

07-06-2022

Amendment no. 1

Sub: Technical amendment to the tender of Department of Cardiology for referred bid number.

Ref.: Bid No: GEM/2022/B/2118792, GEM/2022/B/2118749, GEM/2022/B/2118681, GEM/2022/B/2118592, GEM/2022/B/2118572, GEM/2022/B/2118542, GEM/2022/B/2118521, GEM/2022/B/2118477, GEM/2022/B/2118447, GEM/2022/B/2118415, GEM/2022/B/2118385, GEM/2022/B/2118350, GEM/2022/B/2118338, GEM/2022/B/2118244 Dated 26.04.2022

The following changes are being incorporated in the above referred GeM Bid No.

Technical Specification Amendment

TECHNICAL AMENDMENT (AIIMS- CARDIOLOGY)		
GeM tender ID: GEM/2022/B/2118792 dated 26.04.2022		
Item no 1- Single plane Cathlab with DSA		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para B.4	The table should have floating longitudinal, horizontal and vertical movements	The table should have floating longitudinal, horizontal and vertical movements Added Para: It should have facility for motorized head end/ tilt facility of at least +/- 15 deg (Optional)
Para D.	NA	Added para: System should have the latest dose reduction package for further reduce the dose (ALLURA CLARITY IQ /BLUE PRINT/CARE & CLEAR or Equivalent)
Para J. 2	Cath lab also need to be provided with total 20 ton AC with voltage stabilizer. The AC may be distributed to the console room, Procedure room, equipment room and patient waiting area as per site requirement	Cath lab also need to be provided with total 25 ton AC with voltage stabilizer. The AC may be distributed to the console room, Procedure room, equipment room and patient waiting area as per site requirement
Para 14	Site modification: 3. The cost of Site modification for the area of 1500sq.ft and Air-conditioning of Tonnage 20 TR will be considered for Ranking / Evaluation purpose	Site modification: 3. The cost of Site modification for the area of 1500sq.ft and Air-conditioning of Tonnage 25 TR will be considered for Ranking / Evaluation purpose
	b) Painting 1 Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, Cath Lab room & Equipment room etc.	b) Wall finishing 600 x 600 mm vitrified tiles wall tiling up to false ceiling to be done in entire Cathlab area under scope (patient preparation area, Lobby area, console room, Cath Lab room & Equipment room etc)
	Furniture: 3. Modular design walls cabinets (highest quality)	Furniture: 3. Modular design walls cabinets (highest quality) for safe

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	for safe keeping and storage of drugs, catheter, interventional items, manuals procedures sets, linen, trays etc under lock and key – 4 nos	keeping and storage of drugs, catheter, interventional items, manuals procedures sets, linen, trays etc under lock and key – 5 nos
	Furniture: 4. Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – 3 Nos	Furniture: 4. Cupboard with laminate door shutters for storage of spare parts and accessories and records (3 ft (W) x 6ft (H) x 2.5 ft (D)) as per requirement. – minimum 5 Nos
GeM tender ID: GEM/2022/B/2118749 dated 26.04.2022		
Item no 2- Multiparameter Monitor		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 3.2	Should have facility to monitor and display - ECG, NIBP, SpO2(Nellcor/Masimo), Temperature, Respiration and upgradable to ETCO2(Sidestream or Microstream) & IBP	Should have facility to monitor and display - ECG, NIBP, IBP-2 , SpO2(Nellcor/Masimo), Temperature, Respiration and upgradable to ETCO2(Sidestream or Microstream)
Para 3.13	Should have inbuilt 2 Ch thermal recorder with selectable recording speed of 25 & 50 mm /sec	Should have inbuilt 3 Ch thermal recorder with selectable recording speed of 25 & 50 mm /sec Added para: Should provide paper rolls - 100 nos for thermal printing (Price should be quoted separately and the price will be freezed for warranty period).
	BOQ 3: 2 Channel recorder - 1 No	BOQ 3: 3 Channel recorder with 100 nos paper rolls - 1 No
GeM tender ID: GEM/2022/B/2118681 dated 26.04.2022		
Item no 3- Defibrillator with CPR monitoring and TC pacing		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 7	It should have ability to measure chest compression rate and depth in real time with both visual & audible feedback	Deleted
Para 14.4	In addition to standard accessories following items have to be supplied with unit Reusable CPR feedback sensor/ or similar product - 1No	Deleted
BOQ-10	BOQ 10. Reusable CPR feedback sensor/ or similar product	Deleted
GeM tender ID: GEM/2022/B/2118592 dated 26.04.2022		
Item no 4- Syringe Infusion Pump		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 15	Mounting device/ Docking Station for at least four pumps as per requirement so as to enable to power up to 4 pumps with one power cord when mounted on IV pole (Price to be quoted separately)	Docking Station for at least four pumps as per requirement so as to enable to power up to 4 pumps with one power cord (Unit Price to be quoted separately and price for 75 nos of docking station will be considered for ranking purpose)

BOQ.2	BOQ: 2. Docking station - 1 No	BOQ: 2. Docking station (Unit Price to be quoted separately and price for 75 nos of docking station will be considered for ranking purpose) - 1 No
GeM tender ID: GEM/2022/B/2118572 dated 26.04.2022		
Item no 5- Portable Echocardiography System		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 10	Should have a large hard disk capacity at least 500GB to store patient data into the hard drive and 5TB External hard disk to be provided	Should have a large hard disk capacity at least 1 TB to store patient data into the hard drive and 5TB External hard disk to be provided
Para 11	Should be able to transfer images and clips to CD and DVD media	Should be able to transfer images and clips to CD and DVD media or USB
Para 12	The quoted echo machine should be compatible with use of Intracardiac catheter for ultrasound (ICE).	The quoted echo machine should be compatible with use of Intracardiac catheter for ultrasound (ICE) (Optional)
Para 21	Battery backup of minimum 30 min.	Battery backup of minimum 120 min.
GeM tender ID: GEM/2022/B/2118542 dated 26.04.2022		
Item no 6- High End Echocardiography system (4D ECHO)		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 8	Image storage facility on in build hard disc or MOD/CD/DVD-RW facility should be available. Inbuilt hard disk with capacity of 500 GB. System should have extensive image capability including thumb nail review, Cine loop editing etc. management. System must be supplied with 5TB external hard disk	Image storage facility on in build hard disc or MOD/CD/DVD-RW facility should be available. Inbuilt hard disk with capacity of 1TB SSD . System should have extensive image capability including thumb nail review, Cine loop editing etc. management. System must be supplied with 5TB external hard disk
Para 12	Should be able to perform advanced quantification measurements like strain & Strain rate quantification. Should measure the myocardial velocity and derives the strain rate and strain along user-defined M-lines, Capable of drawing up to 3 M-lines at a time, Capable of sub-dividing each M-line into 8 sub-regions or according to user-defined sub-region sizes, Point of interest tool obtains values from any point on the M- mode display. In addition to the tissue Doppler based strain system should have 2D based strain like VVI, AFT and TMQ should be offered. These should be offered both on the system and on a licensed workstation. OFF-CART workstation (both licensed hardware and licensed software) should be quoted and highlighted in the technical bid	Should be able to perform advanced quantification measurements like strain & Strain rate quantification. Should measure the myocardial velocity and derives the strain rate and strain along user-defined M-lines, Capable of drawing up to 3 M-lines at a time, Capable of sub-dividing each M-line into 8 sub-regions or according to user-defined sub-region sizes, Point of interest tool obtains values from any point on the M- mode display. In addition to the tissue Doppler based strain system should have 2D based strain like VVI, AFI and TMQ should be offered. These should be offered both on the system and on a licensed workstation. OFF-CART workstation (both licensed hardware and licensed software) should be quoted and highlighted in the technical bid
Para 13	2D speckle tracking.	2D speckle tracking for LA, LV and RV with Volume, TAPSE and EF
Para 20	Latest PC (off-cart workstation) with permanent	Latest PC (off-cart workstation) with permanent licence

