TECHNICAL SPECIFICATION – LAPTOP			
S.N.	***Feature***	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
	Manufacturer	***Must be specified by the Bidder***	
	Brand Name	***Must be specified by the Bidder***	
	Model No	***Must be specified by the Bidder m***	
1	Processor	Intel Core i5-13420H, 13th Generation or equivalent/better; minimum 8 cores and 12 threads; maximum turbo frequency up to 4.60 GHz or higher; cache 12 MB or higher.	
2	Processor Architecture	Hybrid architecture with performance and efficiency cores, or equivalent architecture.	
3	Memory (RAM)	16 GB DDR4 RAM or higher; upgradeable.	
4	Memory Expandability	Memory upgrade capability;	
5	Storage	512 GB PCIe Gen 4 NVMe M.2 SSD or higher.	
6	Graphics	Dedicated GPU with minimum 6 GB GDDR6 VRAM; NVIDIA GeForce RTX 3050 Laptop GPU or equivalent/better.	
8	Display Size	15.6-inch or larger, Full HD (1920 × 1080) resolution.	
9	Display Panel	IPS or equivalent wide-viewing-angle panel; anti-glare coating.	
10	Display Refresh Rate	144 Hz or higher.	
11	Display Brightness	250 nits or higher.	
12	Display Color Gamut	Bidder shall specify color gamut; reference configuration is approximately 45% NTSC.	
13	Operating System	Windows 11 Home or higher, pre-installed.	
14	Wireless	Wi-Fi 6 (802.11ax) or higher.	
15	Bluetooth	Bluetooth 5.0 or higher.	
16	Ethernet	Integrated Gigabit Ethernet (RJ-45) port.	
17	USB Ports	USB Type-C port and at least two USB Type-A ports; bidder shall state port versions and count.	
18	Video Output	HDMI port or equivalent digital video output.	
19	Audio	Built-in stereo speakers and microphone(s).	
20	Camera	Integrated HD webcam or higher.	
21	Keyboard	Backlit keyboard with numeric keypad.	
22	Pointing Device	Multi-touch precision touchpad.	
23	Card Reader	Integrated microSD card reader or equivalent.	
24	Power Adapter	AC adapter rated at 150 W or appropriate for the offered configuration.	
25	Color / Finish	Dark finish (e.g., Titanium Black) or equivalent.	
26	Warranty	At least 1 year warranty in Nepal.	
27	Accessories	AC adapter, power cable, and standard manufacturer accessories.	
28	Documentation	datasheet	

Technical Specification of Desktop Computer (Branded)		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacture, Country		
Brand Name		
Model No.		
Processor	14th Intel Core i5-14400 (10 Cores, 16 Threads, 20 MB Cache, 2.5Ghz- to 4.7 Ghz (turbo))	
Graphics	Intel® UHD Graphics	
Chipset	Intel® H610	
Memory	16 GB DDR5 5600MHz (2 Slot Max. 64GB)	
Display	22" Full HD, 100Hz Refresh Rate, 1ms, (Display must be from the same manufacturer as the computer)	
Communication	G-LAN Wi-Fi + Bluetooth	
Storage	512GB M.2 NVMe SSD, 1x 3.5" HDD + 1x 2.5" HDD/SSD Slot	
Front/Rear Ports	2x 3.5mm Audio Jack 2x USB 3.2 Type-A 1x USB 3.2 Type-C 1x RJ45 1x HDMI Out (2.0) 1x DisplayPort (1.4) 1x VGA Port 4x USB 2.0 Type-A 3x 3.5mm Audio Jack	
Keyboard/Mouse	USB Keyboard and Mouse (Should be from same Manufacture)	
Colling System	Fan	
Case/Volume	Tower	
Security	Kensington Lock	
AC Adaptor/PSU	300W	
Operating System	Windows 10 or 11	
Warranty	1 year part and service (Warranty must beverifiable from OEM Website)	

