Critical Care Block Equipments on Complete Turnkey Basis under PM–ABHIM
GEM / 2024 / B / 4757970 Dated 09.03.2024.

Reference queries from M/S arti enterprises Dated 12/03/2024,M/S Vikas Medical Devices-Dated 13/03/2024,M/S Medex India Private limited -Dated:06/05/2024 ,M/S Facio Marketing Solution vide emails dated 10/05/2024 and M/S Medicon trade and Agency ,Guwhati vide email dated 22/05/20240 M/S Biosi Medical Services vide email dated30/04/2024 and 29/05/2024 ,M/S RGS Enterprise vide email dated 24/05/2024,M/S HD Consortium India Ltd.vide letter dated 02/05/2024 Follwing amendment/Modification are placed

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
1.Multi Parameter Monitor with Central Monitoring & upgradable charting system			
1	**Advanced high-end modular patient monitor having integrated non-invasive, invasive measurement & features suitable for neonate, pediatrics & adult patients. It should be a proper modular monitor with interchangeable modules or servers.**	**No change**	
2	**The monitor should have a highly visible, bright 15" color TFT, full touch screen, and display for easy viewing from a distance. It must be a proper modular monitor with swapable module with facility to transfer data from one monitor to another just be swapping modules -.**	**No change**	
4	**Monitors must be able to monitor ECG, Sp02 (masimo-SET with PI), NIBP, Respiration, temperature and 2 x IBP as standard parameters. ECG, Respiration, NIBP, Sp02, 2 x Invasive pressure and Temperature should be monitored through one server/ module.**	**Monitors must be able to monitor ECG, Sp02 (masimo-SET with PI)/Nellcore/any other similar technology, NIBP, Respiration, temperature and 2 x IBP as standard parameters. ECG, Respiration, NIBP, Sp02, 2 x Invasive pressure and Temperature should be monitored through one server/ module.**	For Wider participation
	Should have the option of integrating 6 inches in the transport module with a bedside monitor for shifting the patient without any disconnection of cables / wires with seamless data transfer to the main bedside monitor and minimum 4-5 hrs battery backup. Transport Monitor's screen should remain reflecting waveforms and parameters when connected to the main monitor.	**No change**	
6	**Monitor must be Upgradable to minimal invasive continuous cardiac output (CCO), NMT Module, Etco2, 4 IBP, EEG module, SPo2, PVI, SPCO, SPOC, SP Met with Spo2, RRa, Cerebral oximetry (03) &Sedline (BIS) Monitoring with 4 channel EEG & Etco2 (main stream). Third-party device integration will not be accepted**	**Monitor must be Upgradable to minimal invasive continuous cardiac output (CCO), NMT Module, Etco2, 4 IBP, EEG module, SPo2, & Sedline (BIS) Monitoring with 4 channel EEG & Etco2 (main stream). Third-party device integration will not be accepted**	For Wider participation
7	**Below modules with standard accessories must be provided with 10 monitor set with accessories**	**Below modules with standard accessories must be provided with 10 monitor set with accessories**	

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
	1. Etco2 (Mainstream)- 3nos	**1. Etco2 (Mainstream)- 3nos**	
	2. Transport module with standard accessories- 3nos	**Transport module with standard accessories- 1 nos**	Qty reduced Considering the allocation of Budget under PM-ABHIM
	3. 03/NIRS/Cerebral oximetry module -1	**Deleted**	
	4. EEG (with a EEG trend graph for all channels)- 4 channel-1	**EEG (with a EEG trend graph for all channels)- 4 channel-1**	
	5. PVI module-1	**Deleted**	
12	**It must have 168 hours of trends facility during and after hospitalization with 32-inch screen monitor.**	**It must have 120 hours or more of trends facility during and after hospitalization with 24-inch or bigger screen monitor.**	For Wider participation as will not affect patient care
	2. Should be a PC based full keyboard. & Mouse user interface.	**deleted**	For Wider participation as will not affect patient care
	3. Display size should be min 32".	**Display size should be min 24" or bigger**	For 10 nos of patient moniotrs 24" scren size or bigger
	5. Should be a scalable to view up to 32 patients per central station.	**Should be a scalable to view up to 16 patients per central station.**	Quantity reduced as total 30 monitors and 3 separate central stations asked and reduced quantity Considering the allocation of Budget under PM-ABHIM
	8. Should be able to review & Print following patient information: Graphic trends, tabular vital signs, arrhythmia history events and other critical alarms. Third party alarm should also be displayed along with other monitoring alarms	**Should be able to review & Print following patient information: Graphic trends, tabular vital signs, arrhythmia history events and other critical alarms.**	For Wider participation as will not affect patient care
	9. Should automatically generate snap shots of all critical alarms for 30 seconds.	**Deleted**	For Wider participation as will not affect patient care
	10. Should have 168 Hours of trend storage facility during and after	**10. Should have 120 hours or more of trend storage facility during and after**	For Wider participation
	24. Should have Web and mobile viewing facilities to monitor each network monitor on any mobile Phone (10S, Windows & Android)	**24. Should have Web and mobile viewing facilities to monitor each network monitor on any mobile Phone {IOS/Android (optional)**	
13	**The monitor must be U. S. FDA / European CE / CDSCO ~~/ BIS~~ approved for main equipment ~~as well as its modules~~.**	**The monitor must be U. S. FDA / European CE / CDSCO /BIS approved**	Clarified on the certification/standards
14	**Each monitor to be supplied with following:**	**30 Nos of monitor to be supplied with following items :**	
	Basic Module foe all seven parameter (ECG,SPO2,RESPIRATION,TEMP,NIBP and IBP-2 ports)	**Basic Module foe all seven parameter (ECG,SPO2,RESPIRATION,TEMP,NIBP and IBP-2 ports)-30 modules(27 module + 3 transaport module)**	