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	licence software for analysing and quantification of 2D and 3D data sets like Strain and Strain rate imaging, Tissue Motion Annular Displacement, Mitral valve 3D data sets, 2D Speckel tracking. CD/DVD writer with Image management software and colour laser Printer. PC should be offered with a flat panel 17" display monitor, 1 TB HDD, i7 processor, 8 GB RAM. (hardware essential for OFF cart quantification)	software for analysing and quantification of 2D and 3D data sets like Strain and Strain rate imaging, Tissue Motion Annular Displacement, Mitral valve 3D data sets, 2D Speckel tracking. CD/DVD writer with Image management software and colour laser Printer. PC should be offered with a flat panel 17" display monitor, 1 TB SSD , i7 processor, 16 GB RAM . (hardware essential for OFF cart quantification)
		Added under Para 12: CT/Flouro integration (Optional)
GeM tender ID: GEM/2022/B/2118521 dated 26.04.2022		
Item no 7- Suction Machine		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 1.3	Suction capacity should be 50-60L/min & twin bottle capacity of 3L each	Suction capacity should be 50-60L/min & twin bottle (autoclavable poly carbonate/poly suphonate) capacity of 3L each
GeM tender ID: GEM/2022/B/2118477 dated 26.04.2022		
Item no 08- 12 Channel ECG Machine		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 1	Twelve channel 5" or more LCD display for all 12 leads along with on screen details.	Twelve channel 7" or more LCD display for all 12 leads along with on screen details.
		Added Para: Machine should be supplied with trolley made up of SS 304 with lockable castors
		Added in BOQ: 4. Trolley made of SS 304 - 1 No
GeM tender ID: GEM/2022/B/2118447 dated 26.04.2022		
Item no 9 - Mobile Spot Light		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 1	To provide cool, intense, focused light of 5000 lux	To provide cool, intense, focused light of 5000 lux or more
Para 2	Should be halogen bulb of 50/75 W at low voltage, Step down transformer (compact) mounted inside the head	Should be halogen bulb of 50/75 W at low voltage or LED lamp , Step down transformer (compact) mounted inside the head
Para 3	Should have bulb retainer to prevent accidental unplugging and fall.	Should have bulb retainer to prevent accidental unplugging and fall (in case of Halogen lamp)
GeM tender ID: GEM/2022/B/2118415 dated 26.04.2022		
Item no 10- Holter system with work station		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 2	The system should have the capability to acquire/analyse 12 lead ECG derived out of 3 or more Channel using 5 or more electrodes for 48-	The system should have the capability to acquire/analyse 12 lead ECG derived out of 3 or more Channel using 5 or more electrodes for upto 7 days (168 Hrs) with facility to

	72 Hrs with facility to display/print 12 lead ECG at any point of time.	display/print 12 lead ECG at any point of time.
Para 7.c	T wave alternans	T wave alternans or equivalent parameter (Optional)
Para 7.d	Heart rate turbulence	Heart rate turbulence or equivalent parameter (Optional)
Para 15.f	Shape	Deleted
Para 15.j	TWA alternans analysis	Deleted
Para 17.1	3 Digital recorder should have 128 samples/sec/channel for recording and storage 1000/sec/channel for VLP	3 Digital recorder should have 128 samples/sec/channel for recording
GeM tender ID: GEM/2022/B/2118385 dated 26.04.2022		
Item no 11- TMT Machine (Stress test system)		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 1.1	Exercise stress testing systems offer a wide array of unique diagnostic software options to evaluate myocardial function. Automatic arrhythmia detection, ST-segment analysis, and T-wave alternans are a few examples. In conjunction with a treadmill or ergometer, these systems provide a controlled environment for the observation of the effects of increases in myocardial oxygen demand: exercise-induced systolic hypotension, exercise-induced angina, and/or the appearance of a heart murmur during exercise.	Exercise stress testing systems offer a wide array of unique diagnostic software options to evaluate myocardial function. Automatic arrhythmia detection, ST-segment analysis, and (T-wave alternans or equivalent parameter) are a few examples. In conjunction with a treadmill or ergometer, these systems provide a controlled environment for the observation of the effects of increases in myocardial oxygen demand: exercise-induced systolic hypotension, exercise-induced angina, and/or the appearance of a heart murmur during exercise.
Para 5	Automatic digital NIBP measurement during stress test should be provided with the system	Integrated Automatic digital NIBP measurement during stress test should be provided with the system
GeM tender ID: GEM/2022/B/2118350 dated 26.04.2022		
Item no 12- Ambulatory BP Monitor		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 11	Cuffs: Adult Cuffs, Left Arm (7.9" - 12.2" (20-31cm) - 2nos Large Cuffs, Left Arm (11" - 14.2" (28-36cm) - 2 nos Small Cuffs, Left Arm (5.9" - 8.7" (15-22cm) - 1 no Adult Cuffs, Right Arm (7.9" - 12.2" (20-31cm) - 2 nos Large Cuffs, Right Arm (11" - 14.2" (28-36cm) - 2 nos	Cuffs: Small Cuffs, (13-22cm) - 2 nos Adult Cuffs, (20-31cm) - 4nos Large Cuffs, (28-36cm) - 4 nos Extra Large Adult, (32-42cm) - 2 nos
	HARDWARE REQUIREMENTS 14. RAM : 8GB Min.	HARDWARE REQUIREMENTS 14. RAM : 16 GB Min.

	17.Hard Disk: 1TB	17.Hard Disk: 1TB SSD
GeM tender ID: GEM/2022/B/2118338 dated 26.04.2022		
Item no 13- Point of Care device (Cardiac Biomarker)		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 1	Should be able to measure quantitatively Troponin, CPK-MB, NT-Pro BNP, PT-INR either separately or in combination.	Should be able to measure quantitatively Troponin, CPK-MB, Myoglobin, D-Dimer , NT-Pro BNP, PT-INR either separately or in combination.
Para 3	Weight : <1.5 Kg	Deleted
Para 4	Data Memory : >150 MB	Data Memory: >150 MB or more than 500 Tests
Para 5	Data Storage : At least 10,1000 tests	Data Storage : more than 500 Tests
Para 6	Display : At least 8"color display	Display : At least 3" color display
Para 7	Should have USB port	Should have USB port/ Communication port
Para 11	Should be supplied with 100 cartridges of each test and the rates should be quoted seperately for each cartridge and prices to be freezed for warranty period	Should be supplied with cartridges for 100 tests for each parameters either separately or in combination. The rates should be quoted seperately for each cartridge and prices will be freezed for warranty period
GeM tender ID: GEM/2022/B/2118244 dated 26.04.2022		
Item no 14- Tilted Table		
Tender Para No.	TENDER SPECIFICATION	AMENDED AS
Para 12	Table should have work table attachment	Deleted

All other contents of the Bid Document including terms & conditions remain unaltered.

Note:

I. Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of bids

Note: Following Technical Compliance Sheet Should be uploaded along with Technical Bid for respective items.

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118792 dated 26.04.2022			
Name of the item :				Single plane Cathlab with DSA			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Single plane Cathlab with DSA							
SN	Technical Specification						
1	Latest state of the art single panel flat detector technology cardiovascular angiography and digital imaging system for diagnostic and intervention cardiovascular procedures with digital subtraction angiography (DSA). The lab must have the following specification.						
A	Multi Directional C ARM positioned						
1	The C arm/G arm should travel both side (right and left) of the patient and it should be possible to park the C arm away from table for patient shifting						
2	The C arm/G arm should travel both side (right and left) of the patient and It should be possible to have head to toe imaging without repositioning of the patient						
3	The C or G arm movement control should be possible from any side of the table						
4	The C or G arm rotation minimum 15 degrees/second in RAO/LAO and 15 degree/second in cranio/caudal						
5	Angulations LAO/RAO= at least 100/100 degrees Cranio/caudal 45 degrees or more						

6	Patient collision prevention and protection is necessary. The system should have an in built collision protection						
7	Arm design should allow sufficient space around the table during resuscitation and defibrillation						
8	The C/G arm should be able to go to angulations automatically depending upon reference image						
B	Patient Table						
1	Table shall be floor mounted with carbon fiber table top.						
2	Should have table rotation facility from base						
3	Maximum patient weight 150kgs or higher with additional weight for at least 50kgs during resuscitation						
4	The table should have floating longitudinal, horizontal and vertical movements Added Para: It should have facility for motorized head end/ tilt facility of at least +/- 15 deg (Optional)						
5	Accessories for the table should include head fixing aids, mattress, four radiolucent carbon fiber arm supports, drip stand, peripheral filter set and catheterization Arm support						
C	X Ray Generator						
1	Generator should be latest technology with high frequency type with at least 100kW output at maximum factor						
2	High frequency power unit that provides pulsed fluoroscopy capability should have automatic exposure control device for radiographic fluoroscopy and Angio mode.						
3	Should have an overloading protection.						
D	X ray tube						
1	Should be with a minimum of two focal spots, small and large. The small focal spot should not be more than 0.6mm with power of at least 30kw and large focal spot should not be more then 1mm with power of at least 80kw						
2	Anode heat storage capacity at least 2.4 MHU or more						

