

**THE UNIVERSITY OF BURDWAN  
RAJBATI, BURDWAN 713104, WEST BENGAL**

**Tender Notice**

No. SERB PROJECT/MATHS/AG/2018/1

DATE:09/10/2018

Sealed quotations are invited (in two-bid system – Technical bid and Commercial bid) from reputed manufacturer/authorized distributors for taking rates for the supply and installation of the following equipments (computer items) in the Department of Mathematics at Golapbag campus of The University of Burdwan, for the on-going Science & Engineering Research Board (SERB) sponsored Research Project entitled “Theoretical studies on bound and resonance states of positronic atoms embedded in plasma” under the principal investigation of Professor Arijit Ghoshal (SERB FILE NO. EMR/2017/004985).

**1. Wi-Fi Duplex All in One Ink Tank Printer with ADF**

Sl no.	Component	Description	Complied (Yes/No)	Remark (if any)
1	Make & Model	To be specified		
2	Printer Type	Print, Scan, Copy, Fax with ADF.		
3	Printing	Print Method: Precision Core Print head; Minimum Ink Droplet Volume: 3.3 pl; Control Panel: 2.4 " Colour LCD Touch Panel; Print Direction: Bi-directional printing, Uni-directional printing; Nozzle Configuration: 400 nozzles Black, 128 nozzles per colour (Cyan, Magenta, yellow); Maximum Resolution: 4800 × 1200 dpi (with Variable-Sized Droplet Technology)		
4	Print Speed	Photo Default – 10 x 15 cm / 4 x 6 " : Approx. 69 sec per photo (Border) , Approx. 92 sec per photo (Borderless); Draft Text-Memo, A4 (Black / Colour): Up to 33 ppm / 20 ppm ; ISO 24734, A4 Simplex (Black / Colour): Up to 15 ipm / 8.0 ipm ; ISO 24734, A4 Duplex (Black / Colour): Up to 6.5 ipm / 4.5 ipm ; Printer Language: ESC / P-R; Automatic 2-sided printing: Yes (up to A4).		
5	Copying	ISO 29183, A4, Simplex (Black/Colour): Up to 11ipm/5.5ipm; Copy Quality: Normal / Best Quality; Maximum Copies from Standalone: 99Copies; Reduction / Enlargement: 25-400%, Auto Fit Function; Maximum Copy Resolution: 600 × 1200 dpi; Maximum Copy Size: A4, Letter.		
6	Scanning	Scanning Type: Flatbed colour image scanner; Sensor Type: CIS; Optical Resolution: 1200 × 2400 dpi; Maximum Scan Area: 216 × 297 mm(8.5 × 11.7"); Scanner Bit Depth: Colour: 48-bit input, 24-bit output; Greyscale: 16-bit input, 8-bit output; Black & White: 16-bit input, 1-bit output; Scan Speed (Flatbed/ ADF (Simplex)): Monochrome 200dpi: 12sec/5.0ppm, Colour 200dpi: 27Sec/5.0ppm.		
7	Fax Function	Type of Fax: Walk-up black-and-white and colour fax capability; Receive Memory / Page Memory: 1.1 MB, Page memory, Up to 100 pages (ITU-T No.1 chart); Error Correction Mode: ITU Group3 fax with Error Correction; Fax Speed (Data Transfer Rate): Up to 33.6 kbps, Approx. 3 sec/page; Fax Resolution: Up to 200 x 200 dpi; Transmission Paper Size: Flatbed: Letter, A4; ADF: Letter, A4, 8.5 × 13", Legal; Receiving Paper Size: Letter, A4, 8.5 x 13 ", Legal; Speed Dial / Group Dial: Up to 60 numbers, 30 groups; Fax Features: PC Fax (Transmission/Receive), Automatic redial, Address book, Delay Send, Broadcast Fax (Mono Only).		
8	ADF	Support Paper Thickness: 64-95 g/m <sup>2</sup> Paper Capacity: 30		

