

# **SPECIFICATION FOR COMPUTERS AND ACCESSORIES**

**Revised on 02-09-2017**

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## 1.0 GENERAL SPECIFICATIONS FOR OFFICE EQUIPMENT

Office equipment shall meet the following general requirements with regard to the performance and operation unless otherwise stated under particular specifications.

- |  |   |   |
|--|---|---|
| Operating Voltage  | - | 230 V, 50Hz .<br>5A or 15 A plug point will be provided by NWS&DB.  |
| Voltage Fluctuation  | - | Office equipment shall be capable of withstanding $\pm 10\%$ of voltage fluctuation.  |
| Noise  | - | Office equipment shall not produce excessive noise unacceptable for office environment.   |
| Guarantee and Free Maintenance Period                          | - | All equipment shall carry a guarantee for a minimum period of one year (unless otherwise stated) from the date of installation, and all repairs which may become necessary during that period shall be attended by the contractor free of charge.   |
| Maintenance/repair work Following the free Maintenance period. | - | All regular maintenance work during this period shall also be attended by the contractor free of charge.<br><br>The Bidder shall indicate the cost of maintenance work following free maintenance   |
| Market Position  | - | Period in an yearly basis in the questionnaire .<br>This cost is also considered at the time of evaluation<br><br>Preference will be given for the models and makes which are commonly used in Sri Lanka and for which consumable/repair parts are commonly available in the open market. |

## 2.0 TECHNICAL SPECIFICATIONS

### 2.1 (a) PERSONAL COMPUTER SYSTEM

	Specification	Minimum Requirement
1.	Form Factor	Tower
2.	Processor	Intel Core i3 , 3240 3rd Generations 3.4 GHZ Processor 3MB cache, 1333MHz/1600 MHz ) or Better
3.	L2 Cache	3MB cache, 1600MHz /1333 MHzFSB or Better
4.	Hard Disk	500GB SATA 3.0Gb/s 7,200rpm Hard Disk
5.	Serial –ATA	4 serial-ATA Interfaces
6.	Memory	4GB DDR3 (1066 MHz/1033 MHz) upgradeable up to 8 GB or better
7.	Network Interface	Ethernet – Integrated
8.	Network Speed	10Mbps, 100Mbps, 1000Mbps Fast Ethernet Adapter
9.	Graphics Type	2D / 3D Graphics with integrated 512 MB or Better
10.	Video Memory	Intel Graphics Media Accelerator 3100
11.	Sound	Integrated High Definition audio with 600w Speaker set
12.	Expansion Bays	(2) 3.5" internal bays
13.	Optical Drive	16X Internal DVD Writer or better
14.	Readers	16GB USB Pen Drive
15.	Key Board	USB Keyboard
16.	Mouse	USB Optical Scroll Mouse with pad
17.	Monitor	18.5" LED Monitor
18.	Resolution	1024 x 768 or better
19.	Slots total free and type	1 full-height PCI slots, 1full height PCI Express x1 slot, 1 full height PCI Express x16 slot
20.	I/O Ports	1 Parallel, 1 Serial standard, 8 USB 2.0 (2 Front and 6Rear) Ports

	<b>Specification</b>	<b>Minimum Requirement</b>
21.	Expansion Ports	External microphone, External Display, Keyboard, Line in, Line out, Mouse, RJ-45
22.	Operating System	Windows 7 with Down grade to Genuine windows XP Professional with Original User Licenses (32 bit)
23.	Warranty	Three years comprehensive warranty.
24.	Authorization	Manufacturer authorization letter should be provided
25.	Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand.
26.	Serviceability	Manufacturer authorized service centre facilities should be available.
27.	Product Data	Make: Model: Country of Manufacture: No. of Identical Units Sold in Sri Lanka:
28.	Manuals &CDs	Original Manual and Installation and Drivers CD for Each Desktop Computer

## 2.1 (b) TECHNICAL SPECIFICATION FOR PERSONAL COMPUTER SYSTEM

	Specification	Minimum Requirement
1.	Form Factor	Tower
2.	Processor	Intel Core i5 3470 3.20 GHZ, 3rd Generations Processor, 6MBCashe , DDR3-1333/1600MHz) or Better
3.	Cache	6MB Cache, or Better
4.	Hard Disk	500GB SATA 3.0Gb/s 7,200rpm Hard Disk
5.	Serial –ATA	4 serial-ATA Interfaces
6.	Memory	4GB DDR3 (1600 MHz/1333 MHz) upgradeable up to 8 GB or better
7.	Network Interface	Ethernet – Integrated
8.	Network Speed	10Mbps, 100Mbps, 1000Mbps Fast Ethernet Adapter
9.	Graphics Type	<i>Integrated Intel® HD Graphics 2000</i>
10.	Video Memory	1 GB
11.	Sound	Integrated High Definition audio with 600w Speaker set
12.	Expansion Bays	(1) 5.25" external bays
13.	Optical Drive	Internal DVD Writer or better
14.	Readers	8GB USB Pen Drive
15.	Key Board	USB Keyboard
16.	Mouse	USB Optical Scroll Mouse with pad
17.	Monitor	17" LED Monitor
18.	Resolution	1024 x 768 or better