3	Cooling system high oil/water cooling to ensure continuous operation						
4	Anode heat cooling rate should be 3000W/min or more						
5	Automatic/programmable spectral filtration mechanism for eliminating soft radiation without any need for manual filter insertion in both fluor and cine mode						
6	X ray tube with noise less operation with high anode heat storage capacity to support long interventional procedures without interruption						
	Added para: System should have the latest dose reduction package for further reduce the dose (ALLURA CLARITY IQ /BLUE PRINT/CARE & CLEAR or Equivalent)						
E	Dynamic flat detector system						
1	Dynamic flat detector system : Flat detector of current generation for cardiovascular application with excellent spatial and contrast resolution with pixel size smaller than 200µm						
2	Smaller pixel size of FD is preferred for smallest detail visualization						
3	Should have acquisition and display in at least 1024 x 1024						
4	System must be offered with latest image processing software /algorithm to reduce quantum noise in image to have excellent image quality						
5	A minimum of 12 bit acquisition with at least 3 level acquisition with at least 3 level of zoom.						
6	The DQE of detector should be > 75%						
7	The system should have capability to acquire the images @ minimum 30 fps for pediatric application: adult cardiology 12.5-25: peripheral angio range (1-15fps)						
F	Digital Image system						
1	Digital cardiac imaging for acquisition storage and retrieval in high matrix of 1024 x 1024 or more acquisition/ display and storage of image application to give excellent resolution with latest image processing software/algorithm						
2	Gray scale depth of at least 8 bit pixel should be possible at all frame speed						

3	Image storage capacity of 1,00,000 image at 1024 x 1024 matrix at a minimum of 8 bits/pixel on main system hard disk						
4	Medical grade full high definition, either single (minimum 52") or multiple display to display live, reference, 3D,CT like image, Hemodynamic and EP waveforms.						
5	Monitor should have high refresh rate / flicker free viewing of images						
6	In control room there should be data entry monitor, live monitor, hemodynamic monitor and one DICOM based or equivalent suitable work station capable of all review including 3D reconstruction, post processing and quantification of coronary and ventricular function in the control room. It should be possible to perform simultaneous off line post processing in control room.						
7	Cath lab should be supplied with state of art complete coronary ventricular and vascular on line & off line both quantifications software programs which are clinically validated with operation from exam room and control room						
8	Auto calibration should be possible						
9	All recall of stored images in fast slow still modes to select images at table side itself						
10	Cine loop replay facility & last image hold facility during fluoroscope						
11	Integrated intercom facility between control room and Examination room						
12	On line acquisition & display of DSA images in 1024 x 1024 matrix with DSA post processing from table side control in exam room and control room. All 2D and 3D roadmapping/remodelling features should be offered						
13	Should have facility for stent enhancement operable from table side and control room						
G	Archival System						
1	Direct digital archival on compact disk (CD /DVD-recordable) in latest DICOM format preferably in loss less compression						

2	Ability to view CD and post process with clinically validated quantification software						
3	Ability to export DICOM vascular images onto CD/other image recording medium						
4	Two additional fully loaded PC (latest generation processor i7 or above, min 16GB RAM, 2TB HardDisk, Min 21"display) based CD review station with DVD combo devices of latest specification with two nos. of latest specifications laser printers.						
5	The system should be fully DICOM ready and fully compliant for connection to PACS system of any make including currently available PACS system for the cath lab.						
6	Ability to convert the DICOM loops to BMP/JPEG and AVI format to CDR.						
7	The system should supply with DICOM CD recorder for storing DSA runs photo images and it should be possible to review in other PC.						
H	Cross sectional imaging						
1	Cross sectional 3D images using 3D reconstruction algorithms for 3D reconstruction of chambers and vessels of heart should be possible.						
2	The system should have ECG/angle triggered and untriggered 3D acquisition and processing capability.						
3	Dedicated 3D workstation to be provided for 3D image processing for efficient workflow with display in control room and exam room -1 Nos						
4	3D roadmapping should be available. It should be possible to have TAVI guidance for TAVI procedures with landmark marking and overlay. TAVI guidance packages should be included.						
5	DICOM workstations: Two number, with 1TB HDD for image viewing and CD/DVD writing in consultation rooms away from cath lab connected to cath lab for online image transfer. CD/DVD archiving on these computers should be in addition to standard CD/DVD archiving on main system						
I	HEMODYNAMIC AND EP STATION						

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	(Price to be quoted separately):						
1	The following features should be available in the recorder						
	• 12 Lead ECG Amplifier with floating input						
	• At least 4 pressures with floating inputs						
	• Time and amplitude measurement with electronic calipers						
	• Latest specification Laser Printer - 2 Nos						
2	Storing of patient hemo data on hard disk and retrieval as and when required.						
3	21" color wave form monitor with programmable layout and digital monitoring readout – 2 Nos						
4	SPO2, cardiac output , pressure gradient facility, NIBP should be available						
5	FFR measurement facility should be offered and is must & machine should be preferably compatible with OCT & IVUS						
6	Minimum 64 Channel or more Intra cardiac ECG for electrophysiological studies should be available. Separate system or integrated solution may be offered.						
7	Stimulator and RF ablator						
8	ECG cable and pressure transducers with facility for superimposition of pressure tracings with printing supports inside the operating room: 4 each						
9	Live Hemodynamic monitors should be available in operating room as well as console room						
	Essential accessories:						
1	Foot switch for fluoroscopy and acquisition.						
2	Ceiling suspended operation lamp.						
3	Lead glass (120 x 100cm) (as per international radiation protection standard)						
4	Radiation shield ceiling and table mounted/suspended. (as per international radiation protection standard)						
5	High power contrast injector (floor/ceiling mounted) with 200 syringes.						

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6	Radiation protective apron (Lead-Free, light weight) of high quality with hangers: (Total quantity 20: Front type - 10, Wrap around – 6, Two-piece type - 4 and Lead Cap - 4). It should be state of art light weight with a lead equivalent of 0.5mm.						
7	Two hanger stands to hold 5 apron each and two wall mounted hangers to hold 5 aprons each.						
8	Thyroid guards 10 in number with lead equivalent of 0.5mm						
9	Lead spectacles 10 in numbers.						
10	Lead lined gloves: Two pairs						
11	Intercom and music system between exam room and control room.						
12	One Laser Network Printer of high resolution with minimum 500MB memory and 2400 dpi should also be offered for high quality image printing.						
13	ETO sterilizer: of approved make at least 4.5 cu ft. – One (Price to be quoted separately)						
14	Intra-aortic balloon pump (IABP) system – One. State of art, latest, imported model with two gas cylinders and two balloons. (Price to be quoted separately)						
15	ABG Machine: One no. for measuring Hb, electrolytes, bicarbonate, Po2, Pco2 and oxygen saturation etc. during cardiac catheterization complete with all accessories like rinse solution, calibration solution etc for at least 100 procedures. (Price to be quoted separately)						
16	On line UPS for completed cath lab with back up of at least 30 minutes. Emergency lighting should also be on UPS.						
17	Should meet all national and international safety standard and comply with BARC and AERB guidelines. AERB Type approval Certificate should be submitted for quoted model.						
18	Act machine: 2 Nos						
19	Anaesthesia Workstation: Compact three gas Anaesthesia workstation with an integrated Ventilator for infants/pediatric to adult patients, Airway Monitor and Anaesthesia Monitor. (US FDA Approved/European CE with 4 digit						

	notifying body no/BIS approved) . (Price to be quoted separately)						
20	Radiation Protection						
20.1	The system should have integrated computer controlled (preferably automatic) X-Ray Beam filtering with copper filters of various size from 0.2 mm to 0.9 mm to reduce soft radiation for fluoroscopy and acquisition mode. Please list the special filters available.						
20.2	The system must have latest generation software/hardware packages for radiation safety of operator and patient with documentation of radiation dose per fluoroscopy/cine time						
J	Installation						
1	Installation to be done on turn key basis lab and attached patient waiting area needs to be renovated with high quality false ceiling floor and wall tiles up to roof level high quality adequate modular storage racks and necessary furniture like table chair also need to be provide						
2	Cath lab also need to be provided with total 25 ton AC with voltage stabilizer. The AC may be distributed to the console room, Procedure room, equipment room and patient waiting area as per site requirement						
	Site modification						
1	Comprehensive site modification and detailed lay out plan suitable to the existing site and ambient condition at the center to be submitted by all the agencies before offering their price bid.						
2	Power for air conditioning and space requirement will be provided by the institute for coordinated planning and execution of the work						
3	Turnkey would include dismantling and disposal of redundant fixtures and execution of all necessary civil electrical and air conditioning work at site.						

