



**Ministry of Works and Supply**

**GOVERNMENT OFFICE EQUIPMENT  
MANAGEMENT STANDARDS  
2021 -2023**

October 2020, Lusaka

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## **FOREWORD**

The Government of the Republic of Zambia recognizes the role of office equipment in advancing the quality of service delivery in the public service. Office equipment ensures operational efficiency and productivity in Government workplaces through easing work, enhanced communication and data storage.

Given the level of utilization of office equipment in Government institutions currently, it is inevitable to ensure their sustainability and promote value for money through a streamlined and cost effective approach of managing Government office equipment. In this regard, the Ministry of Works and Supply revised the 2018-2020 Office Equipment Standards to be abreast with technological advancement and provide Ministries, Provinces and Spending Agencies (MPSAs) with guidance in the acquisition, registration, utilization, maintenance, transfer and disposal of office equipment.

The revised technical standards will provide guidance to all MPSAs during the period 2021-2023 on the management of Government office equipment with strict adherence to the provision of various regulations. It is therefore, imperative that MPSAs adopt a coherent approach in the management of office equipment for optimal performance and efficient service delivery to the general public.



Hon. Sylvia Bambala Chalikosa, MP  
**MINISTER OF WORKS AND SUPPLY**

## **ACKNOWLEDGEMENT**

I wish to thank all the stakeholders for their support and contributions in the preparation of the Revised Government office equipment standards. Special thanks go to Policy Analysis and Coordination (PAC) at Cabinet Office, Smart Zambia Institute, Ministry of Communication and Transport, Zambia Information Communication and Technology Authority (ZICTA) who provided invaluable guidance in the process of preparing these Standards. Last but not the least, am highly indebted to the members of staff at the Ministry of Works and Supply who worked tirelessly to prepare these standards.



Agnes M. Musunga (Ms.)  
Permanent Secretary

**MINISTRY OF WORKS AND SUPPLY**

# Chapter One

## 1.0 INTRODUCTION

This document sets out the main principles, rules and procedures regarding the management of office equipment necessary to create a productive working environment in Ministries, Provinces and other Spending Agencies (MPSAs) for effective service delivery. The aim of these standards is to provide guidelines that will assist to promote excellence in the management of office equipment in MPSAs. The role of Information Communication and Technology (ICT) in advancing the growth of national economies through enhanced efficiency and productivity cannot be over emphasised. It is therefore, imperative that all MPSAs adopt a balanced approach towards the procurement and management of office equipment for optimal performance and efficient service delivery to the general public.

The Ministry of Works and Supply through the Office Equipment and Maintenance Services Unit is mandated to regulate the acquisition, registration, maintenance, usage and disposal of Government office equipment in order to ensure adherence to set standards as outlined by SI. No. 122 of 1985 of the Public Stores Regulations. The following are the functions of the Unit:

- i) To effectively maintain Government office equipment in order to ensure serviceability and prolonged life span;
- ii) To provide professional technical advice to Government institutions on the procurement of office equipment in order to enhance standardization and easy maintenance;
- iii) Allocation of GRZ numbers to office equipment in order to ensure accountability;
- iv) To maintain an up to date inventory of Government office equipment for informed decision making and easy retrieval of information; and
- v) To inspect all surplus and unserviceable office equipment in Government institutions in order to re-allocate the surplus equipment to other needy Government institutions and/or recommend all unserviceable equipment for disposal to the Committee of Survey(COS).

### 1.1. Scope

The procedures outlined in these standards shall be applied by MPSAs or projects wishing to procure, register, maintain, transfer and dispose of office equipment. For the purposes of clarification, office equipment shall mean and include all equipment intended for use in Government offices i.e. all equipment including but not limited to computers, copiers, digital cameras, scanners, printers and barcode readers. However, the standards do not cover computer software, networking devices, servers and related peripheral which are under the responsibility of the Smart Zambia Institute (SZI).

The standards provided in this document are minimum specifications. However, office equipment with higher specifications than those indicated may be procured with approval from the Office Equipment Controller. Office equipment not covered in this document like desk jet printers are not

cost effective and shall not be procured by MPSAs or projects. The Office Equipment Controller shall monitor the use of these minimum specifications and give technical advice where specifications above these are required.

## 1.2. Document Control

Document Name	Government Office Equipment Management Standards
Prepared by	Office Equipment and Maintenance Services Unit in consultation with stakeholders
Edition	Version 1.3
Approved by	Honourable Minister Works and Supply
Effective Date	1st January 2021
Next Review Date	After 3 years

## 1.3 Application

These guidelines shall be applicable to all Government Ministries, Provinces and Spending Agencies including projects involved in the procurement, registration, utilisation, transfer, maintenance and disposal of Government office equipment.

## 1.4 Purpose

The goal of the guidelines is to ensure:

- 1.4.1 Guidance is provided to procurement units in MPSAs in the procurement of office equipment;
- 1.4.2 MPSAs receive value for money on office Equipment;
- 1.4.3 Compatibility and interoperability of office equipment in all MPSAs;
- 1.4.4 Standardisation and easy maintenance;
- 1.4.5 Cost effective use by sharing of office equipment where possible;
- 1.4.6 Consistency in office equipment performance;
- 1.4.7 Maximum equipment functionality;
- 1.4.8 Environmentally responsible and sustainable utilisation, maintenance and disposal of office equipment; and
- 1.4.9 Improved end user performance and experience.