Technical Compliance Sheet for Multifunction A3 Laser Printer			
SN	***Feature***	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
	Manufacturer		
	Brand Name		
	Model No.		
1	Machine Type	A3 Monochrome Laser Multifunction Printer (MFP)	
2	Core Functions	Print, Copy, Color Scan (Network-enabled)	
3	Processor & Memory	Dual-Core Processor (1.2 GHz or higher) with minimum 1.0 GB RAM	
4	Control Panel	Minimum 3.5-inch (8.9 cm) Touch Panel display	
5	Print / Copy Speed	Minimum 24 ppm (A4, 1-sided) and 12 ppm (A3, 1-sided)	
6	First Print / Copy Out Time	7.5 seconds or less (A4, Platen)	
7	Warm-up Time	20 seconds or less from Power On	
8	Print & Copy Resolution	Print: Up to 1,200 × 1,200 dpi (or 600 × 600 dpi standard with enhanced 1200 dpi); Copy: 600 × 600 dpi	
9	Duplex Printing	Automatic Double-Sided (Duplex) Printing unit included	
10	Document Feeder	50-sheet (or higher)supporting up to A3 size ADF	
11	Paper Input Capacity	Minimum 350 sheets standard (minimum 1 × 250-sheet cassette + 100-sheet multi-purpose tray), expandable to 600 sheets or more	
12	Paper Output Capacity	Minimum 250 sheets (A4, 80 gsm)	
13	Supported Paper Sizes	Cassette & MPT: A3, A4, A4R, A5, B4, B5, and Custom sizes	
14	Supported Media Weight	Cassette: 64 to 90 gsm (or wider); Multi-purpose Tray: 60 to 157 gsm (or wider)	
15	Copy Features	Zoom 25% – 400% (in 1% increments), Continuous copy up to 999 sheets, ID Card Copy, N-on-1, Electronic Sort/Collate	
16	Scan Functionality	Flatbed + ADF Color Scanning; Resolution up to 600 × 600 dpi; Scan-to-SMB, Scan-to-Email (SMTP), TWAIN/WIA support	
17	Supported Scan File Formats	PDF, TIFF, JPEG (minimum)	
19	Connectivity & Network	Built-in Ethernet (10/100Base-TX or 1000Base-T RJ45) and USB 2.0; Mobile printing support	
20	OS Compatibility	Windows 10 / 11, Windows Server, and macOS	
21	Power Supply	AC 220–240V, 50/60 Hz (compatible with Nepal power grid)	
22	Warranty	1 year	

Technical Compliance Sheet for Multifunction (A4) Laser Printer		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Printer Type	Mono Laser Printer	
Functions	Print, Copy, Scan	
Print Speed	Up to 30 pages per minute (ppm)	
Print Resolution	600 x 600 dpi, HQ1200 (2400 x 600 dpi) quality	
Additional Features	Auto-Duplex	
Paper Weight	60 – 163 gsm	
Processor & Memory	266MHz processor, 32 MB memory	
Paper Input (Front)	250 Sheets	
Multipurpose Tray	100 Sheets	
Connectivity	Hi-SpeedUSB2.0, Ethernet 10Base-T/100Base-TX, Wireless LAN IEEE 802.11b/g/n (Infrastructure/Ad-hoc Mode), IEEE 802.11g/n (Wi-Fi Direct)	
Power Consumption	Operation: 480W, Standby: 9W	
Toner Cartridge Yield	Cartridge 070 / 070H (3100 / 10000 pages)	
REC (A4) Monthly Print	2000 – 5000 pages	
Monthly Duty Cycle	80000 pages	
Display	LCD	
Warranty	1 year	