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4	Site preparation should be time bound and completed before shipment of equipment and time to installation of the machine no more than 4 weeks (total time 90 days).						
5	Cost of Site modification works for 1500 sq ft will be considered for ranking purpose; however payment will be made as per the actual site modification work done at site.						
6	Essential site preparation requirement include the following.						
	Civil work						
14	Site Modification						
	The Site modification Work - Cath Lab						
1	The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of Cath Lab Centre.						
2	While preparing the plan, the following aspects have to be addressed:						
a)	Care should be taken to provide easy negotiation of the patient stretchers/ trolleys through corridors and doors.						
b)	Radiation shielding for doors, walls, windows etc.						
c)	Furniture like desk, chairs, shelves etc.						
d)	Patient stretcher and other furniture/ accessory to make the Cath Lab centre functional.						
3	The cost of Site modification for the area of 1500sq.ft and Air-conditioning of Tonnage 25 TR will be considered for Ranking / Evaluation purpose						
4	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work.						
a)	Civil works						
b)	Electrical work						
c)	Public health (plumbing and sanitary fittings).						
d)	Air Conditioning (HVAC)						
e)	Interior Furnishing & Furniture						
f)	Miscellaneous like scrub, catheter wash station, etc						
	Scope of work for Site modification						

	Cath Lab system :						
	The Cath Lab site shall consist of the following rooms:						
a	Cath Lab Room						
b	Console room						
c	Equipment room						
d	Patient preparation room for minimum two patients						
e	Change room						
f	Scrub area, catheter wash area						
g	Pre Cath Patient waiting area upto 5 patient						
h	Post Cath Patient waiting area upto 5 patient						
i	Consultant room						
	The actual area of site modification works done will be considered for payment, based on the unit rates and site measurements						
	Civil work						
a)	Civil construction work including construction of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.						
b)	Concrete bed at Cath Lab equipment area.						
c)	Platform for unloading and shifting the Cath Lab should be provided if necessary.						
d)	Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.						
e)	All the construction work to be done as per the final plan approved by the Consignee.						
a)	Flooring						
1	600 x 600 mm vitrified tiles/non porous high quality granite atleast 20 mm thickness with 100mm tile skirting to match in console room, lobby and patient preparation areas, Radiologist room etc.						
2	50 mm thick cement concrete flooring with Vinyl flooring in cath Lab equipment / UPS room.						
b)	Wall finishing						

1	600 x 600 mm vitrified tiles wall tiling up to false ceiling to be done in entire Cathlab area under scope (patient preparation area, Lobby area, console room, Cath Lab room & Equipment room etc)						
c)	False Ceiling						
1	Acoustical tile for ceiling with light weight insulating material of high quality supported on grid or finished seamless with support above ceiling. Finished with white paint or powder coated with white paint, if metallic. Ceiling height to suit the equipment mount and clearances.						
	Plumbing work						
3	All water pipes and fittings shall be of high density polythene of approved and standard make. The gratings shall be brass chrome plated. All plumbing accessories should be of standard make.						
	Electrical work						
4	The supplier shall be required to specify the total load requirements for the Cath Lab centre including the load of air conditioning , room lighting and for the accessories if any. The supply line will be provided by the Institute up to one point within the Cath Lab centre . The distribution panel shall be provided by the vendor. Few lights in each room shall be connected to the UPS to provide emergency lighting.						
5	The electrical work shall include the following:						
a)	Wiring – All interior electrical wiring- with main distribution panel board, necessary MCBs, DB, joint box, switch box etc. the wires shall be of copper of different capacity as per the load and should be renowned make as listed below.						
b)	Switches light and power points should be of modular type and of standard make as listed below.						
c)	General lights – LED light fitting with 500 Lux Illumination						
	AIR CONDITIONING:						

	Ductable package air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. . The Air conditioning should be designed with standby provision to function 24 hours a day.						
	The outdoor units of AC should have grill coverings to prevent theft and damage.						
	Ventilation is required in toilet.						
2	Environment specifications:						
a)	Relative Humidity range: To be maintained between 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.						
b)	Temperature ranges: 22 ± 2° C in all areas except equipment room which shall be as per requirement of the equipment.						
c)	Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.						
	Furniture						
1	Revolving chairs height adjustable, medium-back with hand-rest in the Console room – 4 Nos						
2	Tables for Console and Workstation - As required						
3	Modular design walls cabinets (highest quality) for safe keeping and storage of drugs, catheter, interventional items, manuals procedures sets, linen, trays etc under lock and key – 5 nos						
4	Cupboard with laminate door shutters for storage of spare parts and accessories and records (3 ft (W) x 6ft (H) x 2.5 ft (D)) as per requirement. – minimum 5 Nos						
5	Instrument trolleys- 2 nos						
6	Patient foot step – 1 no						
7	Drug trolley – 1 no						
8	Chairs for patient waiting area – Three seater (chrome plated). - 10 Nos						

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9	Patient trolley with rubber foam mattress to be kept in the patient preparation room- 1 No						
10	Changing rooms should have change lockers and dressing table – 2 Nos						
11	Dustbins (plastic with lid) to be provided- 4Nos						
12	All furniture items should be of standard make as mentioned in the table below.						
	LIST OF ITEMS AND SUGGESTED MANUFACTURERS						
	ITEMS PREFERRED MAKES						
A	FLOORING VITRIFIED TILES Somany, Kajaria , H&R Johnson, RAK India						
B	PAINT: Dulux, Asian Paints , Nerolac						
C	PLUMBING: Kohler, Jaguar , Grohe , Roca						
D	SANITARY ITEMS: CERA, Hindware, Parryware						
E	ELECTRICAL						
	1 CABLES: Finolex, Havells ,V-Guard						
	2 SWITCHES: Legrand, L&T, Crabtree , Roma						
	3 DISTRIBUTION BOX , MCB : Legrand, L&T, Siemens, Havells						
	4 LIGHT FITTINGS (LED Lights) : Philips, Crompton, Wipro, Havells, Syska						
F	AIR CONDINTIONING: Daikin, Hitachi, Blue Star, Voltas,						
G	FURNITURE: Hermen Miller , Godrej , Featherlite, Geeken						
SI No	BOQ	Qty	UO M				
1	Dedicated 3D workstation	1	Nos				
2	DICOM workstations:	2	Nos				

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3	HEMODYNAMIC AND EP STATION	1	Nos				
4	Laser Printer as per specification	4	Nos				
5	21" color wave form monitor with programmable layout and digital monitoring readout	2	Nos				
6	ECG cable and pressure transducers with facility for superimposition of pressure tracings with printing supports inside the operating room:	4	Nos				
7	Foot switch for fluoroscopy and acquisition.	1	Nos				
8	Ceiling suspended operation lamp.	1	Nos				
9	Lead glass (120 x 100cm)	1	Nos				
10	Radiation shield ceiling and table mounted/suspended	1	Nos				
11	High power contrast injector with 200 syringes	1	Nos				
12	Radiation protective apron light weight						
a	Front type -	10	Nos				
b	Wrap around –	6	Nos				
c	Two-piece type	4	Nos				
d	Lead Cap	4	Nos				
13	Hanger stands to hold 5 apron	2	Nos				
14	Wall mounted hangers	2	Nos				
15	Thyroid guards	10	Nos				
16	Lead spectacles	10	Nos				
17	Lead lined gloves	2	Nos				
18	Intercom and music system between exam room and control room.	1	LS				
19	Laser Network Printer	1	Nos				
20	ETO sterilizer	1	Nos				
21	Intra-aortic balloon pump (IABP) system	1	Nos				
22	ABG Machine:	1	Nos				