	<b>Specification</b>	<b>Minimum Requirement</b>
19.	Slots total free and type	1 full-height PCI slots, , 1 full height PCI x16 slot
20.	I/O Ports	1 Parallel, 8 USB 2.0 (2 Front and 6Rear) Ports
21.	Expansion Ports	External microphone, External Display, Keyboard, Line in, Line out, Mouse, RJ-45
22.	Operating System	Windows 7 Genuine 32 Bit Professional with Original User Licenses
23.	Warranty	Three years comprehensive warranty.
24.	Authorization	Manufacturer authorization letter should be provided
25.	Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand.
26.	Serviceability	Manufacturer authorized service centre facilities should be available.
27.	Product Data	Make: Model: Country of Manufacture: No. of Identical Units Sold in Sri Lanka:
28.	Manuals &CDs	Original Manual and Installation and Drivers CD for Each Desktop Computer

## 2.1 (c) TECHNICAL SPECIFICATION FOR PERSONAL COMPUTER SYSTEM

Specification	Minimum Requirement
Form Factor	Tower
Processor	Intel® Core™ i7-4790 T 4th Generations Processor (8M Cache, 2.7 GHz Up to 3.90 GHz or Better (4th Generation))
L2 Cache	8MB Cache, DDR3/L/-RS 1333/1600
Hard Disk	500GB Hard Disk or Better
Serial –ATA	4 serial-ATA Interfaces
Memory	6 GB DDR3 (1066 MHz/1033 MHz) upgradeable up to 16GB or better
Network Interface	Ethernet – Integrated
Network Speed	10Mbps, 100Mbps, 1000Mbps Fast Ethernet Adapter
Graphics Type	HD 1GB Graphics Better
Video Memory	Intel Graphics Media Accelerator 4600 HD
Sound	Integrated High Definition audio with 600w Speaker set
Expansion Bays	(1) 5.25" external bays and
Optical Drive	16X Internal DVD Writer or better
Readers	16GB USB Pen Or SD Card Reader
Key Board	USB Keyboard
Mouse	USB Optical Scroll Mouse with pad
Display	17" LED Monitor



<b>Specification</b>	<b>Minimum Requirement</b>
Resolution	1366 x 768 or better
Slots total free and type	1 full height PCI Express x1 slot, 1 full height PCI Express x16 slot
I/O Ports	8 USB 2.0 (2 Front and 6Rear) Ports
Expansion Ports	External microphone, External Display, Keyboard, Line in, Line out, Mouse, RJ-45
Operating System	Windows 8.1 64 Bit with Original User Licenses
Warranty	Three years comprehensive Onsite warranty.
Authorization	Manufacturer authorization letter should be provided
Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand.
Serviceability	Manufacturer authorized service center facilities should be available.
Product Data	Make: Model: Country of Manufacture: No. of Identical Units Sold in Sri Lanka:
Manuals & CDs	Original Manual and Installation and Drivers CD for Each Desktop Computer

## 2.2 (a) SPECIFICATION FOR NOTEBOOK COMPUTER

	Feature/Description	Minimum Requirement
1.	Make/Model	Please Specify
2.	Country of Manufacture	Please Specify
3.	Country of Origin	Please Specify
4.	Processor	Intel® Core i3-3120ME Processor (2.13 GHz 1333MHz , 1600 MHz 3MB Cache) or Better
5.	Memory	4GB DDR3 DDR3/DDR3L 1333/1600RAM, upgradeable up to 8GB or Better
6.	Chipset	Intel HM55 Express or Better
7.	Display	15.6 TFT LED
8.	Video Memory	512 MB of dedicated V RAM
9.	Storage	320 GB HDD
10.	Multimedia	Integrated Speakers, Volume control & Mute Buttons, sound blaster pro compatible, 16-bit stereo sound, In built web camera
11.	Number of slots/ports	3 x USB 2.0 ports 1 x PC Card slot (one Type II) 1 x External display (VGA) port 1 x Headphones/speaker/line-out/Microphone/line-in jack 1 x Ethernet (RJ-45) port 1 x HDMi Port
12.	Communication	Intel® Wireless WiFi Link (Dual-band quad-mode 802.11a/b/g/Draft-N) Wi-Fi CERTIFIED® network connection, & Bluetooth® 2.0+EDR
13.	Key Board	Full size desktop compatible – 101 key Keyboard

	<b>Feature/Description</b>	<b>Minimum Requirement</b>
14.	Pointing Device	Touch pad with on / off button and dedicated scroll up / down surface
15.	Drivers	DVD / CD-RW Drive Super Multi Dual Layer, External USB 2
16.	Network	10/100/1000 Base-T Fast Ethernet interface– Integrated on the system
17.	Power Supply	External AC adapter
18.	Battery	2-4 - hour battery life (44.4W 4000 mAh 6 cell Li-ion battery pack)
19.	Warranty	Comprehensive warranty covers the whole system for 3 years
20.	Accessories	Original carrying bag
21.	Operating System	Latest version of Original Windows OS with service packs
22.	Anti Virus Software	Kaspersky Antivirus 2013 or latest
23.	Warranty Period	3 Years Comprehensive.
24.	Annual Maintenance Fee after warranty period	Please Specify
25.	Maintenance Terms	Attach a sample maintenance agreement
26.	Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand.
27.	Serviceability	Manufacturer authorized service centre facilities should be available.
28.	Manuals &CDs	Original Manual and Installation and Drivers CD

## 2.2 (b) SPECIFICATION FOR NOTEBOOK COMPUTER

	<b>Feature/Description</b>	<b>Minimum Requirement</b>
1.	Make/Model	Please Specify
2.	Country of Manufacture	Please Specify
3.	Country of Origin	Please Specify
4.	Processor	Intel® Core i5-3320M Processor (2.6 GHz 1333MHz ,1600MHz, 3MB Cache) or Better
5.	Memory	4GB DDR3 RAM, 1333MHz ,1600MHz, upgradeable up to 8 GB or Better
6.	Display	15.6 WXGA TFT LCD
7.	Video Memory	512 MB of dedicated DDR3
8.	Storage	500GB HDD
9.	Multimedia	Integrated Speakers, Volume control & Mute Buttons, sound blaster pro compatible, 16-bit stereo sound, In built web camera
10.	Number of slots/ports	3 x USB 2.0 ports and 3.0 USB 1 x PC Card slot (one Type II) 1 x External display (VGA) port 1 x Headphones/speaker/line-out/Microphone/line-in jack 1 x Ethernet (RJ-45) port 1 x HDMi Port
11.	Communication	Intel® Wireless WiFi Link (Dual-band quad-mode 802.11a/b/g/Draft-N) Wi-Fi CERTIFIED® network connection, & Bluetooth® 2.0+EDR
12.	Key Board	Full size desktop compatible – 101 key Keyboard

	<b>Feature/Description</b>	<b>Minimum Requirement</b>
13.	Pointing Device	Touch pad with on / off button and dedicated scroll up / down surface
14.	DVD ROM	DVD / CD-RW Drive Super Multi Dual Layer,
15.	Network	10/100/1000 Base-T Fast Ethernet interface– Integrated on the system.
16.	Power Supply	External AC adapter
17.	Battery	2-4 - hour battery life (44.4W 4000 mAh 6 cell Li-ion battery pack)
18.	Warranty	Comprehensive warranty covers the whole system for 3 years
19.	Accessories	Original carrying bag
20.	Operating System	Windows 7 Professional Original Licen
21.	Anti Virus Software	Kaspersky Antivirus 2013 or latest
22.	Warranty Period	3 Years Comprehensive.
23.	Annual Maintenance Fee after warranty period	Please Specify
24.	Maintenance Terms	Attach a sample maintenance agreement
25.	Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand.
26.	Serviceability	Manufacturer authorized service centre facilities should be available.
27.	Manuals & CDs	Original Manual and Installation and Drivers CD

## 2.2 (c) SPECIFICATION FOR NOTEBOOK COMPUTER

	<b>Feature/Description</b>	<b>Minimum Requirement</b>
1.	Make/Model	Please Specify
2.	Country of Manufacture	Please Specify
3.	Country of Origin	Please Specify
4.	Processor	Intel Core i7 3610QM 3 <sup>rd</sup> Generations (2.3GHz) Processor 6MB cache or Better
5.	Memory	4GB DDR3 RAM,
6.	Display	15.6" diagonal LED-backlit HD anti-glare (1366 x 768)
7.	Video Memory	1GB dedicated VGA
8.	Storage	500GB HDD
9.	Multimedia	Integrated Speakers, Volume control & Mute Buttons, sound blaster pro compatible, 16-bit stereo sound, In built web camera
10.	Number of slots/ports	3 x USB 2.0/3.0 ports 1 x PC Card slot (one Type II) 1 x External display (VGA) Port 1 x Headphones/speaker/line-out/Microphone/line-in jack 1 x Ethernet (RJ-45) port 1 x HDMi Port
11.	Communication	Intel <sup>®</sup> Wireless WiFi Link (Dual-band quad-mode 802.11a/b/g/Draft-N) Wi-Fi CERTIFIED <sup>®</sup> network connection, & Bluetooth <sup>®</sup> 2.0+EDR
12.	Key Board	Full size desktop compatible – 101 key Keyboard

	<b>Feature/Description</b>	<b>Minimum Requirement</b>
13.	Pointing Device	Touch pad with on / off button and dedicated scroll up / down surface
14.	Drivers	DVD / CD-RW Drive Super Multi Dual Layer,
15.	Network	10/100/1000 Base-T Fast Ethernet interface– Integrated on the system.
16.	Power Supply	External AC adapter
17.	Battery	2-4 - hour battery life (44.4W 4000 mAh 6 cell Li-ion battery pack)
18.	Warranty	Comprehensive warranty covers the whole system for 3 years
19.	Accessories	Original carrying bag
20.	Operating System	Genuine Windows® 7 Professional 64 with service packs
21.	Anti Virus Software	Kaspersky Antivirus 2013or latest
22.	Backup External Hard Disk	500GB(5400RPM)/ 2.5 Inch SATA Hard Disk/ USB 2.0 High Speed/
23.	Warranty Period	3 Years Comprehensive.
24.	Annual Maintenance Fee after warranty period	Please Specify
25.	Maintenance Terms	Attach a sample maintenance agreement
26.	Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand.
27.	Serviceability	Manufacturer authorized service centre facilities should be available.
28.	Manuals &CDs	Original Manual and Installation and Drivers CD

### 2.3 (a) SPECIFICATION FOR 10KVA UPS SYSTEM

	Feature	Description
1.	Make & Model	
2.	Rating	10 KVA
3.	Input Voltage	230 V , 172-285V
4.	Input frequency	40-70Hz
5.	Input power factor	$\geq 0.99$
6.	THD input current	$\leq 10\%$
7.	Output Voltage	230V $\pm$ 1% static resistive load
8.	Output power factor	0.8
9.	Output frequency range	50 or 60 Hz selectable, $\pm 0.1\%$ ,
10.	Output wave form	Sine wave
11.	Autonomy time	8 mints at full load
12.	Typical over load	110% $\geq$ 20 min, 130% $\geq$ 3.5 min 150% $\geq$ 2 min
13.	Harmonic distortions	2% max. with linear load
14.	Protection	Automatic shut down or Transfer to bypass <ul style="list-style-type: none"> <li>- Low/High DC voltage</li> <li>- Over temperature</li> </ul> Overload / short circuit
15.	Bypass switch	Automatic & Manual bypass switch available
16.	Battery type	Sealed and maintenance free
17.	Recharge time	1.5 – 3 hours for 80% capacity
18.	Display	LCD
19.	Paralleling (RPA version)	Up to 4 units parallelable for redundancy or capacity in RPA configuration



	<b>Feature</b>	<b>Description</b>
20.	Humidity	95% non condensing
21.	Audible noise level	40-50d B(A)
22.	Warranty	Three years comprehensive warranty.
23.	Authorization	Manufacturer authorization letter should be provided
24.	Eligibility	Manufacturer should have minimum of ten years experience in manufacturing of the same brand
25.	Serviceability	Manufacturer authorized service centre facilities should be available.
26.	Product Data	Make: Model: Country of Manufacture: No. of Identical Units Sold in Sri Lanka:
27.	Manuals &CDs	Original Manual and Installation and Drivers CD for UPS

## 2.3 (b) SPECIFICATION FOR 650 VA UPS

	Description	Required Specification (Minimum)
1.	Power Rating	650VA
2.	Type	Line interactive sine wave
3.	Input Supply	180V to 250V, Single Phase, 50Hz
4.	Output Supply <ul style="list-style-type: none"> <li>• Voltage</li> <li>• Frequency</li> <li>• Wave Form</li> <li>• Distortion</li> </ul>	230V 50 Hz True Sine Wave Less than 5%
5.	Battery Back-up <ul style="list-style-type: none"> <li>• Back-up time</li> <li>• Re-charge time</li> <li>• Battery type</li> </ul>	5-10 Minutes for full typical computer load 10 to 15 hours after fully discharged Replaceable maintenance free in built battery system
6.	No of Sockets	02 Minimum
7.	Protection	Overload, Over/Under Voltage, Battery Low
8.	Noise	Noise less than 55 DBA
9.	Indicators <ul style="list-style-type: none"> <li>• Visuals</li> <li>• Audible</li> </ul>	Line input, Overload, Inverter on/off, Battery low Battery in use, Overload, Battery Low
10.	Warranty	(Minimum) two years including batteries
11.	Spares	Availability of spare parts and after sales services
12.	Product Data:	Make: Model: Country of Manufacture:
13.	Popularity of model	Model shall be a popular one in Sri Lanka. Number of identical units sold in Sri Lanka shall be indicated.

### 2.3 (c) SPECIFICATION FOR 750VA UPS

	Description	Required Specification (Minimum)
1.	Power Rating	750VA
2.	Type	Sine wave
3.	Input Supply	180V to 250V, Single Phase, 50Hz/60Hz
4.	Output Supply <ul style="list-style-type: none"> <li>• Voltage</li> <li>• Frequency</li> <li>• Wave Form</li> <li>• Distortion</li> </ul>	230V 50 Hz True Sine Wave Less than 5%
5.	Battery Back-up <ul style="list-style-type: none"> <li>• Back-up time</li> <li>• Re-charge time</li> <li>• Battery type</li> </ul>	4-16 Minutes for full typical computer load 3to 16 hours after fully discharged Replaceable maintenance free in built battery system
6.	No of Sockets	04 Minimum
7.	Protection	Overload, Over/Under Voltage, Battery Low
8.	Surge energy rating	340 Joules
9.	Noise	Noise less than 55 DBA
10.	Indicators <ul style="list-style-type: none"> <li>• Visuals</li> <li>• Audible</li> </ul>	Line input, Overload, Inverter on/off, Battery low Battery in use, Overload, Battery Low
11.	Warranty	(Minimum) two years including batteries
12.	Spares	Availability of spare parts and after sales services
13.	Interface Port(s)	DB-9 RS-232,USB,SmartSlot
14.	Product Data:	Make: Model: Country of Manufacture:
15.	Popularity of model	Model shall be a popular one in Sri Lanka. Number of identical units sold in Sri Lanka shall be indicated.

### 2.3 (d) SPECIFICATIONS FOR SERVER UPS (2000VA)

	Description	Required Specification (Minimum)
1.	Power Rating	2000 VA
2.	Type	Output should be in Sine Wave Form
3.	Input Supply	180V to 286V, Single Phase, 50Hz
4.	Output Supply <ul style="list-style-type: none"> <li>• Voltage</li> <li>• Frequency</li> <li>• Wave Form</li> <li>• Distortion</li> </ul>	230V 50 Hz True Sine Wave Less than 5%
5.	Battery Back-up <ul style="list-style-type: none"> <li>• Back-up time (Full Load)</li> <li>• Re-charge time</li> <li>• Battery type</li> </ul>	40 Minutes for full typical computer load 10 to 15 hours after fully discharged Replaceable maintenance free in built battery system
6.	No of Sockets	04 Minimum
7.	Protection	Overload, Over/Under Voltage, Battery Low, Replace Battery
8.	Audible Alarm	Alarm when on battery, Distinctive low Battery Alarm, Configurable delaya
9.	Noise	Noise less than 45 DBA
10.	Dataline Protection	RJ-11 Modem/Fax/DSL Protection (2 Wire Single line), RJ-45 10/100 Base-T Ethernet protection
11.	Indicators <ul style="list-style-type: none"> <li>• Visuals</li> <li>• Audible</li> </ul>	Line input, Overload, Inverter on/off, Battery low Battery in use, Overload, Battery Low
12.	Warranty	(Minimum) 2 years including batteries
13.	Spares	Availability of spare parts and after sales services
14.	Product Data:	Make: Model: Country of Manufacture:
15.	Popularity of model	Model shall be a popular one in Sri Lanka. Number of identical units sold in Sri Lanka shall be indicated.

## 2.4 (a) SPECIFICATION FOR COLOR LASER PRINTER

	Item	Required Specification
1.	Processor Speed	600 MHz Processor
2.	Memory, standard	128 MB
3.	Memory, maximum	384 MB
4.	Printing Method	Laser Technology
5.	Print speed Black/Color	12ppm Pagers Per Minute Black colour up to 8 ppm
6.	First page out color (A4, ready)	As fast as 32 sec
7.	First page out black (A4, ready)	As fast as 26 sec
8.	Print Quality / Resolution	Black :Up to 600x600 dpi Colour : Up to 600x600 dpi
9.	Fonts	84 fonts ( 49 Scalable True type and 35Postscript)
10.	Paper Trays ,std.	2
11.	Paper Input Capacity	125 sheets
12.	Recommended Monthly Page Volume	250 to 1000
13.	Operating systems compatibility	Microsoft® Windows® 2000, XP Home, XP /WIN7/Professional, Server 2003; Windows Vista® Ready; Mac OS X v10.2.8, v 10.3, v10.4 or higher WIN8 and WIN Server 2008/2012 Optional: OS/2, UNIX, Linux , Latest drivers for Windows® and Mac

	<b>Item</b>	<b>Required Specification</b>
14.	Media types	Paper (bond, brochure, colour, glossy, letterhead, photo, plain, preprinted, prepunched, recycled, rough), transparencies, labels, envelopes, cardstock
15.	Duty cycle	Up to 30000 pages per month
16.	Connectivity	Hi-Speed USB (compatible with USB 2.0 specifications), 10/100Base-TX with RJ45 connector
17.	Power	295 watts (printing), 12.5 watts (standby), 5.5 watts (sleep), 0.2 watts (manual-off). Typical electricity consumption (TEC) 1.208 kWh/Week
18.	Printer languages	PCL 6, Postscript level 3 emulation
19.	Warranty	1 Years Comprehensive Warranty
20.	Product Data	Make Country of origin Model No Number of Identical units sold in Sri Lanka

## 2.4 (b) SPECIFICATIONS FOR LASER PRINTER – GENERAL OFFICE USE

No.	Description	Required Specification (Minimum)	Bidders Offer (Please specify in details) Do not mention YES or NO
1	Print speed, black (best quality mode)	Up to 32 ppm or Better	
2	Print speed, black (normal quality mode)	Up to 32 ppm or Better	
3	First page out (black)	As fast as 8.5 sec	
4	Monthly duty cycle	Up to 15000 pages	
5	Recommended monthly print volume	740 to 3000 pages	
6	Print quality, black	Up to 1200 x 1200 dpi or Better	
7	Cartridges	1 (black)	
8	Paper tray(s), standard	2	
9	Paper tray(s), maximum	2 plus 50-sheet multipurpose input tray	
10	Input capacity, standard	Up to 250 sheets	
11	Duplex printing (printing on both sides of paper)	Auto (driver support provided)	
12	Media sizes, standard	Letter, legal, executive, index cards, envelopes (No. 10, Monarch)	
13	Media sizes, custom	Tray 1: 3 x 5 to 8.5 x 14 in; Tray 2: 5.8 x 8.3 to 8.5 x 14 in	
14	Media types	Paper (bond, light, heavy, plain, recycled, rough), envelopes, labels, cardstock, transparencies, heavy media	
15	Document finishing	Manual duplexing, manual feed, sheet-fed, straight-through paper path	
16	Memory, standard	32 MB or better	
17	Memory, maximum	256 MB	
18	Processor speed	400 MHz or Better	
19	Print languages, standard	PCL 5e, PCL 6, Postscript level 3 emulation with automatic language switching	

<b>No.</b>	<b>Description</b>	<b>Required Specification (Minimum)</b>	<b>Bidders Offer (Please specify in details) Do not mention YES or NO</b>
20	Connectivity, optional	Wireless Print Server	
21	Warranty Period, minimum	1 year comprehensive	
22	Product Data	Make: Model: Country of Manufacture:	
23	Compatibility	XP/2000/2003/2008/Vista/ windows 7/ Win 8.1	
24	Annual Maintenance Charge (parts and labour) after warranty period (Rs.)	Pl. specify	
25	Current Market Price of the Toner (Rs.)	Pl. specify	
26	No. of A4 size pages that can be printed from a replacement cartridge	Pl. specify (with default printing mode, with OEM cartridge)	
27	Average Toner Cost per A4 page (divide price of a cartridge by no of pages given above)	Shall be less than Rs. 2.50 per page.	
28	Average printing volume per month (A4 size)	Assumed as 3000 pages	
29	Total toner cost for 3 years	Cost per page x 3000 x 12 x 3 (please calculate on this basis)	
30	Price of the Printer with standard warranty (minimum 1 year)	Pl. indicate the price of the printer	
31	If any extra costs to extend the warranty to 3 years	Pl. calculate based on the price + annual maintenance charges for extra years to provide 3 years comprehensive warranty	



## 2.4 (c) SPECIFICATION LINE MATRIX PRINTER

	<b>Feature</b>	<b>Required Minimum Specification</b>
1.	Make/Model	Pl. Specify
2.	Country of Origin	Pl. Specify
3.	Country of Manufacture	Pl. Specify
4.	Printing Method	Impact Line Matrix
5.	Printing Speed	1500LPM – Draft at 10CPI and 6 lines per inch 1000LPM – Draft at 10 cpi and 6 lines per inch
6.	Print Line Length	13.6 inches (345.4mm) 136 Columns
7.	Paper Handling Features	Should incorporate the following Bi-directional Printing Mechanical forms adjustments while printing
8.	Control Panel	Power On Ready Line Space Selection Electronic Paper Adjustment Test Print LCD Display of print hours. Print lines and pages. Printer on time and ribbon exhaust
9.	Interfaces	RS 232C, Centronics Parallel
10.	Other Features	Printer should come with Acoustic cabinet Adjustable alarm to notify the faults occurred Noise level Operating 55dBA
11.	Power Supply	200-240V/50Hz
12.	Cables	Parallel printer connector (5 meter length)
13.	Warranty	03 Years (minimum)
14.	Bidder's experience	Bidder should have minimum 10 years experience in providing similar types of line printers. (Reference sites should be provided)
15.	Technical Staff	Bidder should have qualified engineers to support and maintain the proposed printer (CVs should be attached)
16.	Environmental Conditions	The equipment shall be capable of operation in 15-40 degree Cabinet temperature.

## 2.5 (a) SPECIFICATIONS FOR SCANNER (A4)

No	Specification	Minimum Requirement
1	Scanner Type	Flatbed scanner
2	Optical Scan Resolution	4800*9600 dpi
3	Maximum Scan Resolution	12800*12800 dpi
4	Scan sizes Supported	A4, Letter, Legal
5	Object Scanning	3D Object Scanning to be possible
6	Operating System	Microsoft Windows XP Professional 64 bit Edition Microsoft windows vista, Microsoft Windows XP Home Edition, Microsoft windows 2008/Professional/ XP Professional/Win 7 Pro
7	Interface	Hi-Speed USB
8	Max color Depth	48 bit
9	Max Gray Depth	16 bit
10	Media Load Type	Manual load or Better
11	Supported Media	Transparencies, Plain paper, Film
12	USB Connectors	Hi-Speed USB
13	System Type	PC, Mac
14	Warranty Period	1 year Comprehensive
15	Product Data	Make: Model: Country of Manufacture:
16	Product Literature	Manufacturer's technical literature shall be submitted
17	Any other details	Please specify

## 2.6 (a) MINIMUM SPECIFICATIONS FOR RACK MOUNTABLE SERVER

	Item	Required Specifications
1.	Processor	Intel® Xeon® E5640 (2.66GHz/4-core/12MB/80W, DDR3-1066, HT, Turbo 1/1/2/2) Dual Processor
2.	Cache	8MB (1 x 8MB) Level 3
3.	Chipset	Intel® 5520 Chipset
4.	Hard Disk	300 GB SATA Hard Disk Drive RAID Level Supports with Hot Plug Capability. 01 no. HDD as Spare and 03 HDD in RAID.
5.	Optical Drive	Half-Height SATA DVD-Writer Optical Drive
6.	Memory	12 GB DDR3 Registered DIMMs. Expandable up to 192GB Registered DIMMs
7.	Expansion slots	Expansion Slots : I/O (6 Total - 1x 64-Bit/133MHz PCI-X, 2 x 64 Bit/100MHz, PCI-X, 1 x 64-Bit / 66MHz PCI-X, 1x PCI-Express X8, 1 x PCI-Express X4 also it should support SCSI HDD.
8.	USB Ports	5 total: 2 front, 2 back, 1 internal
9.	Monitor	<b>17" LCD Colour</b> Monitor, 1280x1024 non-interlaced resolutions, Digital control. * Low Radiation. Perfect Flat Monitor.
10.	Graphics Integrated	Video Controller with 32 MB SDRAM Video Memory (with VGA connector, up to 1600 x 1200/16 M resolution supported.)
11.	Form Factor	2U Rack
12.	Product dimensions	(W x D x H) 44.54x 69.22x8.59 CM
13.	Key Board	P/S 2 Or USB keyboard
14.	Mouse	P/S 2 Or USB Optical Scroll Facility Mouse with pad

