

ANNEXURE F

**NATIONAL COUNCIL OF SCIENCE MUSEUMS
SECTOR-V, BLOCK-GN, BIDHANNAGAR,
KOLKATA – 700 091.**

TENDER NO. I-18012/7/21(277)

Technical Specification

SUPPLY OF 43" TV, 23" / 24" TOUCH MONITOR, 3 KVA UPS, RASPBERRY, PROJECTOR, 10 KVA UPS, DESKTOP PC AND 24" LED BACKLI LCD MONITOR STRICTLY AS PER ENCLOSED TECHNICAL SPECIFICATIONS Annexure F and NIT of tender document.

Sl.No.	Description of item	Qty.
1	TV 43" (Commercial)	4 nos.
2	Touch Monitor(24" / 23")	6 nos.
3	UPS 3KVA	2 nos.
4	Raspberry Pi 3B +	22 nos.
5.	3000/5000 Ansi Lumen Ultra Short Throw Projector	2 nos.
6.	3000/5000 Ansi Lumen Long Throw (HD) Projector	1 no.
7.	UPS System 10 KVA	3 nos.
8.	Desktop PC with windows 10 Pro	5 nos.
9.	24" LED Backlit LCD Monitor	5 nos.

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- Diagonal Size 43"
- Type : LED or equivalent
- Resolution 1920*1080 (Full HD) or more
- Brightness(Typ.) 300 nit or equivalent
- Contrast Ratio: 3000:1
- Viewing Angle(H/V): 178:178
- Display Colors 16.7 M
- Color Gamut 72% or equivalent
- Operation Hour 16/7 or equivalent
- Dynamic C/R MEGA
- H-Scanning Frequency 30 ~ 81kHz or equivalent
- V-Scanning Frequency 48 ~ 75HZ or equivalent
- Maximum Pixel Frequency 148.5MHz or equivalent
- Speaker Type Built in Speaker(10W + 10W)
- Input: RGB, DVI-I, HDMI 1.4 (2), Component(CVBS Common)
- Audio Stereo Mini Jack, RGB/DVI/HDMI/CVBS/Component Audio(Common)
- USB USB 2.0 x 1
- Type
- Internal
- Power Supply
- AC 100 - 240 V~ (+/- 10 %), 50/60 Hz
- Max[W/h] 99 or less
- Sleep mode: less than 0.5W
- **Mounting to be provided with TV**
- **Manufacturer has to be present for continuous 8 years in india for same business.**
- **One year warranty**

24" touch Screen**6 Nos**

Display Type :LED-backlit LCD monitor / TFT active matrix or equivalent

Diagonal Size : 24" /23" or or equivalent

Viewable Size 23.8" or more

Built-in Devices USB 3.0 hub

Panel Type : IPS or equivalent

Aspect Ratio 16:9

Native Resolution Full HD (1080p) 1920 x 1080 at 60 Hz

Pixel Pitch : 0.275 mm

Pixel Per Inch : 93 or equivalent

Brightness: 250 cd/m² or equivalent

Contrast Ratio: 1000:1 / 8000000:1 (dynamic) or equivalent

Response Time: 6 ms (grey-to-grey) or equivalent

Horizontal Viewing Angle 178

Vertical Viewing Angle 178

Screen Coating Anti-glare, 3H Hard Coating or equivalent

Backlight Technology: LED backlight or equivalent

Weight 3.12 kg or less

Input Type

Touchscreen : capacitive touch type

Connectivity Interfaces

VGA

HDMI

DisplayPort

USB 3.0 upstream

2 x USB 3.0 downstream

2 x USB 2.0 downstream

Warranty : 1 year

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TECHNICAL SPECIFICATION FOR 3 KVA ONLINE UPS Systems with 30 mins back up on full load		
SI No	Technical Parameters	
1	UPS Capacity	3 kVA UPS System (1Ph Input /1Ph Output)
2	Topology	True On-line Double Coverstion UPS (inbuilt Isolation Transformer in input side)
3	Output power capacity	2.1KW or equivalent
4	Input	
4.1	Voltage Range	110 - 300 VAC based on the load percentage
4.2	Frequency	50 Hz
	Frequency Range	45 to 55 Hz
4.3	Power Factor	≥ 0.99 at full load and nominal input Voltage
4.5	Current THD	< 5%
5	Output	
5.1	Voltage	230 VAC
5.2	Voltage Regulation	+ / - 1%
5.3	Frequency (Free Running Mode)	50 Hz ± 0.1 Hz
5.4	Frequency (Synchronisation Mode)	45 to 55 Hz
5.5	Harmonic Distortion (THD)	< 2% (linear load) or equivalent < 5% (non-linear load) or equivalent
5.6	Output Waveform	Sine wave or equivalent
5.7	Crest Factor	3:1 or equivalent
5.8	Inverter Efficiency	> 90%
5.9	Power Factor	0.9 Lagging
5.10	Overload	101% - 109% for 5 minutes 110% - 129% for 1 minute 130%-150% for 10 Sec
5.11	System DC Voltage	≥192 VDC
6	Battery	
6.1	Battery Type	12 V Sealed Lead Acid Maintenance Free
6.2	Battery make	Exide/ quanta or equivalent with 2years warranty
6.3	Battery charging	Constant Current & Constant Voltage
6.4	Back up time	30 Mins Backup
6.5	Charger	Built-in solid state float-cum-equalizing charger with automatic boost / trickle charge modes with current limiting features.
6.6	VAH Required	≥ 8064
7	Efficiency	
	AC/AC (overall efficiency)	≥ 85% (at full Load)