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			.				
23	On line UPS	1	Nos				
24	Act machine	1	Nos				
25	Anaesthesia Workstation:	1	Nos				
	FURNITURES						
1	Revolving chairs height adjustable	4	Nos				
2	Tables for Console and Workstation - As required	1	LS				
3	Modular design walls cabinets	4	Nos				
4	Cupboard with laminate door shutters	3	Nos				
5	Instrument trolleys	2	Nos				
6	Patient foot step	1	Nos				
7	Drug trolley	1	Nos				
8	Chairs for patient waiting area – Three seater (chrome plated)	10	Nos				
9	Patient trolley with rubber foam mattress	1	Nos				
10	Changing rooms should have change lockers and dressing table	2	Nos				
11	Dustbins (plastic with lid)	4	Nos				
	Site Modification						
1	Civil works	1500	Square ft				
2	Electrical work	1500	Square ft				
3	Public health (plumbing and sanitary fittings).	1500	Square ft				
4	Air Conditioning	20	TR				
5	Interior Furnishing & Furniture	1500	Square ft				
6	Miscellaneous items	1	set				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118749 dated 26.04.2022			
Name of the item :				Multiparameter Monitor			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Multiparameter Monitor							
SN	Technical Specification						
1	Description of Function						
1.1	It should provide monitors of ECG, NIBP, SpO2, Temperature, Respiration						
2	Operational Requirements						
2.1	Comprised of bedside monitors						
2.2	Capability of storage of patient data and printing of patient reports.						
2.3	Demonstration of the equipment to be given if required.						
3	Technical Specifications						
3.1	Minimum 18 inches or more multicoloured TFT display.						
3.2	Should have facility to monitor and display - ECG, NIBP, IBP-2 , SpO2(Nellcor/Masimo), Temperature, Respiration and upgradable to ETCO2(Sidestream or Microstream)						
3.3	Digital and 4 waveforms/traces display of all parameters. Specification include – monitoring of heart rate & respiratory rate in addition to above to make it a complete monitor.						
3.4	Multichannel ST segment analysis.						
3.5	Automatic arrhythmia detection & alarm for standard arrhythmia						
3.6	Should be suitable for Adult to Neonate usage						
3.7	Should be able to measure B.P in automatic, manual and stat mode.						
3.8	Motion tolerant NIBP with cuff overpressure protection						
3.9	Should be capable of measuring						

	oxygen Saturation even in case of motion artifact.						
3.10	Should have audio – visual alarms for all parameters and should display alphanumeric alarm messages.						
3.11	Trend of at least 48 hours.						
3.12	Should have automatic and manual alarm setting for all parameters						
3.13	Should have inbuilt 3 Ch thermal recorder with selectable recording speed of 25 & 50 mm /sec Added para: Should provide paper rolls - 100 nos for thermal printing (Price should be quoted separately and the price will be freezed for warranty period).						
3.14	Battery backup of at least 2 hours, when fully charged.						
4	System configuration Accessories, spares and consumables						
4.1	Accessory as per BOQ						
4.2	Necessary wall mounting solution/ mounting for monitors						
5	Environmental factors						
5.1	The unit shall be capable of operating continuously in ambient temperature of 0 -40° C and relative humidity of 15-90%						
5.2	The unit shall be capable of being stored continuously in ambient temperature of 20 – 60° C.						
6	Power Supply						
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug						
7	Standard Safety And Training						
7.1	Monitor should be European CE with four digit notified body number or US FDA or BIS approved for the quoted model and certificate to be submitted. OR Monitor should meet IEC 60601-1, IEC 60601-1-2 & IEC 80601-2-49 standards and submit valid test report from any NABL accredited labs or from the labs in their country of origin (incase of foreign manufacturers) for the quoted model)						
7.2	Should have local service facility the service provider should have the						

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	necessary equipment recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.						
8	Documentation						
8.1	User Manual in English						
8.2	Service manual in English						
8.3	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the Page /para number of original catalogue / data sheet. Any point, if not substantiated with Authenticated catalogue/manual, will not be considered.						
8.4	List of important spare parts and accessories with their part number and costing and to be blocked for 5 years.						
8.5	Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.						
	BOQ	Qty	UOM				
1	Monitor as per tender specification	1	No				
2	Wall Mount	1	No				
3	3 Channel recorder with 100 nos paper rolls - 1 No	1	No				
4	5 Leads ECG cable with electrodes	2	Nos				
5	Reusable Spo2 probe adult	5	Nos				
6	Reusable Spo2 probe pediatric	2	Nos				
7	Reusable Spo2 probe neonatal	1	No				
8	NIBP cuff for Adult	5	Nos				
9	NIBP cuff for Paediatric	2	Nos				
10	NIBP cuff for Neonates	1	No				
11	NIBP Hose	2	No				
12	Temperature probe nasopharyngeal (Adult & Paediatric)	1	No each				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118681 dated 26.04.2022			
Name of the item :				Defibrillator with CPR monitoring and TC pacing			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Defibrillator with CPR monitoring and TC pacing							
SN	Technical Specification						
1	The defibrillator should be least, lightweight, small size with bright colored display						
2	The defibrillator should be Biphasic waveform with 3 wave form display						
3	Screen size minimum 6 inches diagonal						
4	It should display of both selected and delivered energy						
5	It should have ability to energy selection from Paddles or Unit.						
6	In manual mode the unit should provide energy selection at (1-200 J in variable step) and AED mode of upto minimum 150 Joules.						
7	Deleted						
8	The unit should have transcutaneous external pacing with 40 milli-second pulse width						
9	The unit should do self test daily with facility to give print out of defibrillator testing report and also have code ready indicator on unit.						
10	It should have ability to filter out CPR artifacts and allowing person to see organized rhythms without interrupting chest compression						
11	The defibrillator should have facility to monitor following parameters						
a	ETCO2						
b	EKG						
c	Should have SpO2 Module integrated facility.						

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d	Should have NIBP Module integrated facility.						
12	Should have capability of internal defibrillation if and when required.						
13	Equipment should be European CE with four digit notified body number or US FDA or BIS approved for the quoted model and certificate to be submitted. OR should meet IEC 60601-1, IEC 60601-1-2 & IEC 60601-2-4 standards and should submit valid test report from any NABL accredited labs or from the labs in their country of origin (incase of foreign manufacturers) for the quoted model.						
14	In addition to standard accessories following items have to be supplied with unit						
14.1	Battery – 1 No (100 shocks at full charge)						
14.2	Reusable airway adapter to be used with ETCO2 sensor & cable - 2 Nos						
14.3	Multi Function Defibrillator/Pacing padz - 10 Nos						
14.4	Deleted						
	BOQ	Qty					
1	Defibrillator with CPR monitoring and TC pacing	1 No					
2	Paddles Adult/Paediatric (pair)	1 No					
3	ECG Cable with electrodes	1 Set					
4	ETCO2 Module	1 No					
5	SpO2 Module	1 No					
6	NIBP Module	1 No					
7	Reusable airway adapter to be used with ETCO2 sensor & cable	2 Nos					
8	Battery (100 shocks at full charge)	1 No					
9	Multi Function Defibrillator/Pacing padz (Disposable)	10 No					
10	Deleted	1 No					
11	ECG Rolls	10 Nos					

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118592 dated 26.04.2022			
Name of the item :				Syringe Infusion Pump			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Syringe Infusion Pump							
SN	Technical Specification						
1	The syringe pump should be programmable, user friendly, safe to use and should have battery backup and comprehensive alarm system.						
2	Must Work on commonly available standard 5ml/10ml/20ml/50ml/60 ml Syringes with accuracy of minimum of +/-2% or better, with automatic syringe size recognition.						
3	Equipment should be European CE with four digit notified body number or US FDA or BIS approved for the quoted model and certificate to be submitted. OR should meet IEC 60601-1, IEC 60601-1-2 & IEC 60601-2-24 standards and submit valid test report from any NABL accredited labs or from the labs in their country of origin (incase of foreign manufacturers) for the quoted model						
4	Flow rate programmable from 0.1 to 1000 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF.						
5	Bolus rate should be programmable to 40 to 1000 ml/hr or more with infused volume display and one key press bolus. Reminder audio after every 1 ml delivered/programmable bolus should be available						
6	Display of Drug directory of more than 50 drugs, customized and adjustable.						
7	Key board locking system for patient safety.						