	<b>Item</b>	<b>Required Specifications</b>
15.	I/O Interface	Serial 1 Video 2 (1 front, 1 back) Network RJ-45 4 iLO Remote Management Port1 Keyboard 1 Pointing Device (Mouse) 1 Graphics 1 SD slot 1 USB 2.0 Ports 5 total: 2 front, 2 back, 1 internal
16.	Network Controller	Gigabit NIC standard Network card extra as a backup
17.	Storage Controller	512MB BBWC 0,1,10,5,50
18.	Internal Storage	8 TB Maximum Hot – plugging SCSI
19.	Tape Drive	1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive
20.	System Fans	Fully redundant hot plug fans
21.	Power Supply	750Watts, Power Factor Correction (PFC), Hot Plug Redundant Power Supplies
22.	Warranty	03 Years Comprehensive Warranty.
23.	RAID	Built in RAID 5, RAID 1, RAID 0
24.	Operating System	Windows Server 2008 Standard
25.	OS Support	Should Support Ms Windows Server, Oracle Enterprise Linux (OEL), Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), Solaris & Netware
26.	Authorization	Manufacturer authorization letter should be provided with warranty details.
27.	Vender Qualification	Manufacturer should have minimum of ten years experience in manufacturing of the same brand. Vendor should have minimum of five years Experience selling & Servicing the same brand. The vender should have an island wide support center network for over 5 years. (Proof document should be attached)
28.	Serviceability	The vender should be certified by the manufacture as having an authorized service center facility.
29.	Product Data	Make Country of origin Model No Number of Similar units sold in Sri Lanka

## 2.6 (b) TECHNICAL SPECIFICATION FOR TOWER SERVER

	Description	Required Specification
	<b>Architecture</b>	
1.	Form Factor	Tower
	<b>Processor</b>	
2.	Processor Type	Intel® Xeon® Processor E5520 (2.24 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) ,Dual Processor, Intel® 5520 Chip set or equivalent with power Supply Cooling fans
3.	Upgradeability	Upgradeable to 2 processors (4 or 8 cores) or Better
4.	L3 Cache	8MB (1 x 8MB) L3 cache or Better
5.	Chipset	Intel® 5520 Chipset or Better
	<b>Memory</b>	
6.	Memory	8GB DDR3 Registered DIMMs .Expandable up to 192GB Registered DIMMs
7.	Memory Type	DDR3 Registered (RDIMM) or Un buffered (UDIMM)
8.	RAM Speed	800MHz or Higher
9.	RAM Slots Total(Available)	18 DIMM Slots
	<b>Expansion slots</b>	Six total expansion slots ,One PCI-Express x16 Gen2 (x8 speed); One PCI-Express x8 Gen2 (x8 speed); Four PCI-Express x8 Gen2 (x4 speed)
	<b>Hard Disk</b>	
10.	Hard Disk	320GB 3G SATA 7.2K\SAS,SAS\SATA Hard Disk Drive RAID Level Support with Hot Plug Capability. 01 no. HDD as Spare and 03 HDD in RAID.
11.	Hard Disk Controller	Smart Array P410i/256MB Controller (RAID 0/1/1+0/5/5+0)

	<b>Description</b>	<b>Required Specification</b>
12.	Maximum Storage	Maximum of 8TB of internal storage capacity
13.	CD – ROM Drive	DVD-ROM
	<b>Graphic Subsystem</b>	
14.	Video RAM	Integrated ATI RN50, 64MB video standard
	<b>Networking</b>	
15.	Network Interface	Embedded NC326i PCI Express Dual Port Gigabit Server Adapter
16.	Network Speed	10/100/1000Mbps
	<b>Monitor</b>	
17.	Monitor	17” LCD Monitor (Same Brand)
	<b>Standard Features</b>	
18.	Keyboard	Standard Key Board (Same Brand)
19.	Mouse	Mouse (Same Brand)
	<b>Power Management</b>	
20.	Power Supply	750W CS HE Gold Dual Power Supply
21.	Cooling System	2 fans ship standard, 4 fans total supported
22.	Expansion Ports	1 Serial, 1 Pointing Device, 1 Graphics, 1 Keyboard Port, Network RJ-45 Port 3 (1 dedicated for Onboard Administrator), USB 2.0 Ports 6 (2 front, 2 rear, 2 internal)
	<b>Tape Storage</b>	
23.	Tape Drive	DAT 320GB USB Internal Drive

	Description	Required Specification
	Security	
24.	Security Features	Power on Password, Setup Password, Diskette boot control, Parallel and Serial Interface Control, Disk Configurable lock, Power switch security
25.	Warranty	Three years comprehensive warranty.
26.	Authorization	Manufacturer authorization letter should be provided
		Manufacturer should have minimum of ten years experience in manufacturing of the same brand. <b>(Proof document should be attached)</b>
		Bidder should have minimum of five years experience selling of the same brand <b>(Proof document should be attached)</b>
		ISO Certification should be provided.
27.	Serviceability	The Vender should be certified by the manufacture as having authorized service centre facility.
28.	Operating System	Windows Server 2008 standard
29.	Product Data	Make Country of origin Model No Number of Similar units sold in Sri Lanka