Technical Compliance Sheet for Signature Capture Device		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Display Type	4" (10.4 cm) Monochrome TFT LCD, backlit (158 cd/m² brightness)	
Display Resolution	320 × 160 pixels (86 × 86 ppi; 0.275 mm pixel size)	
Touch Technology	Resistive Touch Panel (RTP) with wear-protection foil	
Active Signing Area	91 × 45 mm (listed as 95 × 47 mm on earlier revisions)	
Signature Resolution	4,096 × 4,096 pixels (2,214 × 1,130 ppi)	
Pressure Sensitivity	1,024 pressure levels	
Sampling Rate	500 Hz external (4 axes: X, Y, time, and pressure); 6,000 Hz internal	
Linearity	+/- 1.5% in X, Y, and Z directions	
Stylus	Battery-less passive pen with replaceable spring-loaded tip and tether	
OS	Win 10,11, Linux	
Security Mechanism	AES-256 encrypted data transfer between host and pad via RSA key exchange, Supported Hash-algorithms:SHA-1- SHA-256- SHA-512	
Certification	CE, FCC, RoHS	
Warranty	1 year	

Technical Compliance Sheet for Biometric Thumb Capture Device		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Image Resolution	500 DPI	
Image Size	300 × 400 pixels	
Platen Size	18.2 × 23.1 mm (older revisions: 18.2 × 22.9 mm)	
Effective Sensing Area	15.2 × 20.3 mm (0.6" × 0.8")	
Image Grayscale	256 levels (8-bit)	
Light Source / Lifespan	Green LED (~60,000 hours typical lifetime)	
Capture Speed	0.2 – 0.5 seconds (with Smart Capture)	
Interface	USB 2.0 Hi-Speed (backward compatible with USB 1.1)	
Cable Length	1,500 mm (1.5 m)	
Ingress Protection	IP54 / IP65	
Warranty	1-year limited hardware warranty	

Technical Compliance Sheet for CAT-6 Cable		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Category & Shielding	Cat6 U/UTP (Unshielded Twisted Pair, 4 pairs / 8 cores)	
Conductor Material	Solid CCA (Copper-Clad Aluminum, ≥ 27% copper content)	
Conductor Gauge / Diameter	23 AWG / 0.585 ± 0.01 mm (newer revisions: 0.565 mm)	
Insulation Material & Diameter	Solid HDPE / 1.05 ± 0.05 mm	
Outer Sheath Material	White PVC (RAL9003)	
Outer Diameter & Thickness	6.0 ± 0.3 mm outer diameter; 0.50 ± 0.05 mm thickness	
Internal Structure	Cross separator (spline) + rip-cord; no drain wire	
Cable Length	305 ± 1.5 m (1,000 ft) pull-box	

Technical Compliance Sheet for Scanner		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Scanner Type	Flatbed Document & Photo Scanner (CIS sensor, RGB LED)	
Optical Resolution	2,400 × 2,400 dpi	
Color / Grayscale Depth	48-bit input (24-bit output) / 16-bit input (8-bit output)	
Max Document Size	A4 / Letter (216 × 297 mm)	
Scan Speed	Approx. 10 seconds (A4, 300 dpi, Color)	
Lid & Controls	Z-Lid (expands up to 21 mm for books); 4 EZ-Scan buttons	
Interface & Power	USB 2.0 High-Speed (Single-cable USB bus-powered, no AC adapter)	

Technical Compliance Sheet for Biometric Attendance		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Device Type	Wall-Mounted Biometric Face Recognition & Access Control Terminal	
Display	Min. 4.3-inch Capacitive LCD Touchscreen (480 × 272 resolution)	
Camera	2MP Dual-Lens Camera with Anti-Spoofing (Liveness Detection)	
Authentication Modes	Face, Fingerprint, M1 (Mifare) Smart Card (13.56 MHz), and PIN	
Recognition Speed	Face: less than 0.2 sec; Fingerprint: less than 1 sec	
Recognition Distance & Accuracy	0.3m – 1.5m range; greater than or equal to 99% accuracy	
Storage Capacity	Min. 1,500 Faces, 3,000 Fingerprints, 3,000 Cards, 150,000 Event Logs	
Network Connectivity	10/100 Mbps Ethernet (RJ45) & Built-in 2.4GHz Wi-Fi (802.11b/g/n)	
Protocols	ISAPI, ISUP 5.0 (or open SDK/API support)	
Interfaces	Lock Control, Exit Button, Door Contact, Tamper Alarm, RS-485, USB	
Power Supply	DC 12V (with compatible power adapter)	
Warranty	Minimum 1-Year comprehensive warranty	

Technical Compliance Sheet for 2 MP Outdoor Fixed Bullet Network camera		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Image Sensor	1/2.7" Progressive Scan CMOS (older revisions: 1/2.8")	
Max. Resolution	1920 × 1080 (2 MP)	
Min. Illumination	Color: 0.01 Lux @ (F1.2, AGC ON) / 0.028 Lux @ (F2.0, AGC ON); 0 Lux with IR	
Shutter Speed	1/3 s to 1/100,000 s (supports slow shutter)	
Day & Night	IR Cut Filter (ICR)	
Angle Adjustment	Pan: 0° to 360°, Tilt: 0° to 90°, Rotate: 0° to 360°	
Lens Options	2.8 mm fixed focal lens, F2.0 aperture, M12 mount	
Field of View (2.8 mm)	Horizontal: 112.1°, Vertical: 60.0°, Diagonal: 132.2°	
IR Illuminator	EXIR 2.0 (850 nm wavelength), up to 30 m range	
Main Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720); 60 Hz: 30 fps (1920 × 1080, 1280 × 720)	
Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360, 320 × 240); 60 Hz: 30 fps (640 × 480, 640 × 360, 320 × 240)	
Video Compression	Main stream: H.265+ / H.265 / H.264+ / H.264; Sub-stream: H.265 / H.264 / MJPEG	
Video Bit Rate	32 Kbps to 8 Mbps	
Image Enhancement	Digital WDR (DWDR), 3D DNR, BLC, HLC, Saturation/Brightness/Contrast/Sharpness	
Smart Features	Motion detection, video tampering alarm, exception notification	
Network Interface	1× RJ45 10M/100M self-adaptive Ethernet port	
Protocols & API	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, QoS, IPv6, UDP, Bonjour; ONVIF (Profile S, Profile G), ISAPI	
Protection & Material	IP67 weatherproof; front cover: metal, back cover & bracket: plastic	
Warranty	1 year	

Technical Compliance Sheet for 16-Channel 4K (NVR)		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
IP Video Input	16 channels (up to 8 MP resolution)	
Incoming / Outgoing Bandwidth	160 Mbps / 160 Mbps	
HDMI Output	1-ch, 4K (3840 × 2160)/30 Hz, 2K (2560 × 1440)/60 Hz, 1080p/60 Hz	
VGA Output	1-ch, 1920 × 1080/60 Hz, 1280 × 1024/60 Hz, 1280 × 720/60 Hz	
Video Output Mode	HDMI / VGA independent output	
Audio Input / Output	1-ch RCA input / 1-ch RCA output	
Two-Way Audio	1-ch RCA (2.0 Vp-p, 1 KΩ, using the audio input)	
Decoding & Recording	Supports H.265+, H.265, H.264+, H.264, and MPEG4 formats up to 8 MP resolution with 16-channel synchronous playback. Max decoding capability reaches 2-ch @ 8 MP (30 fps), 4-ch @ 4 MP (30 fps), or 8-ch @ 1080p (30 fps). Audio compression supports G.711ulaw, G.711alaw, G.722, and G.726.	
Network & Connectivity	Features 1× RJ-45 10/100/1000 Mbps Ethernet port, supports up to 128 remote connections, and is compatible with extensive network protocols (TCP/IP, DHCP, IPv4/IPv6, RTSP, HTTP/HTTPS, NFS, iSCSI, etc.).	
Storage & Hardware	Includes 2 SATA interfaces supporting up to 10 TB per HDD (up to 16 TB on newer K2(D) revisions). Does not support RAID. USB ports (USB 2.0 / USB 3.0 depending on revision) and 4/1 alarm I/O are also provided.	
Warranty	1 year	