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
	a. 3 and 5 Lead ECG electrode cable-2 No. each	a. 5/10 Lead ECG electrode cable- 30 Nos (30 x1No. each)	Qty reduced Considering the allocation of Budget under PM-ABHIM
	b. Disposable ECG electrodes -50 pcs	b. Disposable ECG electrodes -900 nos in total (30 pcs x30)	
	c.Sp02 probe with cable —1size each (Adult,pediatric,Neonatal)	c.Sp02 probe with cable —55 Nos in total (30 Adult,15 pediatrics and 5 neonatal size	
	d. Reusable NIBP cuffs for Pediatrics and neonates — 2 no each (of different sizes)	d. Reusable NIBP cuffs for Pediatrics and neonates — 55 Nos in total (30 Adult,15 pediatrics and 5 neonatal size	
	e. Temp Probe — 1 Nos. (skin one each)	e. Temp Probe — 30 Nos. skin	
	f. IBP connection cable — 02 Nos.	f. IBP connection cable — 60 Nos.(2Nos x 30)	
	g. IBP Disposable Pressure Transducers — 20 Nos	g. IBP Disposable Pressure Transducers — 150 Nos	
2.ICU Ventilator-High End			
1	Should be a microprocessor controlled ventilator with inbuilt in 12″ or more colorTFT /LCD touchscreenscreen with integrated graphics providing support to Adultl Pediatric patient range & must be supplied along with attached trolley from the same manufacture.	Should be a microprocessor controlled ventilator with inbuilt turbine in 12″ or more color TFT / LCD touchscreen screen with or without Rotatry knob with integrated graphics providing support to Adult Pediatric patient range must be supplied along with attached trolley from the same manufacturer.	Being Better technology and Many OEM are adopting the same.
2	Should have enhanced invasive and noninvasive ventilation based on both pressure and volume.	no Change	
5.(xi)	PSV/ASV/Equivalent	ASV/NAVA/PAV or Equivalent	PSV removed ,being not an closed loop ventilation
14. (i)	Reusable Expiratory valve (If required for the ventilator):- 5 Nos.	Reusable Expiratory valve (If required for the ventilator) should be covered under warranty	to reduce the repeted processing of acessroeis
(ii)	Oxygen Sensor are covered under warranty	No change	To reduce the repeted processing of acessrories although it will impact intitial budget .
(iii)	Reusable Flow sensor :- 10 Nos. Each size (Adult & Pediatric).	Reusable Flow sensor :- 4 Nos. Each size (Adult & Pediatric).	Qty reduced Considering the allocation of Budget under PM-ABHIM
v	Air & Oxygen Hose with Adopters :- 1 No. Each.	Air(if Applicable) & Oxygen Hose with Adopters :- 1 No. Each.	Being turbine model ,Air hose is not required.