## Chapter Two

### 2.1. Acquisition of Office Equipment

This chapter provides measures to guide the procurement and/or donation of office equipment.

### 2.2. Mandatory Requirements

- 2.1.1. Procurement of office equipment shall be done in accordance with the provision of the Zambia Public Procurement Act No. 12 of 2008;
- 2.1.2. Procurement Units in MPSAs should ensure that all office equipment procured are of high quality and type approved as per SI number 6 of 2011 (type approval regulations) of the ICT Act No. 15 of 2009;
- 2.1.3. Procurement of office equipment shall also be done in accordance with prescribed standards set in this document, including any other office equipment that are donated or funded by development partners;
- 2.1.4. Requests to procure office equipment should be accompanied by minimum technical specifications drawn from this documents;
- 2.1.5. The Office Equipment Controller shall be invited to be part of the Tender Evaluation Committee by MPSAs during the procurement of office equipment;
- 2.1.6. At District level, where the Office Equipment Controller is not available the IT Unit shall be responsible for interpreting and verifying the procurement of office equipment in accordance with the guidelines in this document;
- 2.1.7. Procurement of office equipment shall be based on the needs of the MPSAs;
- 2.1.8. MPSAs shall not procure second hand and/or reconditioned office equipment for use in Government offices unless with permission from the Secretary to the Cabinet;
- 2.1.9. MPSAs shall ensure that all office equipment and furniture is appropriately assigned with GRZ serial numbers upon procurement;
- 3.0. Office equipment donated to Government must be reported to the Office Equipment Controller for registration and labelling with Government serial number; and
  - 3.1.1. All project office equipment shall be recorded in the asset register of the respective MPSAs.

## **2.3. Process**

- 2.3.1 MPSAs shall be required to develop annual office equipment procurement plans;
- 2.3.2 The user departments shall initiate the procurement of office equipment according to their needs;
- 2.3.3 The procurement unit shall only handle procurement requisitions that are accompanied by appropriate minimum technical specifications as outlined in the appendices;
- 2.3.4 The Head Procurement shall ensure that the Office Equipment Controller is invited at the Tender Evaluation stage; and
- 2.3.5 MPSAs shall be required to notify the Office Equipment Controller of any office equipment donations.



## Chapter Three

### 3.0 Registration of Office Equipment

This chapter provides guidance on the registration of office equipment.

#### 3.1 Mandatory Requirements

- 3.1.1 All Office equipment and other assets whether procured or donated shall be inscribed with GRZ serial numbers by the Office Equipment Controller;
- 3.1.2 A GRZ serial number shall be clearly marked at a visible position for easy identification;
- 3.1.3 A GRZ serial number shall be quoted in all correspondences about the Machine;
- 3.1.4 MPSAs shall ensure that each office has an updated Miscellaneous form 58A visibly displayed on the door;
- 3.1.5 All MPSAs shall maintain an asset register of office equipment under their charge with the following details: make, model, manufacturer serial number, GRZ serial number, location;
- 3.1.6 The Office Equipment Controller shall maintain a master copy of all Government office equipment; and
- 3.1.7 Allocation of GRZ serial numbers shall be done by the Office Equipment Controller before distribution to end users.

#### 3.2 Process

- 3.2.1 MPSAs shall be required to request the Office Equipment Controller for registration of newly procured or donated office equipment; and
- 3.2.2 MPSAs shall submit an updated office equipment register to the Office Equipment Controller quarterly.

## Chapter Four

### 4.0 Utilisation and Transfer of Office Equipment

This section provides guidance on the effective utilisation and transfer of office equipment in MPSAs.

#### 4.1 Mandatory Requirements

- 4.1.1 Government office equipment shall be used for transacting Government work and not for commercial purposes or in support of other “for profit” activities or illegal activities;
- 4.1.2 No Government office equipment shall be moved out of the Government office without prior authority from the supervisor;
- 4.1.3 Public Officers that have been allocated or provided with movable devices shall be responsible for the safety and custodianship of the devices in and outside the office;
- 4.1.4 Public Officers exiting a particular MPSA shall be required to surrender all office equipment in their custody to their respective supervisors;
- 4.1.5 Transfer of office equipment shall be done in accordance with the provisions of the Public Finance Management Act No 1 of 2018;
- 4.1.6 All transfers of office equipment shall immediately be notified to the Office Equipment Controller; and
- 4.1.7 All office equipment with high cost price/ value shall be considered for insurance by an MPSA.

#### 4.2 Process

Public officers wishing to use Government office equipment outside the Government office shall be required to get permission from the supervisor;

- 4.2.1 MPSAs shall seek authority from the Secretary to the Treasury for transfer of office equipment;
- 4.2.2 Public Officers exiting a particular MPSA shall be required to complete the handover takeover note when surrendering office equipment in their custody;
- 4.2.3 Any abuse of office equipment should be reported to the controlling officer in each respective MPSAs;

## Chapter Five

### 5.0 Maintenance and Inspection of Office Equipment

This section provides guidance on the maintenance of office equipment in MPSAs.

