FILE No.																	
Creator : Mr. Firoj Technical Assistant				**Moderator : Shri A.V.Muralidharan (Dy. CEO GeM)**										**Approver : A K Kamra**			
Superlative Category :																	
Major Category :																	
Sub Category :																	
Echo Cardiography machine : UNSPSC Code																	
S.No.	Parameters			Value 1	Value2	Value 3	Value 4	Value 5	Value 6	Value 7	value 8	Validation	Golden parameter	Remarks	priority	Unit	Demand Aggregation
Standards and Certifications																	
1	Confirmity to standards	S	Enumerable	US FDA	European CE	BIS							G				
2	Confirmity to standards for electromagnetic compatibility	S	Enumerable	IEC-60601-1-2:2001 (or equivalent BIS)													
3	Confirmity to safety standards	S	Enumerable	IS - 13450 / IEC60601-1-2005													
Performance l Parameters																	
4	Purpose	P	Enumerable	Echo Cardiography sytem with color doppler is to study anatomical abnormalities and blood flow in heart and associated vessels													
5	Color Doppler System	P	Enumerable	Latest generation Electronic Phased array Colour Doppler system													
6	Number of Digital Processing Channels in color doppler system	P	Enumerable	more than 50000 and upto 100000	more than 100000												
7	Live 3 D imaging in color doppler system	P	Enumerable	Yes	No												
8	Colour Doppler system with all application packages ,Quad loop for serial studies with high frame rate revies ,harmonic imaging capability in all modes and integrated stress echo package	P	Enumerable	Yes													

9	3 D Volume probe supplied	P	Enumerable	1 No (5 MHZ)	Not provided												
10	Echo cardiography sytem to be DICOM Ready	P	Enumerable	YES													
11	Interfacability	P	Enumerable	Interfacable with HIS/RIS/PACS													
12	Echo Cardiography sytem supplied should be upgradable to next generation system on site	P	Enumerable	Yes													
13	All new software upgradability free of cost offered	P	Enumerable	3 year	5 year	7 year											
14	Number of grey shades for sharp contrast resolutions	P	Enumerable	256													
15	Type of Probes Supplied	P	Enumerable	Adult and PeadiatriocTransthoracic Cardiac,TEE(Adult&Pediatric)) and Vascular	Adult , Peadiatrioc and linear/vascular												
16	Probes supplied shall be latest generation wide band	P	Enumerable	Yes													
17	No of Adult cardiac probe electronics phased array probe suppplied	P	Enumerable	1													
18	No of Pediatric Cardiac Probe electronics phased array probe supplied	P	Enumerable	1													
19	Electronics phased array probe for vascular applications supplied	P	Enumerable	1													
	Echocardiographic machine compatible to TEE probes	P	Enumerable	Yes	No												
	Multi plane TEE Probe for adult echo cardiography supplied	P	Enumerable	1	Not provided												
20	Multi plane TEE Probe for paediatric echo cardiography supplied	P	Enumerable	1	Not provided												
21	Harmonic Imaging- System modes with separate setting	P	Enumerable	a. Tissue Harmonic. b. Contrast Harmonic c. Harmonic Angio. d. Quantification of harmonics imaging													

22	Provision of Harmonic imaging in Adult Cardiac, Paediatric Cardiac and linear Probes	P	Enumerable	Yes													
23	Gain control for image quality control	P	Enumerable	Gain control in two dimensions for additional level of flexibility for image quality control													
24	Provision for higher resolution	P	Enumerable	Real time high frequency 2D													
25	Provision for higher sensitivity			low frequency Doppler in all probes													
26	Frame rate in FPS in all Phased Array probes	P	N								equal to or more than 300					FPS	
27	Steerable PW/CW in all Phased Array probes			yes													
28	High-definition acoustic zoom provision for enlarging sections of 2D and Colour flow images with more acoustic information for greater clarity and detail while maintaining an optimal frame rate	P	Enumerable	Yes													
29	Modes	P	Enumerable	2D, M-Mode, Steerable PW/CW Doppler, Colour Doppler and High Definition Colour flow													
30	Size of monitor in inch	P	Enumerable	17 inch	19 inch	21 inch										inch	
31	Monitor shall have high-resolution	P	Enumerable	Yes													