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16	Should be HL7 compliant and can connect to HMIS open architecture for interfacing cost to be bourne by the supplier	No change	
17. (b)	Should have facility to lung protective modes like ASV/ PAV / MMV	Should have facility to lung protective modes like ASV/ PAV or Equivalent	Equivalent Lung Protective tools should be offered
18.C	Should have facility to lung protective modes like ASV / PAV / MMV.	Should have facility to lung protective modes like ASV/ PAV or Equivalent	Equivalent Lung Protective tools should be offered
3 , 21,38,51,67,81 .Syringe infusion Pump			
7	Should have programmable Occlusion pressure Digital & analog display from 100mmHg up to 900mmHg with increment of 50mmHg.	Should have programmable Occlusion pressure Digital & analog display from 200mmhg to 975mmhg with increment of +150mmhg	For wider Participation
11	Should have PM line disconnection alarm.	Should have PM line disconnection alarm/Syringe Disengage Alarm	For wider Participation
13	Battery operating time: Approx. 15 @ 1 ml/h, 10 h @ 5 ml/h, 08 h @ 20 ml/h with Battery capacity display in hr and min.	Battery operating time: Approx 7 Hours or more	For wider Participation
15	Pumps should be mountable on each other to save space.	Pumps can be stacked with the stacking station	For wider Participation
16	Should have facility of mounting on stacking racks of 4 Pumps with single power supply & stacking mounts & prices for individual stacking unit may be quote optionally.	Deleted	For wider Participation
25	Pumps must be drop test certified from a height of 1 mtr& certificate must be attached in the technical datasheet.	Deleted	For wider Participation
4. Environmental factors:			
	The unit shall be capable of operating continuously in ambient temperature of 30-40 deg C and relative humidity of 15- 90 %	The unit shall be capable of operating continuously in ambient temperature of 30-40 deg C and relative humidity of 20- 90	For wider Participation
	The unit shall be capable of being stored continuously in ambient temperature of 10-50 deg C and relative humidity of 15 – 90 %	The unit shall be capable of being stored continuously in ambient temperature of 10-50 deg C and relative humidity of 20 – 90 %	For wider Participation
10,28,59 .Portable Ventilator			
1	Tidal volume - (20 – 1500)ml	Tidal volume - (50 – 1500)ml or better	For wider Participation
2	Respiratory rate: 0-80 BPM	Respiratory rate :0-60 BPM or better	For wider Participation
4	Oxygen Concentration - 21 –100 %	Oxygen Concentration - 21 – 90 % or more	For wider Participation
7	Works with both high pressure and low-pressure O2.	No change	
9	Should have screen size 8 inch	Should have screen size 7 inch or more	For wider Participation
11.Mobile Digital Radiography Systems -5KW or more			

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
	Manual Driven, compact, easily transportable digital radiography system with Wireless flat panel detector mobile and inbuilt DAP meter suitable for bedside XRays, Intensive care unit and operation theatre use.	**Manual Driven, compact, easily transportable digital radiography system with Wireless flat panel detector mobile and suitable for bedside X-Rays, Intensive care unit and operation theatre us**	For wider Participation
A.	**The Generator:**		
	It should be microprocessor controlled high frequency with output 5 KW or more.	**It should be microprocessor controlled high frequency with output 4 KW or more.**	For wider Participation
	KV range : 40 KV to 110 KV or more.	**No change**	
3	**Tube current: 150 mA or more.)**	**Tube current: 100 mA or more.**	For wider Participation
B.	**X-Ray Tube:**		
3	**Dual Focal spot size of X-Ray tube of 0.3mmand 1mm.**	**Single/ Dual Focal Spot**	For wider Participation
	Anode heat storage capacity should be 80 KHU or more.	**Anode heat storage capacity should be 40 KHU or more.**	For wider Participation
	Multileaf collimator should be supplied withthe system	**Manual collimator should be supplied withthe system**	For wider Participation
	It should have an integrated DAP meter. The DAP meter reading should be visible on the software console with each image.	**Deleted**	For wider Participation
2	**The detect or pixel matrix should be 3072(h) x 2560(v) or more with DQE at least 70%. at 0 lp/mm**	**The detect or pixel matrix should be 3072(h)x2560(v) or more with DQE at least 65%. at 0 lp/mm**	For wider Participation
7	**The wireless detector must have a lithium-ion battery that allows more than 600 thorax exposures per recharge.**	**The wireless detector must have a lithium ion battery that allows more than 200 thorax exposures per battery recharge**	For wider Participation
C.	**Flat Panel detector:**		
D.	**Battery:**		
1	**The machine should be able to run on mains as well as on battery supply. The system should allow at least 150 thorax exposures per battery recharge**	**The machine should be able to run on mains . The system should allow at least 150 thorax exposures per battery recharge**	For wider Participation
2	**The unit should have separate batteries for driving the unit and generator**	**Deleted**	Not applicable for manual driven model
3	**The battery should be able to be charged from a normal 15A, 220-240V single phase socket in less than 4 hours, should be capable of generating at least 100 exposures.**	**Deleted**	Not applicable for manual driven model
F.	**Other Features:**		
	The system should have European CE (Full Quality assurance, MDD 93/42/EEC) and USA FDA approval/CDSCO/BIS.	**The system should have European CE / USA FDA approval/CDSCO/BIS.**	Certification /Standards included