	Function	pages (75 g/m <sup>2</sup> );		
9	Paper Handling	Paper Feed Method: Friction feed; Number of Paper Trays:1 (Paper Cassette); Paper Hold Capacity: Input Capacity: 250 sheets, A4 Plain Paper (80 g/m <sup>2</sup> ); 20 sheets, Premium Glossy Photo Paper; Output Capacity: 30 sheets, A4 Plain Paper; 20 sheets, Premium Glossy Photo Paper; Paper Size: Legal, 8.5 × 13", Letter, A4, 195×270 mm, B5, A5, A6, 100×148 mm, B6, 5×7 ", 4×6 ", Envelopes #10, DL, C6; Maximum Paper Size: 215.9×1200 mm (8.5×47.24 "); Print Margin: 0 mm top, left, right, bottom via custom settings in printer driver.		
10	Interface	USB: USB 2.0.		
11	Network	Ethernet, Wi-Fi IEEE 802.11b/g/n, Wi-Fi Direct; Network Protocol: TCP/IPv4, TCP/IPv6, LPD, IPP, PORT9100, WSD; Network Management Protocols: SNMP, HTTP, DHCP, BOOTP, APIPA, PING, DDNS, mDNS, SLP, WSD, LLTD		
12	Printer Software	Operating System Compatibility: Windows XP / XP Professional x 64 Edition / Vista / 7 / 8 / 8.1 / 10; Windows Server 2003 / 2008 / 2012 / 2016; Only printing and scanning functions are supported for Windows Server OS; Mac OS X 10.6.8 or later.		
13	Warranty	3 years onsite.		
14	Additional Accessories	Original cartridge of this printer.		

## 2. Rack Server

Sl. No.	Component	Description	Complied (Yes/No)	Remark (if any)
1	Make & Model	To be specified		
2	Form Factor	Max. 2U rack mounted with sliding rails		
3	Configured CPU	2 x Intel Xeon Silver 4110 2.1G, 8 cores		
4	Memory slots	16 DDR4 DIMM slots		
5	Memory configured	64GB (4 x 16GB) DDR4 RDIMM		
6	Disks supported	8 x 2.5 " SAS/SATA HDD		
7	RAID Controller	12Gbps PCIe 3.0 with RAID 1, 5, 10, 50		
8	Disks configured	4 x 1.2TB 10k rpm 12Gbps SAS disks		
9	Optical drive	DVD RW		
10	Ethernet ports	4 x 1G RJ45		
11	Certified for	Windows Server 2016, VMWare, Red Hat Enterprise Linux, SUSE Linux Enterprise Server		
12	Power Supply	Platinum rated redundant Power Supply		
13	SD Modules slots	Dual SD module slots supporting RAID1 config		
14	Power & temperature	Real-time power meter, graphing, thresholds, alerts & capping with historical power counters. Temperature monitoring & graphing		
15	Pre-failure alert	Predictive failure monitoring & proactive alerts of actual or impending component failure for fan, power supply, memory, CPU, RAID, NIC, HDD		
16	Configuration & management	Must provide server management software to remotely manage all servers from a single console. Should support remote OS install, Virtual Folder, Virtual Media, Virtual Console.		
17	Server security	Should protect against firmware which executes before the OS boots		

		<ul style="list-style-type: none"> <li>- Silicon-based Hardware Root of Trust</li> <li>- UEFI Secure Boot with custom certificates</li> <li>- Secure default passwords</li> <li>- Configuration and firmware drift detection</li> <li>- Persistent event logging including user activity</li> <li>- Secure alerting</li> <li>- Automatic BIOS recovery</li> <li>- Rapid OS recovery to boot a trusted backup OS image from a hidden boot device</li> <li>- System erase to securely &amp; quickly wipe all user data from drives, NVRAM</li> <li>- Persistent event logging including user activity</li> </ul>		
18		Configuration upgrades should be only with cryptographically signed firmware and software		
19		Support for system lockdown feature to prevent change (or “drift”) in system firmware images & prevent malicious modification of server firmware		
20	Intrusion alert	Intrusion alert in case of chassis being opened		
21	IO devices	OEM Keyboard, Mouse, Monitor(18.5” TFT Monitor)		
22	Spare support	Should have spare warehouse / depot in West Bengal. OEM letter certifying the same required		
23	Warranty	5 years On-site comprehensive warranty with 24x7x365 remote hardware support. Post installation, 3-year product warranty should reflect in the support web site of the OEM.		

### 3. UPS 1

Sl no.	Component	Description	Complied (Yes/No)	Remark (if any)
1	Make & Model	To be specified		
2	Colour	Black		
3	Type	Linear-interactive		
4	Output power capacity	600 Watts / 1.0 kVA		
5	Max Configurable Power (Watts)	600 Watts / 1.0 kVA		
6	Nominal Output Voltage	230V		
7	Efficiency at Full Load (Green Mode)	84.0%		
8	Output Frequency (sync to mains)	50/60 Hz +/-1Hz		
9	Topology	Line Interactive		
10	Waveform type	Stepped approximation to a sine wave		
11	Output Connections	(4) India 3pin 6A (Battery Backup), (2) India 3pin 6A (selector surge title)		
12	Transfer Time	8ms typical : 12ms maximum		
13	Nominal Input Voltage	230V		
14	Input frequency	50/60 Hz +/-3 Hz (auto sensing)		
15	Input Connections	India 3pin 6A		
16	Cord Length	2.00 meters		
17	Input voltage range for main operations	150-280 V		
18	Number of Power Cords	1		
19	Battery type	Maintenance free sealed Lead Acid battery with suspended electrolyte : leak proof		
20	Typical recharge time	6-7 hour(s)		

21	Expected Battery Life (years)	3-4		
22	RBC Quantity	1		
23	Extendable Run Time	1		
24	Battery Volt-Amp-Hour Capacity	1		
25	Interface Port(s)	USB		
26	Control panel	Multifunction LCD status and control console		
27	Crest Factor	03:01		
28	Data Line Protection	Analog phone line for phone/fax/modem/DSL (RJ11 connector), Network line 10/ 100/1000 Base-T Ethernet (RJ45 connector)		
29	Warranty	3 years onsite		
30	Additional Accessories	Rack and Link		

#### 4. UPS 2

Sl. No.	Component	Description	Complied (Yes/No)	Remark (if any)
1	Make & Model	To be specified		
2	Type	Linear-interactive		
3	Colour	Black		
4	Technology	Sine wave		
5	Power Rating	1000VA		
6	Output Power	800 Watts		
7	Phase	Single Phase		
8	Wave Form	Pure Sine		
9	Frequency	45- 65 hertz (Auto sensing)		
10	Maximum Input Voltage	140-300V		
11	Output Voltage	230V		
12	Typical Battery Recharge Time	6 hours		
13	Battery Backup	3Hours		
14	Control Panel	LED status display with On Line: On Battery: Replace Battery and Overload Indicators		
15	Audible Alarm	LED status display with On Line: On Battery: Replace Battery and Overload Indicators		
16	Indicator	LED status display with On Line: On Battery: Replace Battery and Overload Indicators		
17	Output Connections	3 numbers of 5 A India socket		
18	Crest Factor	03:01		
19	Efficiency at Full Load ( Green Mode )	90%		
20	Cord length	10A, 2.0m		
21	Warranty	3 years onsite		
22	Additional Accessories	Rack and Link		

The quoted price (in Indian rupees) must include all taxes and other applicable charges. The authority reserves the right to accept or reject any or all the quotations without assigning any reason or any correspondence whatsoever.

Duly sealed envelope containing sealed “Technical bid” (in the above format) and sealed “Commercial bid” along with OEM authorization letter and all relevant documents must be submitted. Both, “Technical bid” and

“Commercial bid” must be kept in a single sealed envelope superscribed as “Quotation for SERB sponsored research project (SERB FILE NO. EMR/2017/004985)” and submitted to the undersigned on or before November 16, 2018 between 11.00 am to 4.00 pm. in working days.

Prof. Arijit Ghoshal  
Principal Investigator  
SERB sponsored Research Project  
Department of Mathematics  
The University of Burdwan  
Golapbag, Burdwan 713104  
West Bengal  
09/10/2018