#### 5.1 Mandatory Requirements

- 5.1.1 The maintenance and repair of Government office equipment shall only be done by the Office Equipment Controller;
- 5.1.2 No office equipment shall be taken to a private firm or mechanic for repairs without prior authority of the Office Equipment Controller in writing;
- 5.1.3 No public officers shall remove or swap (cannibalising) any part from an office equipment without authority from the Controlling Officer; and
- 5.1.4 The Office Equipment Controller shall conduct regular inspection of office equipment in MPSAs.

#### 5.2 Process

- 5.2.1 All maintenance works on office equipment shall be reported to the Office Equipment Controller and MPSAs shall be required to pay for the services;
- 5.2.2 MPSAs shall request a certificate of clearance from the Office Equipment Controller to seek private company services where applicable; and
- 5.2.3 MPSAs shall be notified of the inspection before the commencement.

## Chapter Six

### 6.0 Theft and Loss of Office Equipment

This chapter provides guidance in incidences of theft and loss of office equipment in MPSAs.

#### 6.1 Mandatory Requirements

- 6.1.1 All thefts and loss involving Government office equipment shall be reported to the respective Supervisor and Zambia Police within 24 hours of occurrence;
- 6.1.2 All thefts and loss involving Government office equipment shall be reported to the Office Equipment Controller within 48 hours of occurrence; and
- 6.1.3 All thefts and losses of Government office equipment which occur whilst in the custody of the public officer where authority was not granted by the supervisor shall be the liability of the officer/s involved.

#### 6.2 Process

- 6.2.1 MPSAs shall ensure that a copy of a preliminary report of theft or loss is submitted to the Ministry of Finance, Accountant Generals Office, Losses section and a copy to the Office of the Auditor General;

## Chapter Seven

### 7.0 Disposal of Office Equipment

This section provides guidance on the disposal of office equipment in MPSAs.

#### 7.1 Mandatory Requirements

- 7.1.1 Disposal of office equipment shall be done in accordance with the Public Finance Management Act; and
- 7.1.2 MPSAs shall ensure that active storage devices are removed from all office equipment marked for disposal.

#### 7.2 Process

- 7.2.1 The disposal of office equipment has been decentralised to respective MPSAs who shall constitute the Committee of Survey/ Disposal Committee; and
- 7.2.2 Authority shall be obtained from the controlling officer before active storage device are remove an office equipment marked for disposal.

## **8.0 LEGAL FRAMEWORK**

Below are legislations upon which the Government Office Equipment Management Standards shall be based:

- i) Public Finance Management Act No. 1 of 2018;
- ii) Zambia Public Procurement Authority (ZPPA) Act No. 12 of 2008;
- iii) Information and Communication Technologies (ICT) Act No. 15 of 2009;
- iv) Zambia Environmental Management Agency (ZEMA) Act No. 12 of 2011;
- v) Public Stores Regulations Statutory Instrument No. 122 of 1985; and
- vi) Public Asset Management Policy (PAMP).

## **9.0 NON - COMPLIANCE TO STANDARDS**

The Office Equipment Controller has the oversight role and responsibility for the management, enforcement and review of these standards and shall carry out audits in MPSAs to determine compliance levels.

Failure to comply with these standards shall attract disciplinary action in line with the Public Finance Management Act and the Disciplinary Code for Handling of Offences in the Public Service.

## 10.0 MINIMUM TECHNICAL SPECIFICATION

The Office Equipment Controller shall endeavour to provide minimum technical specifications for office equipment which will work as a measure of ensuring standardization of office equipment used across Government. All office equipment procured and/or donated shall be required to meet the minimum technical specifications as outlined in this document. Upon delivery of the equipment, it shall be required to be inspected by the Office Equipment Controller to ascertain whether it meets the minimum technical specifications as requisitioned.

In reviewing and developing these minimum technical specifications, the following considerations were taken into account:

- i) **Total lifecycle:** These specifications are meant to ensure that equipment acquired have useful life of not less than five years;
- ii) **Long-term support:** This addresses the availability of vendor and internal support for parts, firmware and labour (backup service);
- iii) **Interoperability:** This seeks to facilitate the exchange of information between potentially heterogeneous systems through conformance to open standards;
- iv) **Compatibility:** This addresses the ability to share office equipment components to effectively and efficiently work together in an integrated system;
- v) **Scalability:** This is intended to ensure that the acceptable office equipment if integrated into a system has the ability to support future growth and increased throughput;
- vi) **Availability:** This seeks to maintain a system's operational readiness through robust and redundant (e.g. fault tolerance) of office equipment;
- vii) **Accessibility:** This addresses operational readiness that includes the ability of users and operators to access the system in a timely fashion, to perform its intended functions; and
- viii) **Functionality:** This is intended to guarantee that operational requirements intended to be performed by the equipment, can be achieved effectively and efficiently by the equipment procured.

