minimum 30 cm.		
14.0	Designed with:		
14.1	Full alphanumeric QWERTY keyboard		
14.2	Backlight keys		
14.3	Integrated audio speakers		
14.4	Selection keys		

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	***B***	***C***	***D***
15.0	Weight≤10 kg with integrated trackball		
16.0	With LCD display-minimum 15 inches (diagonal)		
17.0	Archiving capabilities:		
17.1	Still image		
17.2	Cine image		
17.3	Integrated hard disk ≥ 150 GB		
18.0	DICOM 3.0 compatible.		
19.0	With output formats in BMP, PNG, AVI and JPEG for all images and video clips.		
20.0	With a thermal colour digital B/W printer.		
21.0	Facility for storage on CDR should be available.		
22.0	Provision for USB port and LAN transfer of data should also be present.		
23.0	Unit to be mounted on a mobile cart but detachable for portability.		
24.0	The cart should have:		
24.1	Multi-directional castor wheels with locking mechanism		
24.2	Probe holders		
24.3	Gel tube holders		

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	***B***	***C***	***D***
24.4	Space for printer		
25.0	Standard accessories to be supplied to make the equipment fully functional.		
26.0	At least two years warranty on equipment and probe.		
27.0	Minimum 3 working days application training.		
28.0	Minimum 1 day on-site training for Biomedical Engineers/Technicians.		
	SPECIFICATIONS FOR POWER REQUIREMENTS: Portable Ultrasound Machine		
1.	The equipment shall be powered from available BS 1363 socket outlets with single phase electric supply.		
2.	The voltage requirement of the equipment shall be 230 V ± 6% at 50 Hz ± 1.5 % with earthing system: • TT for Normal and Emergency Socket outlet from Utility Power • IT for IPS Socket outlet from Medical Isolation Transformer as per IEC 60364-7-710		
3.	The equipment shall be able to sustain short duration power cut without latent or visible adverse effect as per IEC 61000-4-11, "short interruption tests" resulting in "Performance Criteria A or B" **Certificate of compliance to be submitted with the offer**.		

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	*B*	*C*	*D*
•	**<u>Power Cord:</u>**		
4.	The equipment shall be supplied with a power cord to IEC 60227 which shall be either directly connected to the equipment or connected via any standard IEC 60320 connector.		
5.	The power cord shall be 3-core, international orange coloured, with fused moulded type plug to BS 1363 with nickel plated solid pins, **BSI Kite-marked**, rated to 450/750V. The maximum rated current of the fuse shall not exceed 13 A. The length shall not be less than **3.5 meters**.		
•	**<u>Protection Class:</u>**		
6.	The chassis, as well as all exposed metal parts of the equipment shall be grounded as per IEC 61140 Protection Class I.		
7.	For equipment with non-conducting polymer enclosure, the power components shall be double insulated as per IEC 61140 Protection Class II		
8.	The equipment to be delivered complete with one 5 meter Supplementary Equipotential Earth Bonding lead made of highly flexible 4.0 mm^2 copper cable, green/yellow striped PVC insulation with angle sockets and sleeves fitted at both ends.		
•	**<u>ElectroMagnetic Compatibility (EMC)Compliance:</u>**		

Item No	Technical Specification Required	Compliance of Specification Offered	Details of Non-Compliance/ Deviation (if applicable)
A	***B***	***C***	***D***
9.	The equipment shall conform to the IEC 60601-1-2 standard and shall be equipped with RFI suppression system: "General requirements for basic safety and essential performance and Electro-Magnetic disturbances", as well as FCC Part 15 rules. **Certificate of compliance to be submitted with the offer.**		
	Ambient operating Conditions:		
10.	The equipment shall be actively or passively cooled such that the equipment shall be able to operate at continuous duty at high power under an ambient condition of 18 ºC to 35 ºC with the relative humidity up to 85%		
•	**All schematic diagram for the power conditioning circuits and control circuits shall be submitted prior to commissioning for verification.**		

Specification and Compliance Sheet Authorised By:

Bidder's Signature: ---------- **Name : ----------**

Position: ---------- **Date : ----------**
(DD/MM/YY)
Authorized for and on behalf of:

Company: ----------

5. Inspections and Tests

The following inspections and tests shall be performed: The equipment shall be tested and commissioned in the presence of the user department before handing over of same, in accordance with the Terms and Conditions of Contract.