32	Provision of Tilt and Swivel monitor should be able to view in all angles and all light conditions	P	Enumerable	Yes													
33	Colour Flow Imaging	P	Enumerable	Color flow imaging shall provide Increased lateral & spatial resolutio, Detection of even subtle areas of turbulence, displaying a more physiological blood flow appearance without loss of frame rate, with capability of automatically picking up colour flow as a function of focal depth									G				
34	Provision of Tissue Colorization (B-Colour) for improved contrast resolution	P	Enumerable	Yes													
35	Application software	P	Enumerable	Adult,Pediatric,Foetal and Peripherla and Vascular and Trans oesophagal applications													
36	All application packages should be inbuilt into the system	P	Enumerable	Yes													
37	Cine Loop Memory in MB	P	N								120<						
38	Cine Loop Features	P	Enumerable	High Frame rate review for better clarity of playback images study in slow motion. , Quad loop with memory for pre and post image comparison of any procedure. Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory-40 seconds or more. Frame grabber facility for post analysis													
39	Facility of Various maps for pre and post processing	P	Enumerable	Yes													
40	ECG trigger facility	P	Enumerable	Yes													
41	User defined system and application presets for multi-user department	P	Enumerable	Yes													
42	DVD/CD Writer	P	Enumerable	Yes	No												
43	Flash Memory	P	Enumerable	Yes													
44	USB connector	P	Enumerable	Yes									G				

45	Dedicated integrated dynamic stress echo package for flexible user defined protocols with stacked sub loops facility and contrast stress protocol usable for stress echocardiography	P	Enumerable	Yes													
46	Provision of Tissue movement colorization with quantification possibility for IHD/CAD/Heart Failure patients	P	Enumerable	Yes													
45	Number of transducer ports	P	Enumerable	3													
46	Number of levels for Colour Map resolution	P	Enumerable	128													
47	Facility for high definition digital acquisition, review and editing of complete patient studies	P	Enumerable	Yes													
48	Provision of PC	P	Enumerable	Yes	Not provided												
49	Hard Disc Capaciy in GB in the PC Provided	P	Enumerable	250	PC Not provided												
50	RAM capacity of PC in GB (hint: In caase PC not provided put zero)	P	N								≥ 4						
51	Processor speed in GHZ (hInt put zero iif no PC provided)	P	N								≥ 3						
52	Frame Grabber incorporated	P	Enumerable	yes	No												
53	PC with all software inclusive interfaced with echocardiograph machine	P	Enumerable	Yes	NO PC Supplied												
54	laser Color printer provided	P	Enumerable	Yes	No												
	Inkjet printer provided	P	Enumerable	Yes	No												
55	CD/DVD Produced should be playable on any sytem	P	Enumerable	Yes	No cd/dvd Writer provided												
56	Colour M Mode	P	Enumerable	yes													
57	System should be capable of generating real time live 3-Dimages	P	Enumerable	Yes													
58	Provision of Echocardiographic strain and strain-rate imaging	P	Enumerable	Yes													

System Configuration Accessories, spares and consumables																	
59	Glossy Colour Print Paper supplied	P	Enumerable	500 sheets	1000 sheets	Not provided											
60	ECG Cable	P	Enumerable	2	4	Not provided											
Environmental factors																	
61	Operating temperature and humidity	P	Enumerable	operating continuously in ambient temperature of 30° C and relative humidity of 80%													
Power Supply																	
62	Power input	P	Enumerable	220-240VAC, 50Hz fitted with Indian plug													
63	Resettable over current breaker shall be fitted for protection	P	Enumerable	Yes													
64	Online UPS	P	Enumerable	UPPS shall be supplied with suitable rating with voltage regulation and spike protection													
65	Back up time for UPS in minutes	P	Enumerable	30	60												
66	Suitable Servo Controlled Stabilizer / CVT should be provided	P	Enumerable	Yes													
Warranty																	
67	Warranty in years	P	Enumerable	3	4	5	7					G			Years		
Reports																	
69	2 Copies of Instruction manuals and service manual to be supplied	R	Enumerable	Yes													
70	Installation ,demonstration and training required before acceptance	R	Enumerable	Yes													
71	ISO Certification for quality standards for Manufacturer	R	Enumerable	Yes													
72	ISO certification No and date	R	Text														
73	Availability of test report from govt/ NABL/ILAC accredited lab covering all parameters	R	Enumerable	Yes	No							G					
74	Test report number , Incase test reports not availabble , put NA	R	Text														
75	Test report date, Incase test reports not availabble , put NA	R	Text														

76	Name of test lab , Incase test reports not availabble , put NA	R	Text														
77	Address of test lab , Incase test reports not availabble , put NA	R	Text														
78	Copies of all certifications and reports to be provided to buyer on demand at time of supplies ,	R	Enumerable	Yes	NA ,Incase test reports not availabble								G				
	Firoj Technical Assistant								Shri A. V. Muralidharan DCEO -GeM								