## Appendix 1

### a) COMPUTER SECTION

#### i) Desktop Computer

No.	Specifications	Minimum Requirements
1.	Form Factor	Mini Tower / Desktop
2.	Processor	Intel Core i5 , 3240 3rd Generation 3.4 GHZ Processor 3MB cache, 1333MHz/1600 MHz ) or AMD equivalent
3.	L2 /L3 Cache	4MB cache, 1600MHz /1333 MHz FSB
4.	Hard Disk	500GB SATA 3.0Gb/s 7,200rpm, SSD 256GB
5.	Serial –ATA	4 serial-ATA Interfaces
6.	Memory	4GB DDR3 (1066 MHz/1033 MHz) upgradeable up to 8 GB
7.	Connectivity	Wireless 802.11g, 10/100/1000 Mbps Ethernet Adapter
8	Graphics Type	2D / 3D Graphics with integrated 512 MB
9	Video Card	Intel Graphics Media Accelerator 3100
10	Sound	Integrated High Definition audio with internal speaker
11	Expansion Bays	1 X 3.5" internal bays
12	Optical Drive	16X Internal DVD Writer
13	Operating System	Windows 10 supported
14	Key Board	USB Keyboard
15	Mouse	USB Optical Scroll Mouse with pad
16.	Monitor	17.0” LED / TFT/ Monitor, Resolution 1024 x 768
17.	I/O Ports	1 Serial standard, 8 USB 2.0 (2 Front and 6Rear) Ports, External microphone, External Display, Keyboard, Line in, Line out, Mouse, RJ-45
18	Expansion Slots	1M.2,1PCIe X16;1PCIe X1
19	Power Supply	220-240V 50/60Hz (using ZABS Approved plug)
20	Warranty	One (1) Year.



ii) All in One Desktop Computer

No.	Specifications	Minimum Requirements
1.	Form Factor	Desktop
2.	Processor	8th Generation Intel® Core™ i5 processor 3.4 GHZ Processor 3MB cache, 1333MHz/1600 MHz or AMD equivalent
3.	L2 /L3 Cache	4MB cache, 1600MHz /1333 MHz FSB
4.	Hard Disk	1 TB 7200 rpm SATA, 256 GB SSD
5.	Serial –ATA	4 serial-ATA Interfaces
6.	Memory	4 GB DDR4-2400 SDRAM (1 x 4 GB) upgradeable up to 8 GB, 2 SODIMM
7	Connectivity	Wireless 802.11g, 10/100/1000 Mbps Ethernet Adapter
8	Graphics Type	2D / 3D Graphics with integrated 512 MB
9	Video Card	Intel Graphics Media Accelerator 3100
10	Sound	Integrated High Definition audio, Dual 2W speakers
11	Expansion Bays	1 X 3.5" internal bays
12	Operating System	Windows 10 supported.
13	Optical Drive	16X Internal DVD Writer
14	Key Board	USB Keyboard
15	Mouse	USB Optical Scroll Mouse with pad
16	Display	54.61 CM (21.5inch ) diagonal FHD IPS anti-glare ,
17	I/O Ports	1 Serial standard, 2 USB 2.0; 2 USB 3.1 Gen 1, HD Camera with dual array digital microphone, 3-in-1 memory card reader
18	Power Supply	220-240V 50/60Hz (Using ZABS Approved plug)
19	Webcam	HD camera with integrated microphone
20	Warranty	One (1) Year.

iii) **Laptop Computer**

No.	Specifications	Minimum Requirements
1	Processor& Core Logic	Intel Core i5 (2.6 GHZ) / AMD or equivalent
2	Hard Disk	500 GB SATA, 256 GB SSD
3	RAM	4GB DDR3
4	Keyboard and Pointing Device	Enhanced Keyboard (numeric keypad)
		Touch pad with on/ off button, spill resistance.
5	Audio	Integrated Multimedia Sound
6	Connectivity	Wireless 802.11g, 10/100/1000 Mbps Ethernet Adapter
7	I/O ports	3.0 USB , GA, HDMI, DB9 serial port, SD.MMC.MS slot
8	Display	15'LED
9	Video Card	2D/3D with integrated 512MB
10	Webcam	In built 1.3 Megapixel HD web cam, with in built mic
11	Optical Drive(optional )	16X Internal DVD Writer
12	Accessories	Carry case
13	Power Supply	220-240V 50/60Hz (using ZABS Approved plug)
14	Battery	2-4 Hours battery Life, 47WHr Lithium-Ion Battery
15	Warranty	One (1) Year.

iv) Mac Laptop Computer

No.	Specifications	Minimum Requirements
1	Processor & Data Bus	Intel Core i5, 2.53GHz processor with 3MB shared 1.3 cache; 1066MHz- data Bus or AMD equivalent
2	System Memory	Standard 8GB 2133MHz LPDDR3 upgradeable to 32 GB
3	Hard Drive	500GB , 256 GB SSD
4	DVD ROM	Optional
5	Display/Graphics	13.3”TFT Colour LCD, Resolution 1440 x 900dpi
6	Keyboard and Pointing Device	84/85/88 Key, Built in pointing device,14 function keys,4 cursor keys
7	Audio	PCI 3D audio system, sound card, Built in Microphone, Internal speakers
8	Connectivity	Wireless 802.11g,10/100/1000Mbps
9	I/O Interface Ports	1 x audio-SPDIF Input,1 x Audio-SPDIF output,bluetooth1 x 9 Pin Serial Port,1 x 25 Pin Parallel Port,4 x 2.0 USB port,1x External VGA Port, with in built mic
10	Operating System	Apple Mac OSX 10.15
11	Webcam	In built Megapixel HD web cam, 720P mode at 30 frames per second within built mic
12	Accessories	Carry Case
13	Power System	Power management standard to support standby and hibernation power savings modes
14	Battery	2-4 Hours battery Life, 47WHr Lithium-Ion Battery
15	Power	220-240V 50/60Hz (using ZABS Approved plug)
16	Warranty	One (1) year