Technical Compliance Sheet for Web Cam		
Feature	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
Manufacturer		
Brand Name		
Model No.		
Operating System	Windows 7, 8.1, 10 or above, macOS X, Linux, Android, Copatible	
Camera	1/2.8" CMOS, 2.07MP, 90° FOV, 2D/3D Digital Noise Reduction, Backlight Compensation	
Audio	Dual-array microphone, Sensitivity: -30±2dB, S/N Ratio: 70dB	
Video Format	MJPEG, YUY2, H.264	
Max Resolution	1080P@30fps/25fps, 720P@30fps/25fps, 960x540P@30fps/25fps, 640x360P@30fps/25fps	
Connectivity	USB 2.0	
Certifications	CE, FCC, LVD	
Package Contents	Quick Start Guide, USB 2.0 Type-A to Micro-B Cable	
Warranty	1 year	

Technical Compliance Sheet for 5KVA Online UPS			
S.N.	***Feature***	***Specification***	***Compliance (Fully Compliant, Partially Compliant, Non-Compliant) or Bidders Offer***
	Manufacturer		
	Brand Name		
	Model No.		
1	System Rating / Capacity	5 kVA (4 kW at 0.8 PF) True Online Double Conversion UPS	
2	Mains Input		
2.1	Input Supply & Phases	Single Phase, 2 Wire + Ground (1 Phase, 2 Wire)	
2.2	Nominal Input Voltage & Range	220V / 230V AC (+15%, -15% or wider)	
2.3	Grid Frequency Range	50 Hz ± 10% (45 Hz – 55 Hz)	
3	**Battery System**		
3.1	Nominal DC Bus Voltage	96V DC (8 × 12V batteries in series)	
3.2	Maximum Battery Charging Current	1 Amp to 10 Amp (Load adjustable)	
4	**Inverter & Output**		
4.1	Switching Device	High-frequency IGBT-based PWM Inverter	
4.2	Control Topology	16-Bit DSP (Digital Signal Processor) Controlled or better	
4.3	Output Waveform	Pure Sine Wave	
4.4	Nominal Output Voltage	220V / 230V / 240V AC (L-N), Single Phase	
4.5	Output Voltage Regulation	≤ ±1% (Static) / < 3% (Dynamic)	
4.6	Output Supply	1 Phase, 2 Wire + Ground	
4.7	Output Power Factor	≥ 0.8	
4.8	Output Frequency	50 Hz ± 1% (Synchronized with mains; ±0.1% in battery mode)	
4.1	Overload Capacity	• 101% – 125% load for at least 10 minutes	
4.11	Galvanic Isolation	Inbuilt Isolation Transformer at output	
5	Protection Features	Comprehensive electronic protection for: 1. Output Over / Under Voltage 2. Battery Over / Under Voltage 3. Output Overload 4. Output Short Circuit 5. Input Over / Under Voltage 6. Over Temperature	
6	**Display & Indications**		
6.1	Digital LCD Display	Real-time display of: • Output Voltage, Output Current, Load % • Grid / Input Voltage • Battery Voltage, Charging/Discharging Current, Battery Capacity % • Inverter Heatsink Temperature • Load Status (Load on Inverter / Load on Bypass)	

6.2	LED Status Indications	Clear visual LED indicators for: 1. Grid On 2. UPS On 3. Battery On 4. Load On 5. Load on Bypass 6. Battery Low	
8	**Physical & Environmental**		
8.1	Cooling System	Forced Air Cooled	
8.2	Enclosure & Protection Degree	Matte black powder-coated metallic cabinet with IP-20 protection degree or better	
8.3	Operating Temperature	0°C to 45°C	
8.4	Relative Humidity	Up to 95% (Non-condensing)	
9	Warranty & Support	Minimum 1 years comprehensive on-site replacement/repair warranty on UPS electronics	