8	Keep Vein Open (KVO) must be available at 0.1 ml or set rate						
9	Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg. or atleast 3 selectable levels						
10	Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as disengaged plunger, unsecured barrel etc.						
11	Manual / automatic pusher						
12	Anti bolus system to reduce pressure on sudden release of occlusion.						
13	Should have comprehensive ALARM package including: Occlusion limit exceed alarm. Near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm, KVO rate flow, Low battery pre-alarm and alarm, AC power failure and Drive disengaged alarm.						
14	Rechargeable Battery having at least 4hours backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.						
15	Docking Station for at least four pumps as per requirement so as to enable to power up to 4 pumps with one power cord (Unit Price to be quoted separately and price for 75 nos of docking station will be considered for ranking purpose)						
16	The unit shall be capable of stored and operating continuously in ambient temperature of 10 - 50deg C and relative humidity of 15-90%						
17	Power input to be 220-240VAC, 50Hz.						
18	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.						
19	User Manual and service manual in English.						
20	List of important spare parts and accessories with their part number and costing.						
21	Clamp to be supplied with each machine						

	BOQ	Qty	UOM				
1	Syringe Pump as per specification	1	No				
2	Docking station (Unit Price to be quoted separately and price for 75 nos of docking station will be considered for ranking purpose)	1	No				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118572 dated 26.04.2022			
Name of the item :				Portable Echocardiography System			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							

Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES -Give Comments	Committee Observation
Portable Echocardiography System							
1	It should be max 8 kg ,Portable machine with proper bag and storage facility						
2	The portable machine should come with an OEM cart with three universal imaging transducer port, mobile on four wheels (trolley) for easy movement, with facility to detach the machine from the cart easily for transportation.						
3	System should have extremely high resolution 2D imaging, color flow imaging, M-mode,PW Doppler, CW Doppler , and Duplex modes.						
4	Should have advanced image processing algorithms to analyze between targets and artifacts so as to sharpen target anatomy and reduce speckle and artifacts for excellent image quality.						
5	Should have flat panel high resolution display monitor minimum 15 inch LED/LCD monitor						
6	Should have a dynamic range of 165 DB minimum						
7	Should have extended field of viewing of structures, by continuously scanning and moving the probe over						

	the area of interest.						
8	Should have maximum color Doppler frame rate of 750fps .Should have an on –board workstation for storage and review of all exams i.e. 2D Doppler, Loops etc.						
9	Should have DICOM support to be able to connect to hospital network, laser cameras etc						
10	Should have a large hard disk capacity at least 1 TB to store patient data into the hard drive and 5TB External hard disk to be provided						
11	Should be able to transfer images and clips to CD and DVD media or USB						
12	The quoted echo machine should be compatible with use of Intracardiac catheter for ultrasound (ICE) (Optional)						
13	Should be offered with the following transducers without need for frequency selection (Transducers frequency tolerance :±2MHz)						
14	Adult transducer with frequency from 1-5 MHz: transducer technology for adult probes should be clearly mentioned in technical bid.						
15	Pediatric echo transducer with frequency from 3-8 MHz						
16	Transducer for abdominal ultrasound with 1-5 MHz						
17	Vascular probe with frequency form 4-12 MHz						
18	TEE probe for adult and pediatric echocardiography (should be quoted as standard)						
19	4D TEE adult probe with appropriate 4D software (Optional)						
20	The system should be capable of performing Stress, Strain and Contrast Echo						
21	Battery backup of minimum 120 min.						
22	should be US FDA or European CE with four digit notified body number or BIS certified.						
SI No	BOQ	QTY	UO M				
1	System as specified above	1	No.				

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2	Adult transducer with frequency from 1-5 MHz	1	No.				
3	Pediatric echo transducer with frequency from 3-8 MHz	1	No.				
4	Transducer for abdominal ultrasound with 1-5 MHz	1	No.				
5	Vascular probe with frequency form 4-12 MHz	1	No.				
6	TEE probe for adult and pediatric echocardiography	1	Nos. each				
7	4D TEE adult probe with appropriate 4D software (Optional)	1	No.				
8	Mobile cart and suitable carry bag for machine	1	No.				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118542 dated 26.04.2022			
Name of the item :				High End Echocardiography system (4D ECHO)			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
High End Echocardiography system (4D ECHO)							
1	The system must be latest generation (not last prior to 2-3 years), highest & technologically advaced digital 4D (Live 3D) echocardiography system. Any other model other than the highest end and latest version is liable for rejection						
2	System must be offered with a minimum of 800000 digital processed channels. Original technical data sheet should be enclosed in technical bid to support the number of channels on the systems. If not mentioned, Please attach a letter from manufacturer along with the technical bid clearly stating the digital processed channels of the offered system						
3	System must have adult cardiology transducer with either single crystal						

	technology or pure wave technology or matrix or equivalent for excellent greyscale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology.						
4	System must be offered with a minimum 21 inch high resolution OLED flat panel medical grade display monitor with infinite position adjustments. Company should provide wider monitor if available						
5	System should have at-least four Imaging universal active probe ports with electronic switching facility from key board without probe adapter.						
6	System should be capable of supporting second generation 4D(Live 3D) matrix transthoracic transducer for exceptional 4D (live 3D) Echo,4D(Live 3D) zoom, triggered full volume and triggered 3D colour volume with electro cautery suppression						
7	System should support board band probes spanning a frequency of 1-15 MHz.						
8	Image storage facility on in build hard disc or MOD/CD/DVD-RW facility should be available.Inbuilt hard disk with capacity of 1TB SSD . System should have extensive image capability including thumb nail review, Cine loop editing etc.management. System must be supplied with 5TB external hard disk						
9	System must be offered with speckle reduction Imaging: Image processing technique to remove speckles and clutter artifacts.						
10	System should have 4D (Live 3D) Echocardiography capability with colour flow imaging with single beat						
11	System should be capable of scanning depth of 30cm.Scanning Depth should be clearly mentioned in the technical quoted If not mentioned Please attach a letter from manufacturer along with the technical bid clearly stating the						

	scanning depth of 30 cm in the offered system.						
12	Should be able to perform advanced quantification measurements like strain & Strain rate quantification. Should measure the myocardial velocity and derives the strain rate and strain along user-defined M-lines, Capable of drawing up to 3 M-lines at a time, Capable of sub-dividing each M-line into 8 sub-regions or according to user-defined sub-region sizes, Point of interest tool obtains values from any point on the M- mode display. In addition to the tissue Doppler based strain system should have 2D based strain like VVI, AFI and TMQ should be offered. These should be offered both on the system and on a licensed workstation. OFF-CART workstation (both licensed hardware and licensed software) should be quoted and highlighted in the technical bid Added Para: CT/Flouro integration (Optional)						
13	2D speckle tracking for LA, LV and RV with Volume, TAPSE and EF						
14	System must be offered with user friendly high resolution user interface touch panel of minimum size of 12.0 inch or intuitive keyboard. User friendliness will be given preference.						
15	Should be able to perform MPR views for quantification from 3D Imaging on volume measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer synchronicity indicates to measure and compare timing of maximum contraction of LV volumes to determine those patients who will best benefit from CRT system. Should display global LV volume and should provide simultaneous display of 17 regional volume waveform. This should be offered both on the system and on a licensed work station (both licensed hardware and licensed software) should be offered and highlighted in the technical bid.						

16	The system should have the facility of displaying the three planes of the 3D data set.						
17	Contrast Harmonic Imaging should be offered as standard on the system, with optimization for LOW and HI MI applications. Should also have facility of LOW MI with triggered replenishment Imaging.						
18	Integrated stress Echo facility to perform Stress Echo exams.						
19	Should have the state of the art Transmit real time compound Imaging Technology with Multiple transmitted lines of sight, wherein multiple coplanar Images from different viewing angles are obtained and combined into a single compound Image at real-time frame rates for improved visualisation. Should demonstrate and show multiple transmitted line of sight in linear probes.						
20	Latest PC (off-cart workstation) with permanent licence software for analysing and quantification of 2D and 3D data sets like Strain and Strain rate imaging, Tissue Motion Annular Displacement, Mitral valve 3D data sets, 2D Speckel tracking. CD/DVD writer with Image management software and colour laser Printer. PC should be offered with a flat panel 17" display monitor, 1 TB SSD , i7 processor, 16 GB RAM . (hardware essential for OFF cart quantification)						
	Following Transducers (Frequency tolerance +/-2MHz) should be supplied with the system						
1	4D (Live 3D) Echo matrix transducer for adult 4D (Live 3D) with frequency ranging from 1-5±1 MHz. This probe must support for exceptional 4D (Live 3D) image quality on the matrix array transducer to simultaneous display of two real-time live high-quality image planes. This transducer should have either single crystal technology or pure wave technology or matrix technology for excellent Image quality on difficult to image patient. Please mention the						