v) **Notebook Computer**

No	Specifications	Minimum Requirements
1	Processor & Core Logic	2.20GHz AMD Athlon II Dual-Core Processor, 1MB L2 Cache or Intel equivalent
2	Hard Disk	320GB (5400RPM)
3	RAM	4GB DDR3 System Memory (2 DIMM)
4	Pointing Device	Touch Pad with integrated On/Off button and 2-way scroll pad Support
5	Keyboard	Enhanced Keyboard (numeric keypad)
6	Audio	Integrated Multimedia Sound
7	Connectivity	10/100/1000 Mbps, WIFI 802.11g, with Bluetooth
8	I/O ports	3 x 2.0 USB,1 x RJ 45 JACK,VGA,HDMI, SD.MMC.MS SLOT
9	Display Size	Maximum 14" diagonal High-Definition Bright View LED Display (1366 x 768)
10	Video	ATI Mobility Radeon HD 4250 Graphics, VRAM 1405MB
11	Accessories	Carry Case ,power adapters,
12	Webcam	In built HD web cam, with in built mic
13	Battery	2-4 Hours battery Life, 47WHr Lithium-Ion Battery
14	Power Supply	220-240V 50/60Hz (using ZABS Approved plug)
15	Warranty	One (1) Year.

vi) **Tablet Computer**

No.	Specifications	Minimum Requirements
1	Form Factor	Convertible - with physical keyboard dock to be used as a laptop.
2	Operating System	Windows 10 supported
3	Processor	Intel Core i5, 2.5GHz or AMD equivalent or Better
4	Aspect Ratio	16:9
5	Webcam	In built 5 Megapixel HD webcam front and 8 Megapixel HD rear within built microphone
6	Memory	4GB RAM
7	Internal Storage	128GB SSD
8	External Storage	(eMMC) + microSD up to 64GB
9	Display	12.2 inch TFT LCD, LED or equivalent
10	Screen Resolution	1920 × 1080
11	Video	Recording & Playback : Full HD (1080p), Video Codec : H.263, H.264, MPEG4, VC-1, Sorenson Spark, MP43, WMV7/8, VP8
12	Connectivity	Wi-Fi 802.11g, GPS, BT3.0, IrLED, LTE : 3G
13	I/O ports	2.0 USB A, headphone jack, Mic jack, microSD port
14	Audio	MP3, AAC, FLAC, WMA, WAV, OGG, MIDI
15	Power Supply	220-240V 50/60Hz (Using ZABS approved plug)
16	Battery	9,500mAh (max. run time)
17	Warranty	One (1) Year.

vii) **Learners Tablet**

No.	Specifications	Minimum Requirements
1	Form Factor	Convertible - with physical keyboard dock to be used as a laptop.
2	CPU	Intel Atom Z2520, 1.2Ghz , Dual Core,
3	Operating System	Android 4.2 Jelly Bean
4	Network	Micro Sim, 2G , 3G
5	Display	10.1 Inch, LCD Capacitive touch screen,
6	Audio Format	MP3, WAV, AMR, MIDI, AAC
7	Audio	Loud Speaker, 3.5mm Audio Jack
8	Memory	1 GB
9	Storage	8 GB
10	Connection	802.11g (Wireless)
11	Camera	5MP front 1.2MP rear
12	Battery	7 hrs. runtime
13	Power Supply	220 - 240 VAC,50/60Hz (using ZABS approved Plug)
14	Warranty	One (1) Year.

viii) **Thin Client Computer**

No	Specification	Minimum Requirement
1	Operating System	Windows Embedded Standard / Linux
2	Processor	1.2 GHz speed, (800MHz FSB, 2 cores)
3	Display	VGA: 2048 x 1536, 75Hz; DVI-I : 1920 x 1200, 60Hz
4	Monitor support	Built in dual monitor support (DVI-I and DVI-D native, with DVI-I-to-VGA adapter included in packaging)
5	Memory	Flash 8GB, RAM 2GB
6	Connectivity	8 x USB 2.0, 1 x SD card slot, Built-in Kensington Security Slot, 2 x Serial Ports
7	Accessories	Keyboard and Mouse, Horizontal feet standard
8	Protocol	Multi-protocol support
9	Audio	Internal amplified speaker, 1/8-inch mini jack out, full 16-bit stereo, 44kHz sample rate, 1/8-inch mini jack microphone in
10	Software	Citrix ICA client 12.x - HDX Ready, RDP Client : RDP 7 Compatible, VMware View Client, Local Browser, XDMCP Client, SFTP Client
11	Server OS Compatibility/Support	Microsoft Windows Terminal Server, Edition, Windows server 2016, Citrix XenApp/Citrix Presentation, Server/Citrix XenDesktop, VMware View
12	Network Interface	LAN 10/100/1000 Mbps
13	Power Management	Energy Star Compliant, 24 Watt Max , DC 12 V External Power adapter, 220-240V, 50/ 60 Hz, (using ZABS approved Plug)
14	Warranty	One (1) Year.

ix) **Zero Client Computer**

No.	Specification	Minimum Requirement
1	Operating System	Completely operating system independent
2	Processor	TERA2321 PCoIP Zero Client processor / 1.2 GHz, 800MHZ processor
3	Memory	512 MB RAM & 256 MB Flash
4	Monitor Support	Supports up to 2 displays; 1 DVI-D, 1 DVI-I with resolutions up to 1920x1200 at 60 Hz or single digital display at resolutions up to 2560x1600 using a custom DVI dual-link cable.
5	Input Devices	Keyboard and Mouse
6	Protocol	multi-protocol support
7	I/O Ports	4 USB 2.0 & 1 RJ-45,1 microphone ,1 headphone & 1 speaker,1 power connector, DVI-D & 1 DVI-I
8	Connectivity	10/100/1000 Gigabit Ethernet/ Fiber NIC, Wake on LAN (WOL) using magic packet,
9	Audio	Stereo audio output using 1/8-inch mini-jack. Stereo audio input using 1/8-inch microphone mini-jack
10	Power Management	Worldwide auto-sensing 36W, 220-240V, 50-60 Hz , 12V DC adapter, (using ZABS approved Plug)
11	Warranty	One (1) Year.



x) **Thin Client Server**

No.	Specification	Minimum Requirement
1	Processor	Intel® Xeon® E5640 (2.66GHz/4-core/12MB/80W, DDR3-1066, HT, Turbo 1/1/2/2) Dual Processor or AMD equivalent
2	Cache	8MB (1 x 8MB) Level 3
3	Chipset	Intel® C236 Chipset
4	Internal Storage Capacity	250GB SATA Upgradable (3.5" Enterprise 7.2k)
5	Chassis	Mini Tower
6	Memory Protection	Advanced memory protection, Mirroring Mode, Lockstep Mode
7	Memory	8GB DDR3 Registered DIMMs (1X8GB)
8	Expansion Slots	4 slots: 1X8PCIe 3.0 (x16 connector),1X4 PCIe 3.0 (x8 connector)1X4 PCIe 3.0 (x8 connector),1X1 PCIe 3.0 (x1 connector)
9	Redundancy	RAID supported
10	Display/Graphics	17" TFT Flat Panel LCD, 1280x1024dpi, same brand as CPU
11	Connectivity	1 Serial, 1 Pointing Device (Mouse), 1 Keyboard 1 VGA Graphics Adapter, 1 External SCSI Dual Port PCI-X 1000T Gigabit Server Adapter (embedded), 3 USB (1 front, 2 back) & 1 Fire wire interface
12	Support Software, and Configuration Utilities	Include Server managements manufacturers packs
13	Back Up Functionality	Tape Drive & Backup Software, 16X IDE DVD-RW
14	System Fans	Fully redundant hot plug fans
15	Operating System	(MS Windows server 2016, LINUX)
16	Warranty	Two (2) Year.

xi) **Zero Client Server**

No.	Specifications	Minimum Requirements
1	Processor	Intel® Xeon® E5640 (2.66GHz/4-core/12MB/80W, DDR3-1066, HT, Turbo 1/1/2/2) Dual Processor or AMD equivalent
2	Cache	8MB (1 x 8MB) Level 3
3	Chipset	Intel® C236 Chipset
4	Internal Storage Capacity	500GB SATA Upgradable (3.5" Enterprise 7.2k)
5	Chassis	Mini Tower
6	Memory Protection	Advanced memory protection, Mirroring Mode, Lockstep Mode
7	Memory	16GB DDR3 Registered DIMMs (1X16GB)
8	Expansion Slots	4 slots: 1X8PCIe 3.0 (x16 connector),1X4 PCIe 3.0 (x8 connector),1X4 PCIe 3.0 (x8 connector),1X1 PCIe 3.0 (x1 connector)
9	Redundancy	RAID supported
10	Display/Graphics	17" TFT Flat Panel LCD, 1280x1024dpi, same brand as CPU
11	Connectivity	1 Serial, 1 Pointing Device (Mouse), 1 Keyboard 1 VGA Graphics Adapter, 1 External SCSI Dual Port PCI-X 1000T Gigabit Server Adapter (embedded), 3 USB (1 front, 2 back) & 1 Fire wire interface
12	Support Software, and Configuration Utilities	Include Server managements manufacturers packs
13	Back Up Functionality	Tape Drive & Backup Software, 16X IDE DVD-RW
14	System Fans	Fully redundant hot plug fans
15	Power Supply	Input: 220 - 240 VAC,50/60Hz, (using ZABS approved plug)
16	Operating System	MS Windows server 2016/ LINUX
17	Warranty	Two (2) Year.

## b) PRINTER SECTION

### i) LaserJet Printer (Small)

No.	Specifications	Minimum Requirements
1	Print Technology	Monochrome Laser -
2	Print Quality	1200x1200 dpi
3	Print Speed	20 PPM - A4 (8.25 in x 11.7 in)
4	Memory	16MB Expandable to 144 MB through 1 industry-standard DIMM slot
5	Processor Speed	133 MHz
6	First Page Out	Less than 8 sec
7	Languages	PCL 5e, PCL6, Postscript
8	Media Capacity	250 sheets
9	Media Type	Plain paper, envelopes, transparencies, cardstock, postcards, label
10	Media Sizes	A4, A5, A6, B5, B6, envelopes
11	Media Weight	60 g/m <sup>2</sup> - 163 g/m <sup>2</sup>
12	Connectivity	USB 2.0, IEEE-1284, LAN 10/100/1000 Mbps, (Wi-Fi 802.11g optional)
13	Duty Cycle	10,000 pages per month
14	Compatibility	Window 10 supported/MAC/LINUX
15	Power Supply	220-240V, 50/60 Hz, (using ZABS approved Plug)
16	Warranty	One (1) Year

ii) **LaserJet Printer (Medium)**

No.	Specification	Minimum Requirement
1	Print Technology	Monochrome Laser
2	Print Quality	1200 x 1200 dpi
3	Print Speed	27 PPM
4	First Page Out	Less than 5 sec
5	Memory	256 MB - Two 100-pin DDR DIMM slots
6	Standard Paper Trays	2
7	Processor Speed	460 MHz
8	Language	PCL,5ec, PCL6, post script
9	Paper Capacity	100-sheet multipurpose tray, 500-sheet input tray 2
10	Media Size	A4, Letter, Legal, Executive, B5, A5, envelopes (C5, DL, B5), A3
11	Media Weight	60 to 200 g/m <sup>2</sup>
12	Media Types Supported	Paper (plain, pre-printed, letterhead, pre-punched, bond, recycled, colour, card stock, rough, cut-sheet, recycled), envelopes, transparencies, labels
13	Duty Cycle	150,000 pages per month
14	Connectivity	USB 2.0, LAN 10/100/1000 Mbps, IEEE 1284-B, ( Wi-Fi 802.11g optional)
15	Hard Drive	20 GB (Optional)
16	Compatibility	Windows 10 supported/ Linux/mac OSX v10.2
17	Duplex Printing Option	Automatic (standard)
18	Power Supply	220-240V, 50/60Hz, (using ZABS approved Plug)
19	Warranty	One (1) Year.

iii) **LaserJet Printer (Heavy Duty)**

No.	Specifications	Minimum Requirements
1	Print Technology	Monochrome Laser
2	Print Quality	1200 x 1200 dpi
3	Print Speed	45 PPM
4	First Page Out	Less than 8.0 sec
5	Memory	512 MB - Two 100-pin DDR DIMM slots
6	Standard Paper Trays	3
7	Processor Speed	800 MHz
8	Language	PCL,5ec, PCL6 post script
9	Paper Capacity	100-sheet multipurpose tray, 500-sheet input trays 2 and 3
10	Media Size	A4, Letter, Legal, Executive, B5, A5, envelopes (C5, DL, B5), A3
11	Media Weight	60 to 200 g/m <sup>2</sup>
12	Media Types Supported	Paper (plain, pre-printed, letterhead, pre-punched, bond, recycled, colour, card stock, rough, cut-sheet, recycled), envelopes, transparencies, labels
13	Duty Cycle	200,000 pages per month
14	Connectivity	USB 2.0, LAN 10/100/1000 Mbps, IEEE 1284-B, (Wi-Fi 802-11g optional)
15	Hard Drive	20 GB
16	Print management software	Supported
17	Compatibility	Windows 10 supported/ Linux/mac OSX v10.2
18	Duplex Printing Option	Automatic (standard)
19	Power Supply	220-240V, 50/60Hz, (using ZABS approved Plug)
20	Warranty	One (1) Year.

iv) Copy Printer

No.	Specifications	Minimum Requirements
1	Print Technology	Digital, press roller system printer controller built-in
2	Scanning Method	Flatbed scanner (ADF optional)
3	Resolution	600 x 600 dpi (Scanning)
		300 X 600 dpi (Printing)
4	Print speed	Range: 60 - 150 ppm
5	Duplex Printing	Standard
6	Master	A4 masters/roll
7	Master-Making	High-speed digital master-making
8	Master Making Time	Approximately 45 seconds (for A4)
9	Original Size	Book/sheet
10	Paper Size	A5 – A3
11	Paper Feed Capacity	500 sheets 20 lb. bond, optional ADF 75 sheets 20 lb. bond
12	Paper Receiving Capacity	500 sheet 20 lb. bond
13	Pre-set Reduction/ Enlargement	A/B size 61%, 70%, 81%, 86%, 115%, 122%, 141%
14	Zoom (Optional)	50-200% in 1% step
15	Print Mode	Text, photo, text/photo (2 types), Pencil
16	Contrast Control	3-step master making density control
17	Media Types	Plain Paper, Cards, Glossy Photo Paper, Matte Photo Paper.
18	Paper Weight Support	46 g/m2 m to 210 g/m2
19	Duty Cycle	300,000 prints per month
20	Ink	Black ink/ Colour ink
21	Spot Colour Ink	14 standard colours, unlimited custom colours
22	Colour Printing	By using optional colour drum unit
23	Power Saver Mode	50 watts

No.	Specifications	Minimum Requirements
24	Standby	18 watts
25	Power Supply	220-240V, 50/60Hz, (using ZABS approved Plug)
26	Warranty	One (1) Year.

v) **Plotters**

No.	Specifications	Minimum Requirements
1	Print Technology	Thermal/Inkjet
2	Print Quality	1200x600dpi
3	Print Speed	A3 up to 4PPM Normal, B/A3 up to 6PPM (best),D/A1 up to, 11PPM (Normal),D/A1 up to 17 PPM (best)
4	Memory	128MB
5	Media Capacity	Roller feed/sheet feed with cutter
6	Media Size	A4,A3,A1,A0
7	Connectivity	USB 2.0, LAN 10/100/1000 Mbps
8	Hard Drive	20GB (Optional)
9	Power Supply	220-240V, 50/60 Hz, (using ZABS approved Plug)
10	Warranty	One (1) Year.

vi) **Dot Matrix Printer (Line Impact)**

No.	Specifications	Minimum Requirements
1	Print Technology	Line impact dot matrix
2	Printing Speed	Text - 1200 lines per minute(LPM) Graphics - 150 inches per minute (IPM)
3	Workload	345,000 pages per month
4	Acoustic Level	50 dB(A), per ISO 7779
5	Character Printing Modes	Constant density fonts; enhanced fonts
6	Character Sets	Over 1000 character sets
7	Fonts	Draft, Data Processing, Courier, Gothic, OCR A & B
8	Character Styles	Bold, italic, superscript, subscript, underline, overline, strike through
9	Graphics Resolution	Maximum: 240 x 288 (H x V)
10	Graphics Resolution	Tally® Industrial Graphics; QMS® CODE V™ Version 2; Printronix® PGL
11	Characters Per Inch	5, 6, 6.7, 7.5, 8.3, 8.6, 10, 12, 13.3, 15, 16.7, 17.1, 20 cpi
12	Lines Per Inch	1.5, 2, 3, 4, 5, 6, 8, 9, 10 & 12 (plus variable line spacing)
13	Print Media	Up to 6-part forms, forms thickness maximum .025", weight: 15-100 lb. stock
14	Paper Size	Width: 3" – 18.7", forms length: 1 – 255 lines
15	Paper Handling Features	Straight paper path, four tractor system, paper out and paper motion detection, forms position retained in non-volatile memory
16	Standard Emulations	ally® ANSI, GENICOM® ANSI, Printronix® P600 / P5000/ P6000, DEC® LG01, HP2564C, IBM® Proprinter, Epson® FX1180
17	Ribbon	Easy-load, Smart Ribbon® clean-hands cartridges up to 250 million characters – ribbon fault detection
18	Control Panel	Alphanumeric display (six languages) provides complete access to printer operation, configuration, calibration and test features. Includes lockout feature, 32 character 2 line display, save up to 10 unique configurations
19	Connectivity	USB 2.0, RS-232 Serial (up to 38.4K Baud) and IEEE 1284 Compliant Parallel



20	Power Supply	220-240V, 50/60 Hz, (using ZABS approved Plug)
21	Warranty	One (1) Year.

vii) **Dot Matrix Printer (Serial Impact)**

No.	Specifications	Minimum Requirements
1	Print Technology	9-pin, serial impact dot matrix
2	Print Direction	Text mode - Bidirectional Graphical mode Unidirectional (bidirectional via software)
3	Print Speed	<ul style="list-style-type: none"> <li>• Ultra Speed Draft: 680 cps (12 cpi); 566 cps (10cpi)</li> <li>• High Speed Draft: 559 cps (10 cpi)</li> <li>• Draft: 419 cps (10 cpi)</li> <li>• Near Letter Quality: 104 cps (10 cpi)</li> </ul>
4	Character Printing	Modes Constant density fonts; enhanced fonts
5	Characters Per Line	136 characters at 10 cpi
6	Line Spacing	6 lines per inch default
7	Character Sets	13 character tables, 13 international character sets
8	Paper Path	<ul style="list-style-type: none"> <li>• Manual insertion: Front or rear in, top out</li> <li>• Cut sheet feeder: Top in, top out</li> <li>• Tractor: Front, rear or bottom in, top out</li> <li>• Pull push tractor: Front or rear in, top out</li> </ul>
9	Labels	Minimum: 2.5" x 0.94"
10	Roll Paper	8.5" width
11	Paper Feed Speed	62 millisecond per 1/6", 5" per second continuous feed
12	Paper Handling - Forms	Continuous multipart, original plus 5 carbonless copies, 1 + 6 copies with pull tractor, maximum thickness .018"
13	Paper Handling - Envelopes	No. 6 envelopes: 6.5" x 3.6", No. 10 envelopes: 9.5" x 4.1"
14	Paper Sizes - Width	Single sheets: 3.9" to 16.5", Continuous: 4" to 16", Cut-sheet feeder: 7.2" to 16.5"

15	Paper Sizes - