**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 -  Voltage Fluctuation -  Noise -  Guarantee and Free -  Maintenance Period  Maintenance/repair work -  Following the free  Maintenance period.  Market Position - | 230 V, 50Hz .  5A or 15 A plug point will be provided by NWS&DB.  Office equipment shall be capable of withstanding ± 10% of voltage fluctuation.  Office equipment shall not produce excessive noise unacceptable for office environment.  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.  All regular maintenance work during this period shall also be attended by the contractor free of charge.  The Bidder shall indicate the cost of maintenance work following free maintenance  Period in an yearly basis in the questionnaire .  This cost is also considered at the time of evaluation  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 |
|  | Form Factor | Tower |
|  | Processor | Intel Core i3 , 3240 3rd Genarations 3.4 GHZ Processor 3MB cache, 1333MHz/1600 MHz ) or Better |
|  | L2 Cache | 3MB cache, 1600MHz /1333 MHzFSB or Better |
|  | Hard Disk | 500GB SATA 3.0Gb/s 7,200rpm Hard Disk |
|  | Serial –ATA | 4 serial-ATA Interfaces |
|  | Memory | 4GB DDR3 (1066 MHz/1033 MHz) upgradeable up to 8 GB or better |
|  | Network Interface | Ethernet – Integrated |
|  | Network Speed | 10Mbps, 100Mbps, 1000Mbps Fast Ethernet Adapter |
|  | Graphics Type | 2D / 3D Graphics with integrated 512 MB or Better |
|  | Video Memory | Intel Graphics Media Accelerator 3100 |
|  | Sound | Integrated High Definition audio with 600w Speaker set |
|  | Expansion Bays | (2) 3.5" internal bays |
|  | Optical Drive | 16X Internal DVD Writer or better |
|  | Readers | 16GB USB Pen Drive |
|  | Key Board | USB Keyboard |
|  | Mouse | USB Optical Scroll Mouse with pad |
|  | Monitor | 18.5” LED Monitor |
|  | Resolution | 1024 x 768 or better |
|  | Slots total free and type | 1 full-height PCI slots, 1full height PCI Express x1 slot, 1 full height PCI Express x16 slot |
|  | I/O Ports | 1 Parallel, 1 Serial standard, 8 USB 2.0 (2 Front and 6Rear) Ports |

|  |  |  |
| --- | --- | --- |
|  | **Specification** | **Minimum Requirement** |
|  | Expansion Ports | External microphone, External Display, Keyboard, Line in, Line out, Mouse, RJ-45 |
|  | Operating System | Windows 7 with Down grate to Genuine windows XP Professional with  Original User Licenses (32 bit) |
|  | Warranty | Three years comprehensive 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 centre 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 |

# 2.1 (b) TECHNICAL SPECIFICATION FOR PERSONAL

# COMPUTER SYSTEM

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

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|  | **Specification** | Minimum Requirement |
|  | Slots total free and type | 1 full-height PCI slots, , 1 full height PCI x16 slot |
|  | I/O Ports | 1 Parallel, 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 7 Genuine 32 Bit Professional with Original User Licenses |
|  | Warranty | Three years comprehensive 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 centre 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 |

# 2.1 (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 Genaration) |
| 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 |

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|  |  |
| --- | --- |
| **Specification** | **Minimum Requirement** |
| 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 |

Revised on 17-05-2015

2.2 (a) SPECIFICATION FOR NOTEBOOK COMPUTER

|  |  |  |
| --- | --- | --- |
|  | **Feature/Description** | **Minimum Requirement** |
|  | Make/Model | Please Specify |
|  | Country of Manufacture | Please Specify |
|  | Country of Origin | Please Specify |
|  | Processor | Intel® Core i3-3120ME Processor (2.13 GHz 1333MHz , 1600 MHz 3MB Cache) or Better |
|  | Memory | 4GB DDR3 DDR3/DDR3L 1333/1600RAM, upgradeable up to 8GB or Better |
|  | Chipset | Intel HM55 Express or Better |
|  | Display | 15.6 TFT LED |
|  | Video Memory | 512 MB of dedicated V RAM |
|  | Storage | 320 GB HDD |
|  | Multimedia | Integrated Speakers, Volume control & Mute Buttons, sound blaster pro compatible, 16-bit stereo sound, In built web camera |
|  | 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 |
|  | Communication | Intel® Wireless WiFi Link (Dual-band quad-mode 802.11a/b/g/Draft-N) Wi-Fi CERTIFIED® network connection, & Bluetooth® 2.0+EDR |
|  | Key Board | Full size desktop compatible – 101 key Keyboard |

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

2.2 (b) SPECIFICATION FOR NOTEBOOK COMPUTER

|  |  |  |
| --- | --- | --- |
|  | **Feature/Description** | **Minimum Requirement** |
|  | Make/Model | Please Specify |
|  | Country of Manufacture | Please Specify |
|  | Country of Origin | Please Specify |
|  | Processor | Intel® Core i5-3320M Processor (2.6 GHz 1333MHz ,1600MHz, 3MB Cache) or Better |
|  | Memory | 4GB DDR3 RAM, 1333MHz ,1600MHz, upgradeable up to 8 GB or Better |
|  | Display | 15.6 WXGA TFT LCD |
|  | Video Memory | 512 MB of dedicated DDR3 |
|  | Storage | 500GB HDD |
|  | Multimedia | Integrated Speakers, Volume control & Mute Buttons, sound blaster pro compatible, 16-bit stereo sound, In built web camera |
|  | 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 |
|  | Communication | Intel® Wireless WiFi Link (Dual-band quad-mode 802.11a/b/g/Draft-N) Wi-Fi CERTIFIED® network connection, & Bluetooth® 2.0+EDR |
|  | Key Board | Full size desktop compatible – 101 key Keyboard |

|  |  |  |
| --- | --- | --- |
|  | **Feature/Description** | **Minimum Requirement** |
|  | Pointing Device | Touch pad with on / off button and dedicated scroll up / down surface |
|  | DVD ROM | DVD / CD-RW Drive Super Multi Dual Layer, |
|  | Network | 10/100/1000 Base-T Fast Ethernet interface– Integrated on the system. |
|  | Power Supply | External AC adapter |
|  | Battery | 2-4 - hour battery life  (44.4W 4000 mAh 6 cell Li-ion battery pack) |
|  | Warranty | Comprehensive warranty covers the whole system for3 years |
|  | Accessories | Original carrying bag |
|  | Operating System | Windows 7 Professional Original Licen |
|  | Anti Virus Software | Kaspersky Antivirus 2013 or latest |
|  | Warranty Period | 3 Years Comprehensive. |
|  | Annual Maintenance Fee after warranty period | Please Specify |
|  | Maintenance Terms | Attach a sample maintenance agreement |
|  | Eligibility | Manufacturer should have minimum of ten years experience in manufacturing of the same brand. |
|  | Serviceability | Manufacturer authorized service centre facilities should be available. |
|  | Manuals &CDs | Original Manual and Installation and Drivers CD |

2.2 (c) SPECIFICATION FOR NOTEBOOK COMPUTER

|  |  |  |
| --- | --- | --- |
|  | **Feature/Description** | **Minimum Requirement** |
|  | Make/Model | Please Specify |
|  | Country of Manufacture | Please Specify |
|  | Country of Origin | Please Specify |
|  | Processor | Intel Core i7 3610QM 3rd Generations (2.3GHz) Processor 6MB cache or Better |
|  | Memory | 4GB DDR3 RAM, |
|  | Display | 15.6" diagonal LED-backlit HD anti-glare (1366 x 768) |
|  | Video Memory | 1GB dedicated VGA |
|  | Storage | 500GB HDD |
|  | Multimedia | Integrated Speakers, Volume control & Mute Buttons, sound blaster pro compatible, 16-bit stereo sound, In built web camera |
|  | 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 |
|  | Communication | Intel® Wireless WiFi Link (Dual-band quad-mode 802.11a/b/g/Draft-N) Wi-Fi CERTIFIED® network connection, & Bluetooth® 2.0+EDR |
|  | Key Board | Full size desktop compatible – 101 key Keyboard |

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

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

|  |  |  |
| --- | --- | --- |
|  | **Feature** | **Description** |
|  | Make & Model |  |
|  | Rating | 10 KVA |
|  | Input Voltage | 230 V , 172-285V |
|  | Input frequency | 40-70Hz |
|  | Input power factor | ≥ 0.99 |
|  | THD input current | ≤ 10% |
|  | Output Voltage | 230V ± 1% static resistive load |
|  | Output power factor | 0.8 |
|  | Output frequency range | 50 or 60 Hz selectable, ± 0.1%, |
|  | Output wave form | Sine wave |
|  | Autonomy time | 8 mints at full load |
|  | Typical over load | 110% ≥ 20 min,130% ≥ 3.5 min 150% ≥ 2 min |
|  | Harmonic distortions | 2% max. with linear load |
|  | Protection | Automatic shut down or Transfer to bypass   * Low/High DC voltage * Over temperature   Overload / short circuit |
|  | Bypass switch | Automatic & Manual bypass switch available |
|  | Battery type | Sealed and maintenance free |
|  | Recharge time | 1.5 – 3 hours for 80% capacity |
|  | Display | LCD |
|  | Paralleling (RPA version) | Up to 4 units parallelable for redundancy or capacity in RPA configuration |

|  |  |  |
| --- | --- | --- |
|  | **Feature** | **Description** |
|  | Humidity | 95% non condensing |
|  | Audible noise level | 40-50d B(A) |
|  | Warranty | Three years comprehensive 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 centre 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 UPS |

# 2.3 (b) Specification for 650 VA UPS

|  |  |  |
| --- | --- | --- |
|  | **Description** | **Required Specification (Minimum)** |
|  | Power Rating | 650VA |
|  | Type | Line interactive sine wave |
|  | Input Supply | 180V to 250V, Single Phase, 50Hz |
|  | Output Supply   * Voltage * Frequency * Wave Form * Distortion | 230V  50 Hz  True Sine Wave  Less than 5% |
|  | Battery Back-up   * Back-up time * Re-charge time * Battery type | 5-10 Minutes for full typical computer load  10 to 15 hours after fully discharged  Replaceable maintenance free in built battery system |
|  | No of Sockets | 02 Minimum |
|  | Protection | Overload, Over/Under Voltage, Battery Low |
|  | Noise | Noise less than 55 DBA |
|  | Indicators   * Visuals * Audible | Line input, Overload, Inverter on/off, Battery low  Battery in use, Overload, Battery Low |
|  | Warranty | (Minimum) two years including batteries |
|  | Spares | Availability of spare parts and after sales services |
|  | Product Data: | Make:  Model:  Country of Manufacture: |
|  | 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)** |
|  | Power Rating | 750VA |
|  | Type | Sine wave |
|  | Input Supply | 180V to 250V, Single Phase, 50Hz/6 0Hz |
|  | Output Supply   * Voltage * Frequency * Wave Form * Distortion | 230V  50 Hz  True Sine Wave  Less than 5% |
|  | Battery Back-up   * Back-up time * Re-charge time * Battery type | 4-16 Minutes for full typical computer load  3to 16 hours after fully discharged  Replaceable maintenance free in built battery system |
|  | No of Sockets | 04 Minimum |
|  | Protection | Overload, Over/Under Voltage, Battery Low |
|  | Surge energy rating | 340 Joules |
|  | Noise | Noise less than 55 DBA |
|  | Indicators   * Visuals * Audible | Line input, Overload, Inverter on/off, Battery low  Battery in use, Overload, Battery Low |
|  | Warranty | (Minimum) two years including batteries |
|  | Spares | Availability of spare parts and after sales services |
|  | Interface Port(s) | DB-9 RS-232,USB,SmartSlot |
|  | Product Data: | Make:  Model:  Country of Manufacture: |
|  | 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)** |
|  | Power Rating | 2000 VA |
|  | Type | Output should be in Sine Wave Form |
|  | Input Supply | 180V to 286V, Single Phase, 50Hz |
|  | Output Supply   * Voltage * Frequency * Wave Form * Distortion | 230V  50 Hz  True Sine Wave  Less than 5% |
|  | Battery Back-up   * Back-up time (Full Load) * Re-charge time * Battery type | 40 Minutes for full typical computer load  10 to 15 hours after fully discharged  Replaceable maintenance free in built battery system |
|  | No of Sockets | 04 Minimum |
|  | Protection | Overload, Over/Under Voltage, Battery Low, Replace Battery |
|  | Audible Alarm | Alarm when on battery, Distinctive low Battery Alarm, Configurable delaya |
|  | Noise | Noise less than 45 DBA |
|  | Dataline Protection | RJ-11 Modem/Fax/DSL Protection (2 Wire Single line), RJ-45 10/100 Base-T Ethernet protection |
|  | Indicators   * Visuals * Audible | Line input, Overload, Inverter on/off, Battery low  Battery in use, Overload, Battery Low |
|  | Warranty | (Minimum) 2 years including batteries |
|  | Spares | Availability of spare parts and after sales services |
|  | Product Data: | Make:  Model:  Country of Manufacture: |
|  | 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 |
|  | Processor Speed | 600 MHz Processor |
|  | Memory, standard | 128 MB |
|  | Memory, maximum | 384 MB |
|  | Printing Method | Laser Technology |
|  | Print speed Black/Color | 12ppm Pagers Per Minute Black colour up to 8 ppm |
|  | First page out color (A4, ready) | As fast as 32 sec |
|  | First page out black (A4, ready) | As fast as 26 sec |
|  | Print Quality / Resolution | Black :Up to 600x600 dpi  Colour : Up to 600x600 dpi |
|  | Fonts | 84 fonts ( 49 Scalable True type and 35Postscript) |
|  | Paper Trays ,std. | 2 |
|  | Paper Input Capacity | 125 sheets |
|  | Recommended Monthly Page Volume | 250 to 1000 |
|  | 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 |

|  |  |  |
| --- | --- | --- |
|  | **Item** | Required Specification |
|  | Media types | Paper (bond, brochure, colour, glossy, letterhead, photo, plain, preprinted, prepunched , recycled, rough), transparencies, labels, envelopes, cardstock |
|  | Duty cycle | Up to 30000 pages per month |
|  | Connectivity | Hi-Speed USB (compatible with USB 2.0 specifications), 10/100Base-TX with RJ45 connector |
|  | 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 |
|  | Printer languages | PCL 6, Postscript level 3 emulation |
|  | Warranty | 1 Years Comprehensive Warranty |
|  | 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 |  |

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|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Description** | **Required Specification (Minimum)** | Bidders Offer (Please specify in details)Do not mention YES or NO |
| 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 |  |

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**2.4 (c) SPECIFICATION LINE MATRIX PRINTER**

|  |  |  |
| --- | --- | --- |
|  | **Feature** | **Required Minimum Specification** |
|  | Make/Model | Pl. Specify |
|  | Country of Origin | Pl. Specify |
|  | Country of Manufacture | Pl. Specify |
|  | Printing Method | Impact Line Matrix |
|  | Printing Speed | 1500LPM – Draft at 10CPI and 6 lines per inch  1000LPM – Draft at 10 cpi and 6 lines per inch |
|  | Print Line Length | 13.6 inches (345.4mm) 136 Columns |
|  | Paper Handling Features | Should incorporate the following Bi-directional Printing  Mechanical forms adjustments while printing |
|  | 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 |
|  | Interfaces | RS 232C, Centronics Parallel |
|  | Other Features | Printer should come with Acoustic cabinet  Adjustable alarm to notify the faults occurred  Noise level Operating 55dBA |
|  | Power Supply | 200-240V/50Hz |
|  | Cables | Parallel printer connector (5 meter length) |
|  | Warranty | 03 Years (minimum) |
|  | Bidder’s experience | Bidder should have minimum 10 years experience in providing similar types of line printers. (Reference sites should be provided) |
|  | Technical Staff | Bidder should have qualified engineers to support and maintain the proposed printer (CVs should be attached) |
|  | 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** |
|  | Processor | Intel® Xeon® E5640 (2.66GHz/4-core/12MB/80W, DDR3-1066, HT, Turbo 1/1/2/2) Dual Processor |
|  | Cache | 8MB (1 x 8MB) Level 3 |
|  | Chipset | Intel® 5520 Chipset |
|  | 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. |
|  | Optical Drive | Half-Height SATA DVD-Writer Optical Drive |
|  | Memory | 12 GB DDR3 Registered DIMMs. Expandable up to 192GB Registered DIMMs |
|  | 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. |
|  | USB Ports | 5 total: 2 front, 2 back, 1 internal |
|  | Monitor | **17” LCD Colour** Monitor, 1280x1024 non-interlaced resolutions, Digital control. \* Low Radiation. Perfect Flat Monitor. |
|  | Graphics Integrated | Video Controller with 32 MB SDRAM Video Memory (with VGA connector, up to 1600 x 1200/16 M resolution supported.) |
|  | Form Factor | 2U Rack |
|  | Product dimensions | (W x D x H) 44.54x 69.22x8.59 CM |
|  | Key Board | P/S 2 Or USB keyboard |
|  | Mouse | P/S 2 Or USB Optical Scroll Facility Mouse with pad |

|  |  |  |
| --- | --- | --- |
|  | **Item** | **Required Specifications** |
|  | 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 |
|  | Network Controller | Gigabit NIC standard Network card extra as a backup |
|  | Storage Controller | 512MB BBWC 0,1,10,5,50 |
|  | Internal Storage | 8 TB Maximum Hot – plugging SCSI |
|  | Tape Drive | 1U USB Rack-Mount Kit with one DAT 160 USB  Tape Drive |
|  | System Fans | Fully redundant hot plug fans |
|  | Power Supply | 750Watts, Power Factor Correction (PFC), Hot Plug Redundant Power Supplies |
|  | Warranty | 03 Years Comprehensive Warranty. |
|  | RAID | Built in RAID 5, RAID 1, RAID 0 |
|  | Operating System | Windows Server 2008 Standard |
|  | OS Support | Should Support Ms Windows Server, [Oracle Enterprise Linux (OEL)](http://h18004.www1.hp.com/products/servers/linux/hplinuxcert-oracle.html), [Red Hat Enterprise Linux (RHEL)](http://h18004.www1.hp.com/products/servers/linux/hplinuxcert.html), [SUSE Linux Enterprise Server (SLES)](http://h18004.www1.hp.com/products/servers/linux/hplinuxcert-novell.html), Solaris & Netware |
|  | Authorization | Manufacturer authorization letter should be provided with warranty details. |
|  | 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) |
|  | Serviceability | The vender should be certified by the manufacture as having an authorized service center facility. |
|  | 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 |
|  | **Architecture** |  |
|  | Form Factor | Tower |
|  | **Processor** |  |
|  | 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 |
|  | Upgradeability | Upgradeable to 2 processors (4 or 8 cores) or Better |
|  | L3 Cache | 8MB (1 x 8MB) L3 cache or Better |
|  | Chipset | Intel® 5520 Chipset or Better |
|  | **Memory** |  |
|  | Memory | 8GB DDR3 Registered DIMMs .Expandable up to 192GB Registered DIMMs |
|  | Memory Type | DDR3 Registered (RDIMM) or Un buffered (UDIMM) |
|  | RAM Speed | 800MHz or Higher |
|  | RAM Slots Total(Available) | 18 DIMM Slots |
|  | **Expansion slots** | 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) |
|  | **Hard Disk** |  |
|  | 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. |
|  | Hard Disk Controller | Smart Array P410i/256MB Controller (RAID 0/1/1+0/5/5+0) |

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| --- | --- | --- |
|  | Description | Required Specification |
|  | Maximum Storage | Maximum of 8TB of internal storage capacity |
|  | CD – ROM Drive | DVD-ROM |
|  | **Graphic Subsystem** |  |
|  | Video RAM | Integrated ATI RN50, 64MB video standard |
|  | **Networking** |  |
|  | Network Interface | Embedded NC326i PCI Express Dual Port Gigabit Server Adapter |
|  | Network Speed | 10/100/1000Mbps |
|  | **Monitor** |  |
|  | Monitor | 17” LCD Monitor (Same Brand) |
|  | **Standard Features** |  |
|  | Keyboard | Standard Key Board (Same Brand) |
|  | Mouse | Mouse (Same Brand) |
|  | **Power Management** |  |
|  | Power Supply | 750W CS HE Gold Dual Power Supply |
|  | Cooling System | 2 fans ship standard, 4 fans total supported |
|  | 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) |
|  | **Tape Storage** |  |
|  | Tape Drive | DAT 320GB USB Internal Drive |

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