8	Features	
8.1	Eco mode	needed
8.2	Overload capacity	needed

8.3	Converter mode	needed
8.4	Bypass parameters configurable	needed
8.5	Display	LCD Display
9	Mechanical	
	Ingress protection	IP 20
10.6	Bypass	Static Bypass
10.7	Maintenance Bypass	needed
12	Certifications	
12.1	ISO 9001 : 2008	
12.3	ISO 14001 : 2004	
12.4	BIS Certificate	
12.5	PEP Certificate	
13	Warranty	2 Years on UPS & 2 Years on Battery from date of installation.
14	OEM authorization	Tender specific OEM authorization is to be furnished

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Raspberry Pi 3 B+

22 Nos

1. SD card 16 GB class 10
2. Power Supply : 3A 5V output 220V AC input
3. Pi Case with cooling fan

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Projector Ultra short Throw (4K):

2 no

Resolution 4K UHD (3,840 x 2,160)

Speaker (W) 19W speaker x 2

Brightness: 3,000 ANSI lumens or more

3D Yes

Contrast 2,000,000:1 or more

Standby power <0.5W or less

Lamp life (hours) 30,000(Eco. Mode) or more

Noise level (Eco mode) 24 dB or less

Light Source Laser Diode

Display Colors 1.07 billion

Scan Rate

Horizontal : 31~135KHz

Vertical : 24~120Hz

Weight (kg) 10.5kg

Wireless WiFi 2.4G+5G

Dimensions (W x D x H mm) 576 x 383 x 130 mm (w / feet) or less

Power supply 100V ~ 240V ± 10%, 50-60Hz

Throw ratio 0.25:1 or equivalent

Zoom type: Fixed

Warranty : 3 year or more

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Throw ratio: 1.2 to 1.3
Resolution: 1920*1080 or more

Brightness: 3,000 ANSI lumens or more
 Source : Laser diode
 Lamp life : 20000 hr or more
 Contrast 2,0000:1 or more
 Zoom type: Fixed
 Inbuilt speaker
 Input: HDMI
 Warranty : 3 year or more

UPS system (10 KVA single phase output)

3nos.

TECHNICAL SPECIFICATION FOR 10 KVA ONLINE UPS Systems with 30 mins back up on full load		
SI No	Technical Parameters	
1	UPS Capacity	10 kVA UPS System (1Ph Input /1Ph Output)
2	Topology	True On-line Double Coverstion UPS (inbuilt Isolation Transformer in input side)
3	Output power capacity	8 KW or equivalent
4	Input	
4.1	Voltage Range	110 - 300 VAC based on the load percentage
4.2	Frequency	50 Hz
	Frequency Range	45 to 55 Hz
4.3	Power Factor	≥ 0.99 at full load and nominal input Voltage
4.5	Current THD	< 5%
5	Output	
5.1	Voltage	230 VAC
5.2	Voltage Regulation	+ / - 1%
5.3	Frequency (Free Running Mode)	50 Hz ± 0.1 Hz
5.4	Frequency (Synchronisation Mode)	45 to 55 Hz
5.5	Harmonic Distortion (THD)	< 2% (linear load) or equivalent
		< 5% (non-linear load) or equivalent
5.6	Output Waveform	Sine wave or equivalent
5.7	Crest Factor	3:1 or equivalent
5.8	Inverter Efficiency	> 90%
5.9	Power Factor	0.9 Lagging
5.10	Overload	101% - 109% for 5 minutes
		110% - 129% for 1 minute