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	It must have a telescopic / articulated arm for maximum positioning flexibility in any patient position. The angles in various planes to be specified by the manufacturer. The cables should preferably be concealed in the arm system	**"It must have a telescopic / articulated arm for maximum positioning flexibility in any patient position. The angles in various planes to be specified by the manufacturer. The cables should preferably be concealed / conduit in the arm system**	For wider Participation
12. Portable Ultrasound Color Doppler May be read as Highend colour doppler system -1 no			
15 (e)	500GB integrated hard disk	**TheEntire specification was amended to "High end Colour Doppler System - 1no**	
II.	Transducers/ other items	The units should be latest state of the art digital color Doppler with broadband beam forming for abdominal vascular, Obs, & Gynae, Pediatric, Musculoskeletal, and small parts application. The models with following (or higher) specifications need to be quoted.	Need changed by User Depratment for High end Colour Doppler System against protable Ultrasound
1	Should have 6-13 MHz Linear probe	The machines should be USA FDA/ European CE /BIS/CDSCO certified and should be latest in Technology and launched in 2020 or later.	
2	Should have 4-8 MHz phased array probe	They should have at least 4000000 or more digital processing channels for high –resolution imaging and Fast Scanning.	
3	Should have 6-13 MHz hockey stick probe	Imaging Modes:	
4	Should have adult convex probe (2-5 MHZ)	2D, M- Mode, color flow imaging, pulse Doppler, continuous wave Doppler, power Doppler and directional color flow mapping	
		3D/4D - MPR Display format/Ref. Plane/3D Orientation/ Edit ROI /Render Setup: Surface, Depth, Max, Min, XRay, Light, Light2 /Cine/Cine Calc/ /Multislice/ HDLive/Vocal/Any slice/STIC	
		The Machines should have facility for simultaneous dual/ duplex/ triplex mode display	
		Tissue harmonic imaging should be available on convex, linear, and endo cavity transducers.	
		Machines should be capable of advanced real time compound imaging on linear, curved array Probes.	
		The machines should have facility for real time fetal echocardiography with high frame rate to capture the fast-beating fetal heart – 2000 Frames or more	

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		Machine should have integrated gel warmer with temperature level settings	
		High dynamic range of 320 dB or more.	
		The machines should have 256 Grey shades (8 bit) or more.	
		The System should have scanning depth of 40cms or More	
		One touch image optimization should be available in 2 D mode to optimize the image without adjusting multiple parameters.	
		There should be one button automatic adjustment of Doppler PRF, baseline, dynamic range and gain in Doppler mode.	
		Pulsed wave Doppler should be available on all imaging transducers with adjustable sample volume size, simultaneous or duplex mode of operation, simultaneous, 2D, Colour Doppler, pulsed Doppler, Continuous Wave Doppler, high PRF capability in all modes including duplex and triplex and automatic adjustment of scale and baseline.	
		The system should have option to adjust the color flow mode for high or low flows in one touch Operation.	
		Machines should support broad band/ wide band high density probes spanning with frequency range from 1-25 MHz (+/- 1 MHZ). The system should support latest technology single crystal probe for better Uniform resolution and penetration.	
		Automatic Doppler analysis should be available with automatic real time calculation of at least six of following user selectable parameters peak systolic velocity end diastolic velocity, mean diastolic velocity, volume flow, time average mean velocity, time average peak velocity, resistive index, pulsatility index, systolic/ diastolic ratio, acceleration/ deceleration times.	
		Have facility to automatically recognize and measure HC/BPD/FL/AC and calculate Fetal Weight for Obstetric.	
		The machine should have up to 500000 images storing facility and cine loop review facility with memory up to minimum of 20000 frames	

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		The machines should have facility of direct storage and retrieval of B/W and color images (both frozen and cine loop) in the inbuilt hard disk drive. In built hard disk storage should be equal to or more than 1 TB Preferably Solid-State Device.	
		The machines should support three or more Active and 1 parking slot transducers with universal ports allowing any transducer to be connected to any port.	
		Machines should have a high resolution fully articulating non-interlaced flicker free, anti-glare LED display of 21 inches or more. Machine should have touch screen control panel of 12 inches or more for easy accessibility.	
		The System should have electronically Controlled UP & Down movement of Control panel to adjust to the user requirements and side by side rotation.	
		Max. Frame rate (Probe dependent) - 2D: minimum2,500 (Hz/FPS) - Color: 500 (Hz/FPS) - Volume: 45 (Hz/VPS)	
		The system should have image enhancement options like speckle reduction, Spatial compounding, and filtered tissue harmonics. The system should have adaptive blending color to maintain the 2D resolution while working in color mode.	
		Zoom facility with high resolution results and pan capacity in both real time and frozen images.	
		The system should have CD-DVD and USB archival (DICOM and PC format). There should be 5 or more USB ports.	
		USB real-time recording should be possible. Videos are recorded as high-definition and stored in system quickly.	
		Machine Should be supplied with B/w Thermal Printer and a paper dicom printer .	
		Machine should have 3D/4D Hardware inbuild with the machine.	
		Machine should be supplied with 2KVA Online UPS with 30 minutes Back up.	
		The System should carry Warranty for 3 Years	

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		Machine should have facility to do contrast imaging in liver studies with TIC Analysis	
		System should have features to show micro vascularity flow at tissue level.	
		Machine should have protocol to reduce number of keystrokes.	
		User should be able to compare images with two different probes.	
		Machine should be offered with the following broad band High Density Probes.	
		(i) Single Crystal High Density Convex Transducer of frequency 1-7Mhz – 192 elements	
		(ii) Single Crystal High Density Linear Array Transducer of frequency 3-19 MHz (+ 1 MHz) – 256 Elements	
		(iii) Single crystal High Density TVS transducer 3-10 MHz (+ 1MHZ) – 192 elements	
		(iv) Single Crystal Phased array transducer (1.5MhZ)	
14, 40 Biphasic Defibrillator with Cardiac Monitor			
2	**Energy selection 5J to 360J in steps**	**Energy selection 2J to 300J in steps**	Energy is sufficient in Biphasic defib
6	**Should have colour display for heart rate of size 8 inches or more**	**Should have colour display for heart rate of size 7 inches or more**	For wider Participation
15.ABG Analyser			
1	**The analyzer should be able to measure blood gas (Ph, Po2, Pco2) electrolytes (Na+, K+, Ca++/Cl-) and Glucose, Lactate, with 17 calculated parameters.**	**The analyzer should be able to measure blood gas (Ph, Po2, Pco2) electrolytes (Na+, K+, Ca++/Cl-) and Glucose, Lactate, with 12 calculated parameters including HCO3–, HCO3– std, TCO2, BE(B) & Ca++ (if not direct)**	For wider participation
4	**The cartridge/cassettes should have multi test variable pack sizes from 100 to 600 tests.**	**No change**	
8	**Analyzer should have large color touch screen facility optional for keyboard operation.**	**Analyzer should have large color touch screen facility optional for keyboard operation/Extenal keyboard for data entry.**	Additional option given for wider Participation
17,31,46,63,75,89 Electrical suction apparatus			
3	**Should provide with Piston Cylinder Technology**	**Should provide with Piston Cylinder Technology/Equivalent with max noise level of 60dbA for silent operation .**	For wider participation
7	**. Should be available safety jar with over flow protection device**	**Should be available safety jar with over flow protection device with bacteria filters**	For additional Safety
10	**Mobile trolley should have four castors with brakes and On/Off Switch**	**Mobile trolley should have castors with brakes and On/Off Switch**	For wider participation
34.OT Table with Split Leg Section			

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
3	The table should be sturdy, mobile withpadded divided (split leg) foot section &must have motorized control	The table should be sturdy, mobile with padded divided (split leg) foot section	For wider participation
5	Head plates and leg plates should beinterchangeable.	Deleted	
12	Should have facility to invest corselet traythrough tunnel under table.	Deleted	
13	Molded seamless mattress attached to topwith pins (not Velcro) preferably.	Molded seamless mattress attached to top with pins / Velcro.	For wider participation
14	Should have facility to change orientation oftable (Normal and Reverse mode).	Deleted	
16	Weight Load Capacity		
	Should have safe patient weight loadcapacity of at least 225 kg in all tablepositions. The STATIC patient weightcapacity should be 400 Kg or more.	Should have safe patient weight load capacity of at least 225 kg in all table positions. The STATICpatient weight capacity should be 300 Kg or more.	For wider participation
18	Power and Controls		
7	Fast "Memory" options for moving topreviously stored position on Remotecontrol.	Deleted	
8	10 free programmable memory positions for patient positioning	Deleted	
9	Remote must be wireless & can show theGraphical position of the Table	Remote must be wire / wireless & can show theGraphical position of the Table and must covered under warranty & CMC	For wider participation
19	Technical Specification: All Parameters should be within allowed ± 5% variation limits:		
.	Anti-Trendelenburg: 35 degree or more	Anti-Trendelenburg: 30 degree or more	For wider participation
35.OT Lights			
1. General Requirements			
.	Light should have at least 5 program with surgery name for easy setup and recalling.	Deleted	For wider participation
.	The light head/Dome must have Four or more handles for positioning/handling of Dome by O.T. assistants.	Deleted	For wider participation
.	Settings of the light can be controlled from any dome through the synchronize function.	Deleted	For wider participation
.	The light should have at least three obstacle sensors on the dome to detect light obstacles caused by the surgeon's head or shoulder, which should be adjusted from the other side.	Deleted	For wider participation
.	LED Service life should be more than 60000hrs and Total usage Hour should be display on Screen.	LED Service life should be more than 50000hrs or more	For wider participation
2. Technical Requirements of The Main Dome.			
.	Color temperature (K), adjustable from 3500-5000K in 5 steps or more.	Color temperature (K), adjustable from 3500-5000K in 4 steps or more.	For wider participation
6. Monitor arm technical specification. (Optional)			

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.	**The monitor arm should have to route the HDMI cable from it and it must be rotate around 340^0 to its own axis.**	**Deleted**	For wider participation
.	**Minimum weight barring capacity of arm should have 20Kg.**	**Deleted**	For wider participation
.	**The maximum movement angle of the Monitor arm shall be at least up 45° and down 50^0.**	**Deleted**	For wider participation
(36). Anaesthesia Workstation:			
II (3)	**Integrated Multi-Color Touch Screen TFT display of at least 15" size, with virtual flow meter for 02, N20 – or Air**	**Integrated Multi-Color Touch Screen TFT display of at least 12" size, with virtual flow meter for 02, N20 – or Air**	For wider participation
VII (1)	**Monitoring of vital parameters; ECG (5 Leads) with ST segment analysis, NIBP, SPO2 and 2 invasive blood pressure & Spirometry with display of flow volume loop (Either in Ventilator or Patient Monitor). Monitor size should be at least 15″ touch screen.**	**No change**	For wider participation
(37)Electrosurgical Unit Surgical Diathermy			
4	**Should have digital display of power settings for bipolar and mono-polar cut and coagulation modes.**	**Should have digital display/LCD touch screen of power settings for bipolar and mono-polar cut and coagulation modes.**	For wider participation
15	**Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US) / STQC CB Certificate / STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.**	**Should have European CE with 4 digit notified body certified / US -FDA and ISO 9001:2015 and ISO 13485:2016/BIS/CDSCO . Also, provide IEC 60601-1-1, IEC 60601-2-2, and EMI / EMC Compatibility Standard: IEC 60601-1-2 for Electrosurgical Generator**	Option for standards/certification incorportaed
(41) Instrument Set			
	Please specify instruments list	**Item Deleted**	Deleted as decided by the committee
(43) (95)Radiant Warmer			
	Should have Quartz Infrared Heater / Calrod Heater with parabolic reflector / J shaped reflector for uniform heat radiation and the overhead unit should be insulated.	**no Change**	

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19	**Should have safety certificate from a competent authority CE / FDA (US) /BIS or valid detailed electrical and functional safety test report from ERTL. /Test report from ETDC. Copy of the certificate / test report shall be produced along with the technical bid.**	**Should have safety certificate from a competent authority CE / FDA (US) /BIS/ISO . Copy of the certificate / test report shall be furnished along with the technical bid.**	Option for standards/certification incorportaed
(20),(49) Multi Parameter Monitor			
1	**Advanced high-end modular patient monitor having integrated non-invasive, invasive measurement & features suitable for neonate, pediatrics & adult patients. It should be a proper modular monitor with interchangeable modules or servers.**	**No change**	
2	**The monitor should have a highly visible, bright 15" color TFT, full touch screen, and display for easy viewing from a distance. It must be a proper modular monitor with swapable module with facility to transfer data from one monitor to**	**No change**	
4	**Monitors must be able to monitor ECG, Sp02 (masimo-SET with PI), NIBP, Respiration, temperature and 2 x IBP as standard parameters. ECG, Respiration, NIBP, Sp02, 2 x Invasive pressure and Temperature should be monitored through one server/ module.**	**Monitors must be able to monitor ECG, Sp02 (masimo-SET with PI)/Nellcore/any other similar technology, NIBP, Respiration, temperature and 2 x IBP as standard parameters. ECG, Respiration, NIBP, Sp02, 2 x Invasive pressure and Temperature should be monitored through one server/ module**	For Wider participation
5	**Should have the option of integrating 6 inches in the transport module with a bedside monitor for shifting the patient without any disconnection of cables / wires with seamless data transfer to the main bedside monitor and minimum 4-5 hrs battery backup. Transport Monitor's screen should remain reflecting waveforms and parameters when connected to the main monitor.**	**No Change**	
	Monitor must be Upgradable to minimal invasive continuous cardiac output (CCO), NMT Module, Etco2, 4 IBP, EEG module, SPo2, PVI, SPCO, SPOC, SP Met with Spo2, RRa, Cerebral oximetry (03) &Sedline (BIS) Monitoring with 4 channel EEG & Etco2 (main stream). Third-party device integration will not be accepted	**Monitor must be Upgradable to minimal invasive continuous cardiac output (CCO), NMT Module, Etco2, 4 IBP, EEG module, SPo2, &Sedline (BIS) Monitoring with 4 channel EEG & Etco2 (main stream). Third-party device integration will not be accepted**	
13	**The monitor must be U. S. FDA / European CE / CDSCO ~~/ BIS~~ approved for main equipment ~~as well as its modules~~ .**	**The monitor must be U. S. FDA / European CE / CDSCO approved for main equipment**	
14	**Each monitor to be supplied with following:**		
	g. IBP Disposable Pressure Transducers – 20 Nos		

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14	Each monitor to be supplied with following:	45 Nos of monitor to be supplied with following items :	Qty reduced Considering the allocation of Budget under PM-ABHIM
	Basic Module foe all seven parameter (ECG,SPO2,RESPIRATION,TEMP,NIBP and IBP-2 ports)	Basic Module foe all seven parameter (ECG,SPO2,RESPIRATION,TEMP,NIBP and IBP-2 ports)-45 modules	
	a. 3 and 5 Lead ECG electrode cable-2 No. each	a. 5/10 Lead ECG electrode cable- 45 Nos (30 x1No. each)	
	b. Disposable ECG electrodes -50 pcs	b. Disposable ECG electrodes -1350 nos in total (30 pcs x45)	
	c.Sp02 probe with cable —1size each (Adult,pediatric,Neonatal)	c.Sp02 probe with cable —55 Nos in total (30 Adult,15 pediatrics and 5 neonatal size	
	d. Reusable NIBP cuffs for Pediatrics and neonates — 2 no each (of different sizes)	d. Reusable NIBP cuffs for Pediatrics and neonates — 70 Nos in total (45 Adult,20 pediatrics and 5 nos neonatal size	
	e. Temp Probe — 1 Nos. (skin one each)	e. Temp Probe — 45 Nos. skin	
	f. IBP connection cable — 02 Nos.	f. IBP connection cable — 90(02 Nos x 45).	
	g. IBP Disposable Pressure Transducers — 20 Nos	g. IBP Disposable Pressure Transducers — 225 Nos	
(50) ICU Ventilator-Mid End			
1	Should be a microprocessor-controlled ventilator with inbuilt 8.5″ color TFT screen or more, integrated graphics and easy to use rotary knob operation providing support to Peadiatric to Adult Patient Category.	No change	
4.g	APV / PRVC / PCVG CMV / MMV	APV / PRVC / PCVG CMV / MMV equivalent	Equivalenmt mode options added For wider participation
7	Ventilator must have provision to interface with humidifier and can control and monitor humidifier all parameters	Ventilator must have humidifier and can control and monitor humidifier all parameters	For wider participation
8.f	Expiratory over heat to minimize water condensation mode	No change	
9	Servo controlled Humidifier with temperature probe with reusable chamber Humidifier must have LCD display for all monitoring parameter and pictorials represent of alarm for easy to use.	Humidifier must have display for all monitoring parameter and alarm for easy to use.	For wider participation
10	Humidifier must have LCD display for all monitoring parameter and pictorials represent of alarm for easy to use.	Humidifier must have display for all monitoring parameter and alarm for easy to use.	For wider participation
26	Facility to permanently deactivate the O2 alarm, if the O2 cell is depleted or defective.	Deleted	
33	Ventilator should light weight less than 8 Kg and also detachable from trolley without any tools, during intra hospital transport.	entilator should light weight less than 9 –10 Kg and also detachable from trolley without any tools, during intra hospital transport	For wider participation

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
34	**Ventilator should have option to upgrade for volumetric CO2 monitoring facility.**	**No Change**	
35	**Ventilator should have option to upgrade for SPO2 monitoring facility.**	**No Change**	
Additional Point to be added:			
(58)(66)(78)Portable Monitor(3 para)			
2	**8″ High resolution colour TFT display 600 x 800mm**	**7″ or more High resolution TFT/LCD with LED Backlight display 480 x 800mm**	For wider participation
3	**Integrated Touchscreen**	**7″ Integrated screen**	For wider participation
6	**Pulse rate range of 40 to 240 BPM with accuracy of +/- 3 BPM & data averaging every 2 seconds**	**No change**	
(60)PORTABLE X RAY /PORTABLE DR -32kw			
	Battery Driven, compact, easily transportable digital radiography system with Wireless flat panel detector mobile and inbuilt DAP meter suitable for bedside X-Rays, Intensive care unit and operation theatre use.	Battery Driven, compact, easily transportable digital radiography system with Wireless flat panel detector mobile for bedside X-Rays, Intensive care unit and operation theatre use.	DAP meter Removed For wider participation
B.	X-Ray Tube:		
3	Dual Focal spot size of X-Ray tube of 0.3 mm and 1mm.	Dual Focal spot size of X-Ray tube of 0.6 mm and 1.2mm (+.1mm is acceptable)	For wider participation
C.	Flat Panel detector:		
2	The detector pixel matrix should be 3,408 (h) x 2,800 (v) or more with DQE at least 70%. at 0 lp/mm	The detector pixel matrix should be 3,408 (h) x 2,800 (v) or more with DQE at least 65% or more at 0 lp/mm	For wider participation
4	Anode heat storage capacity should be 80 KHUor more.	No change	
6	It should have an integrated DAP meter. TheDAP meter reading should be visible on thesoftware console with each image.	Deleted	
C.	Flat Panel detector:		
2	The detect or pixel matrix should be3072(h)x2560(v) or more with DQE at least 70%. at 0lp/mm	The detect or pixel matrix should be 3072(h)x2560(v) or more with DQE at least 65%. at 0 lp/mm	For wider participation
4	The machine should have provision for detector storage compartment with charging facility.	No change	
	Weight of the detector shouldn't be less than 3.5 kg	Weight of the detector should be less than 5 kg	For wider participation
7	The wireless detector must have a lithium-ion battery that allows more than 600 thorax exposures per recharge.	The wireless detector must have a lithium-ion battery that allows more than 200 thorax exposures per recharge On a single battery	For wider participation
D.	Battery:		

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
1	The machine should be able to run on mains as well as on battery supply. The system should allow at least 150 thorax exposures per battery recharge	The machine should be able to run on mains. The system should allow at least 150 thorax exposures per battery recharge	For wider participation
2	The unit should have separate batteries for driving the unit and generator	No change	
3	The battery should be able to be charged from a normal 15A, 220-240V single phase socket in less than 4 hours, should be capable of generating at least 100 exposures.	The battery should be able to be charged from a normal 15A, 220 – 240 V single phase socket in less than 6 hours, should be capable of generating at least 100 exposure	For wider participation
E.	Inbuilt Console :		
	The machine should have an integrated / inbuilt console with a TFT touch screen with size at least 19 inches or more.	The machine should have an integrated / inbuilt console with a TFT touch screen with size at least 18.5 inches or more.	For wider participation
F.	Other Features:		
	The system should have European CE (Full Quality assurance, MDD 93/42/EEC) and USA FDA approval/CDSCO/BIS.	The system should have European CE (Full Quality assurance, MDD 93/42/EEC) and US FDA approval/CDSCO/BIS.	Option for standards included as per gudidelines
3	It must have a telescopic / articulated arm for maximum positioning flexibility in any patient position. The angles in various planes to be specified by the manufacturer. The cables should preferably be concealed in the arm system.	It must have a telescopic / articulated arm for maximum positioning flexibility in any patient position. The angles in various planes to be specified by the manufacturer. The cables should preferably be concealed / conduit in the arm system	For wider participation
79.Table-Top Pulse Oximeter			
8	Should have a minimum of 4 hours back-up time	Should have a minimum of 2 hours back-up time	For wider participation
80.CPAP/BIPAP Machine or Non Invasive BIPAP Ventilator:			
3	Should have the following modes. S -T (spontaneous - timed), CPAP (Spontaneous), T (Timed), PAC (Pressure Assisted Control)/ PC (Pressure Control), Volume Assured Pressure Support (VAPS).	Should have the following modes.: CPAP, S,T, ST, VAPS	For wider participation
5	Should have color screen at least 4 inch for real time monitoring of minute volume/ tidal volume, respiratory rate, percentage of leak, I:E ratio, Delivered IPAP and EPAP.	5. Should have color screen size more than 2 inch for real time monitoring of minute volume/ tidal volume, respiratory rate, percentage of leak, I:E ratio, Delivered IPAP and EPAP.	For wider participation
6	Should be able to display real time flow and pressure curves / values simultaneously and the Ti bar graph.	Deleted	For wider participation
7	7. Should include user adjustable alarms and essential nonadjustable fixed alarms for patient safety.	Deleted	For wider participation
9	Should have oxygen port to accept flow up to 15 l/min of oxygen to achieve a high FiO2.	Deleted	For wider participation

S. No.	Specification mentioned in the GeM bid document	Accepted corrigendum	Remarks
11	Pressure range: IPAP- 4/ 2-40 cm H2O, EPAP-2/4-25cm H2O.	No change	
18	Machine should be fitted with electrostatic fibre mesh air filter.	5. Should have color screen size more than 2 inch for real time monitoring of minute volume/ tidal volume, respiratory rate, percentage of leak, I:E ratio, Delivered IPAP and EPAP.	For wider participation
19	Should have built in internal battery for minimum 2 hrs of back up and should have capability to add optional external battery	Should have built in internal battery for minimum 1 hrs of back up and should have capability to add optional external battery	For wider participation
20	NIV ventilator to be supplied with patient ckt 2nos, air inlet filters, power supply pack, reusable face mask standard 3 sizes (Small, medium and Large) 2 pieces each, Oxygen connector, Fio2 Monitoring accessories.	20. NIV ventilator to be supplied withReusable mask Medium size (1 Pcs), Power supply, Air Inlet filters, 22 mm Circuit tube	Qty reduced Considering the allocation of Budget under PM-ABHIM
22	Should have safety certificate from a competent authority CE issued by a notified body registered in European commission / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.	The system should have CE/US FDA/CDSCO/BIS.Copy of the certificate / test report shall be produced along with the technical bid.	For wider participation
94.CTG with Fetal Doppler/Cardiotocography Machine			
	10.2 inches hi-tech color TFT Screen with tilt adjustment up to 90 degrees	10.2 inches color TFT/LCD Screen with tilt adjustment up to 90 degrees	For wider participation
.	Wireless probes (No wires with FHR, Toco Probes & Movement Marker)	Wired/Wireless probes (No wires with FHR, Toco Probes & Movement Marker	For wider participation
.	Touch Screen functions, easy to operate, Long Life	Touch Screen functions/Keypad interface , easy to operate, Long Life	For wider participation
.	FAS- Fetal acoustic stimulator facility (Fetal awaking facility).	Deletd	For wider participation
	Compact design, extremely light weight, 3 Kg, Easy to carry& space saving.	Compact design, extremely light weight, 4 Kg, Easy to carry & space saving.	For wider participation

List of Equipments for CCB-NEIGRIHMS

	Tendered item with quantity	Amended item with quantity	
	Item no 12 Portable Ultrasound -2 nos	Item no 12 High end Colour Doppler System - 1no	Qty reduced Considering the allocation of Budget under PM-ABHIM
	Item no 13 Portable Ultrasound POC -1 nos	Item no 13 Portable Ultrasound POC -2 nos	
Successful Bidder have to obtain respective treading license from KHADC ,Meghalaya			