	crystal technology used in the transducer. Systems offered with normal transducers for adult echo are liable for rejection.						
2	1-5±1 MHz Broadband adult echo transducer for adult cardiology imaging. Must have Tissue harmonic Imaging, must have either single crystal technology or pure wave or matrix technology for excellent Image quality on difficult to image patients. Must attach original technical data sheet of transducer to specify the above technology used in the transducer. This adult probe must be of the smallest foot print.						
3	3-8 MHz Broadband pediatric echo transducer for pediatric and small adult cardiology imaging.						
4	5-12 MHz broadband pediatric echo transducer for neonatal and large pediatric cardiology imaging.						
5	4D (3D) Echo matrix TEE transducer for Adult 4D (3D) with frequency ranging from 2-7 MHz. Please quote prices of all probes separately also.						
6	System should be supplied with the 2KVA online UPS						
7	Added Para: Paediatric 2D TEE probe 1 no						
	Guarantee & warranty:						
	Guarantee: Comprehensive Guarantee for five years for parts and labour. All software updates a period of 5 to be provided free of cost. CMC should be unconditional and include all accessories including third party items.						
	Comprehensive Guarantee for parts and labour from year 6 to 10 will also need to be quoted in the price separately and will be taken into account(added in the price bid) while calculating the Final price.						
	should be US FDA or European CE with four digit notified body number or BIS certified.						
SI No	BOQ	Qty	UOM				
1	System as specified	1	Nos.				
2	4D (Live 3D) Echo matrix transducer	1	Nos.				

	for adult 4D (Live 3D) with frequency ranging from 1-5±1 MHz.						
3	1-5±1 MHz Broadband adult echo transducer for adult cardiology imaging.	1	Nos.				
4	3-8 MHz Broadband pediatric echo transducer for pediatric and small adult cardiology imaging.	1	Nos.				
5	5-12 MHz broadband pediatric echo transducer for neonatal and large pediatric cardiology imaging.	1	Nos.				
6	4D (3D) Echo matrix TEE transducer for Adult 4D (3D) with frequency ranging from 2-7 MHz. Please quote prices of all probes separately also.	1	Nos.				
7	Paediatric 2D TEE probe	1	Nos.				
8	Stand alone PC (Windows based) with suitable DICOM viewer,	1	Nos.				
9	Suitable Laser Colour Printer	1	Nos.				
10	2KVA online UPS	1	Nos.				

COMPLIANCE STATEMENT					
Bid Number:		GEM/2022/B/2118521 dated 26.04.2022			
Name of the item :		Suction Machine			
Name of the Bidder :					
Name of the Manufacturer of quoted item :					
Country of Origin of quoted item :					
Model Quoted:					
Sl. No	Technical Specification	Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Suction Machine					
1	Technical Specifications				
1.1	Should be noiseless & should have fast vacuum build up				
1.2	Should have max vacuum of 650mm Hg or more				
1.3	Suction capacity should be 50-60L/min & twin bottle (autoclavable poly carbonate/poly sulphonate) capacity of 3L each				
1.4	Should have mechanical overflow protection system				
1.5	Should be supplied with all necessary accessories for the complete system				
1.6	Should selected second jar automatically or				

	manually				
1.7	Max noise level should not be 50 db				
1.8	Should have 4 castors with 2 of them have breake				
1.9	Oil free and maintenance free vacuum pump				
2	Power Supply				
2.1	Power input to be 220-240VAC, 50Hz				
3	Documentation				
3.1	User/Technical/Maintenance manuals to be supplied				
3.2	Certificate of calibration and inspection from factory.				
3.3	List of important spare parts and accessories with their part number and costing.				
3.4	Manufacturer should be ISO 13485 certified.				

COMPLIANCE STATEMENT							
Bid Number:					GEM/2022/B/2118477 dated 26.04.2022		
Name of the item :					12 Channel ECG Machine		
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
12 Channel ECG Machine							
SN	Technical Specification						
1	Twelve channel 7" or more LCD display for all 12 leads along with on screen details.						
2	Recording for 12 channels simultaneously and have option for user selectable any lead as Rhythm lead. Can able to print ECG at A4 size paper through inbuilt printer.						
3	Recording speed selection of 5, 10/ 12.5, 25 and 50 mm/sec.						
4	Sensitivity of 2.5,5,10,20 mm /mV. It should also have AGC (Automatic Gain Control)						
5	Facility to enter patient information (Patient ID, Name, Age, Sex, Hospital's name) which get updated in system and is recorded on the recorder A4 paper						
6	Patient memory function 20 patients or						

	more						
7	Waveforms can be recorded.						
8	Interpretation software.						
9	Mains and in built rechargeable battery backup atleast 2 hrs/ 30 ECG						
10	Should have USB port/SD card (to be supplied by the bidder)/ equivalent port to send the data in the Computer.						
11	Equipment should be European CE with four digit notified body number or US FDA or BIS approved and certificate to be submitted.						
	Added Para: Machine should be supplied with trolley made up of SS 304 with lockable castors						
	BOQ	Qty	UOM				
1	ECG Machine as per Specification with standard accessories	1	No				
2	Interpretation software.	1	No				
3	ECG paper - Price should be quoted & locked for atleast 5 years separately	1000 patients					
4	Added in BOQ: Trolley made of SS 304	1	No				

COMPLIANCE STATEMENT					
Bid Number:		GEM/2022/B/2118447 dated 26.04.2022			
Name of the item :		Mobile Spot Light			
Name of the Bidder :					
Name of the Manufacturer of quoted item :					
Country of Origin of quoted item :					
Model Quoted:					
Sl. No	Technical Specification	Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES -Give Comments	Committee Observation
Mobile Spot Light					
1	To provide cool, intense, focused light of 5000 lux or more				
2	Should be halogen bulb of 50/75 W at low voltage or LED lamp , Step down transformer (compact) mounted inside the head				
3	Should have bulb retainer to prevent accidental unplugging and fall (in case of Halogen lamp)				
4	Should have protective shade with				

	holds on top to dissipate heat.				
5	5 spokes stand mounted on caster of 5cm diameter.				
6	Maximum height – 170 cms				
7	Tubing of MS, pretreated and epoxy powder coated.				
8	Cable length – 2m				
2.1	Manufacturer should be ISO 13485 certified.				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118415 dated 26.04.2022			
Name of the item :				Holter system with work station			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Holter system with work station							
1	PC based latest software capable of working with microsoft windows 10						
2	The system should have the capability to acquire/analyse 12 lead ECG derived out of 3 or more Channel using 5 or more electrodes for upto 7 days (168 Hrs) with facility to display/print 12 lead ECG at any point of time.						
3	Should be able to re-edit individual form classes.						
4	Should be able to consolidate individual form classes.						
5	Should have scroll function for the overview (super page of the ECG)						
6	System should be capable of analyzing various arrhythmias like ventricular ectopics, supraventricular ectopics, ventricular tachycardia, ventricular fibrillation, supraventricular tachycardia, atrial fibrillation, sinus pause.						
7	Should have the facilities of						
a	Heart Rate Variability						
b	QT Analysis						

c	T wave alternans or equivalent parameter (Optional)						
d	Heart rate turbulence or equivalent parameter (Optional)						
8	Operator should be able to edit and reclassify beats and arrhythmias.						
9	Report format should include covering page, arrhythmia analysis report, ST segment analysis, automatically and manually selected ECG Strips.						
10	ST segment analysis should be available for all three channels.						
11	QT analysis with validation						
12	Any ECG print out should be possible.						
13	Should save 48 hours of ECG into flash memory card / inbuilt memory.						
14	Saved data should be read using integrated reading device.						
15	Software should Include						
	a) Holter analysis						
	b) Trends						
	c) Strips						
	d) Page						
	e) Final report						
	f) Deleted						
	g) Event review						
	h) Episode review						
	i) Final report						
	j) Deleted						
16	Should have Print out facility.						
17	Recorders with following Configuration						
17.1	3 Digital recorder should have 128 samples/sec/channel for recording						
17.2	It should be compact and weight less than 150 gm including batteries						
17.3	Should have LCD graphic display to preview ECG waveforms of multiple leads including patient hookup						
17.4	Should be supplied with 2 AA alkaline batteries along with each recorder						
18	PC- Configuration						
1	Should be supplied with a Latest generation PC, (8GB RAM ,processor i7 or above,Memory 1TB Hard drive.21"monitor)						
2	Suitable Colour Laser printer.						
3	UPS minimum 30 minutes backup						
19	Product should be European CE with 4						

	digit notifying body no/USFDA/BIS Approved. Certificate to be provided.					
20	System should be capable of being interfaced with HIS/RIS/ PACS.					
SI No	BOQ	QTY	UOM			
1	Holter Monitor, as specified	1	Nos.			
2	Recorders, as specified	3	Nos.			
3	PC- Configuration, as specified	1	Nos.			
4	Colour laser Printer	1	Nos.			
5	UPS of minimum 30 minutes back up	1	Nos.			

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118385 dated 26.04.2022			
Name of the item :				TMT Machine (Stress test system)			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES -Give Comments	Committee Observation
SN	TMT Machine (Stress test system)						
1	Description of Function						
1.1	Exercise stress testing systems offer a wide array of unique diagnostic software options to evaluate myocardial function. Automatic arrhythmia detection, ST-segment analysis, and (T-wave alternans or equivalent parameter) are a few examples. In conjunction with a treadmill or ergometer, these systems provide a controlled environment for the observation of the effects of increases in myocardial oxygen demand: exercise-induced systolic hypotension, exercise-induced angina, and/or the appearance of a heart murmur during exercise.						
2	Operational Requirements						
2.1	complete system with latest PC , Storage,& Software, TMT and necessary cables required with digital Wired/wireless ECG transmission module						
3	Technical Specifications						
3.1	System should acquire and analyze 12 leads.						

3.2	System should be based on Windows platform with minimum 19" color monitor having minimum resolution 1280 x 1024.RAM 8 GB, 1 TB HDD, CD/DVD-RW, Mouse.						
3.3	Should provide standard Full Interpretation of Supine ECG with reasoning.						
3.4	Display of real time 12 lead diagnostic qualities ECG waveform, average complexes beat of all 12 leads with superimposed color comparison along with digital value of ST level and slope. Print the graph on the recording paper.						
3.5	System should have ability to manual edit of J & Isoelectric point during exercise. Filters for line frequency and special filters to reduce noise and baseline artifacts without compromising the ECG frequency response.						
3.7	System should have full disclosure play back, review and storage of patient ECG raw data for unlimited numbers depending upon size of the hard disk.						
3.8	System should provide multiple and customizable printing formats as per user's choice on A-4 size online real time printings.						
3.9	Suitable laser printer for printing reports on plain paper to be supplied.						
3.10	System must have ECG trigger output to interface with external automatic devices.						
3.11	Heavy Duty Treadmill: Noise free Treadmill with speed ranging from 0.5 to 20 kmph and grade of 0 – 22%. The system and treadmill should be from the same manufacturer						
3.12	All consumables required for installation and standardization of system to be given free of cost.						
4	Defibrillator						
4.1	Defibrillator should be Bi- Phasic, light weight and latest model						
4.2	Should monitor vital parameters and display them						
4.3	Should print the ECG on thermal recorders.						
4.4	Should work on both Manual mode upto 200J or more and Automated external defibrillation (AED) mode up to 150 J or						

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	more.						
4.5	Should be capable of doing synchronized & asynchronized cardioversion						
4.6	Can be operated from mains as well as battery						
4.7	Should have defibrillator testing facility						
5	Integrated Automatic digital NIBP measurement during stress test should be provided with the system						
6	Power Supply						
6.1	Power input to be 220-240VAC, 50Hz						
6.2	Suitable UPS for Computer System minimum 30 min backup						
6.3	Suitable Servo controlled Stabilizer for Treadmill						
7	Standards, Safety and Training						
7.1	The treadmill and software should be USFDA / European CE (with 4 digit notified body number) / BIS approved						
7.2	System should be capable of being interfaced with HIS/RIS/ PACS.						
SI No	BOQ	QTY	UO M				
1	Stress test system	1	Nos				
2	Treadmill	1	Nos				
3	PC (personal Computer)	1	Nos				
3	UPS for Computer System	1	Nos				
4	Suitable Servo controlled Stabilizer for Treadmill	1	Nos				
5	Laser Printer	1	Nos				
6	Automatic digital NIBP	1	Nos				
7	Defibrillator Bi- Phasic - price to be quoted separately	1	Nos				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118350 dated 26.04.2022			
Name of the item :				Ambulatory BP Monitor			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES -Give Comments	Committee Observation
Ambulatory BP Monitor							
Sl.No	Technical Specification						
1	Measurement Method : Oscillometric						
2	Pressurization : Internal Micro Pump						
3	Display Range : 0 - 300mmHg						
4	Measurement Range: Systolic 60 - 280mmHg (min. division: 1mmHg) Diastolic 0 - 160mmHg (min. division: 1mmHg) Pulse 30-200bpm (min. division: 1bpm)						
5	Accuracy : Pressure ± 3 mmHg or $\pm 2\%$ measurement, whichever is greater. Pulse Rate: $\pm 5\%$						
6	Memory Capacity : ≥ 200 measurements						
7	Power Source: Two or Three AA Alkaline or NiCd (Batteries included)						
8	Temperature & Humidity Range: Operation :50°F to 104°F (10°C to 40°C), less than 85%RH Storage & Transportation : -4°F to 131°F (-20°C to 55°C), less than 95%RH						
9	Weight: <150gm						
10	Data Output : RJ 45 or equivalent ports						
11	Cuffs: Small Cuffs, (13-22cm) - 2 nos						

	Adult Cuffs, (20-31cm) - 4nos Large Cuffs, (28-36cm) - 4 nos Extra Large Adult, (32-42cm) - 2 nos						
12	Manual Interval programming should be available						
HARDWARE REQUIREMENTS							
13	CPU: Intel i7 processor or higher version						
14	RAM : 16 GB Min.						
15	Operating System: Windows latest						
16	Monitor:32" LCD/LED						
17	Hard Disk: 1TB SSD						
18	Printer:Laser printer						
19	compatible UPS						
20	Analyzer software should be provided						
21	Manufacturer should be ISO 13485 certified.						

COMPLIANCE STATEMENT					
Bid Number:		GEM/2022/B/2118338 dated 26.04.2022			
Name of the item :		Point of Care device (Cardiac Biomarker)			
Name of the Bidder :					
Name of the Manufacturer of quoted item :					
Country of Origin of quoted item :					
Model Quoted:					
Sl. No	Technical Specification	Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES -Give Comments	Committee Observation
Point of Care device (Cardiac Biomarker)					
Sl.No	Technical Specification				
1	Should be able to measure quantitatively Troponin, CPK-MB, Myoglobin, D-Dimer , NT-Pro BNP, PT-INR either separately or in combination.				
2	Should be able to measure accurately +/- 5% to the gold standard.				
3	Deleted				
4	Data Memory: >150 MB or more than 500 Tests				
5	Data Storage : more than 500 Tests				
6	Display : At least 3" color display				
7	Should have USB port/ Communication				

	port				
8	Should have built-in printer and should be supplied with paper for reporting 1000 patients. Price for paper rim should be quoted separately and prices to be frozen for warranty period.				
9	Operating Temperature : 15-30°C				
10	Should be BIS/ European CE with 4 digit notified body no / CE-IVD/ US FDA certified for the quoted model				
11	Should be supplied with cartridges for 100 tests for each parameters either separately or in combination. The rates should be quoted separately for each cartridge and prices will be frozen for warranty period				

COMPLIANCE STATEMENT							
Bid Number:				GEM/2022/B/2118244 dated 26.04.2022			
Name of the item :				Tilt Table			
Name of the Bidder :							
Name of the Manufacturer of quoted item :							
Country of Origin of quoted item :							
Model Quoted:							
Sl. No	Technical Specification			Compliance to the Tender Specification- Give Comments	Data Sheet Para & Page No	Deviation if any(Y/N), if YES - Give Comments	Committee Observation
Tilt Table							
Sl.No	Technical Specification						
1	Table should have electric height adjustment control via remote						
2	It should have electric tilting control via remote.						
3	Both control can be adjust by two function hand remote.						
4	Table should tilt min 80 degree						
5	tilt tables motor should have 12-14 mm/sec speed at unloaded and 6 -7 mm/sec speed at full load.						
6	It should have Battery Back-Up to bring the patient down in case of power failure						
7	It should have facility of lowers						

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	to wheelchair height						
8	It should have good quality large braking castors						
9	It should indicate tilt angle.						
10	Table top should have minimum 61cm wide x 198cm long x 80cm high						
11	Table should have minimum Three fixation belts:- Thoracic, Pelvic, Knee						
12	Deleted						
	BOQ	QTY	UOM				
1	Tilt Table (Motorised)	1	Nos.				