		130%-150% for 10 Sec
5.11	System DC Voltage	≥192 VDC
6	Battery	
6.1	Battery Type	12 V Sealed Lead Acid Maintenance Free
6.2	Battery make	Exide/ quanta or equivalent with 2years warranty
6.3	Battery charging	Constant Current & Constant Voltage
6.4	Back up time	30 Mins Backup
6.5	Charger	Built-in solid state float-cum-equalizing charger with automatic boost / trickle charge modes with current limiting features.
6.6	VAH Required	≥ 8064
7	Efficiency	
	AC/AC (overall efficiency)	≥ 85% (at full Load)

8	Features	
8.1	Eco mode	needed
8.2	Overload capacity	needed
8.3	Converter mode	needed
8.4	Bypass parameters configurable	needed
8.5	Display	LCD Display
9	Mechanical	
	Ingress protection	IP 20
10.6	Bypass	Static Bypass
10.7	Maintenance Bypass	needed
12	Certifications	
12.1	ISO 9001 : 2008	
12.3	ISO 14001 : 2004	
12.4	BIS Certificate	
12.5	PEP Certificate	
13	Warranty	2 Years on UPS & 2 Years on Battery from date of installation.
14	OEM authorization	Tender specific OEM authorization is to be furnished

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Desktop PC with Windows 10 Pro**5 Nos.**

Operating System	: Windows 10 Professional 64bit (Licensed)
Processor	: 11th Gen Intel® Core™ i7-11700F processor (8-Core, 16M Cache, 2.5GHz to 4.9GHz)
Processor family	: 11th Generation Intel® Core™ i7 processor
Memory	: 16GB, 16Gx1, DDR4, 2933MHz
Hard drive	: (SSD) 512 GB M.2 PCIe NVMe Solid State Drive with (HDD) 1TB 7200 rpm 3.5" SATA Hard Drive
Graphics	: Intel® UHD Graphics 730 with shared graphics memory
USB Ports	: 6 ports; 2x front and 3x rear USB 3.1 Gen2; 2x USB 2.0 via internal headers; USB Revision 2.0, 3.1 Gen2
RAID Configuration	: 2.5" HDD/SSD + M.2 SATA SSD (RAID-0 RAID-1)
SATA 6.0 Gb/s Ports	: 4
Thunderbolt™ 3 Ports	: 1
Expansion slots	: PCI Express Revision - Gen3;PCI Express Configurations ‡ - M.2 slot with PCIe X4 lanes;
Integrated Bluetooth	: Yes
Removable Memory Card Slot	: microSDXC with UHS-I support
M.2 Card Slot (storage)	: 22x42/80
Network interface	: Integrated LAN Intel® Ethernet Connection I219-V; Integrated Intel® Wi-Fi 6 2x2 (Gig+) and Bluetooth
Pointing device	: USB Hardened Mouse
Keyboard	: USB Wired Keyboard
Security & Reliability	: Intel® AES New Instructions
Warranty	: 3 year warranty and service offering includes 3 years of parts, labor and on-site repair
Services	: 3 years of next business day onsite repair from a qualified technician

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24"LED- Backlit LCD Monitor**5 Nos.**

Display Type	: LED-backlit LCD monitor / TFT active matrix
Diagonal Size	: 24"
Panel Type	: IPS
Aspect Ratio	: 16:9
Native Resolution	: Full HD (1080p) 1920 x 1080 at 60 Hz
Pixel Pitch	: 0.2745 mm
Brightness	: 250 cd/m ²
Contrast Ratio	: 1000:1
Response Time	: 8 ms (grey-to-grey normal); 5 ms (grey-to-grey fast)
Colour Support	: 16.7 million colours
Horizontal Viewing Angle	: 178 degree
Vertical Viewing Angle	: 178 degree
Screen Coating	: Anti-glare (for eye comfort)
Input Connectors	: HDMI, VGA, DisplayPort
Display Position Adjustments	: Height, pivot (rotation), swivel, tilt
Voltage	: AC 100-240 V (50/60 Hz)
Environmental Standards	: ENERGY STAR Qualified
Manufacturer Warranty	: 3 years Limited onsite Hardware Warranty with Advanced Exchange Service

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KOLKATA – 700 091.**

TENDER NO. I-18012/7/21(74)

**SUPPLY OF DLP Projector with Laser Light Source and 2.0 KVA UPS having 30 minutes backup time
STRICTLY AS PER ENCLOSED TECHNICAL SPECIFICATIONS Annexure F and NIT of tender document.**

Make & Model Sheet

Sl. No.	Description of Items	Quantity	Make & Model Offered (To be entered by bidder)
01	TV 43" (Commercial)	4 nos.	
02	Touch Monitor(24" / 23")	6 nos.	
03	UPS 3KVA	2 nos.	
04	Raspberry Pi 3B +	22 nos.	
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06	3000/5000 Ansi Lumen Long Throw (HD) Projector	1 no.	
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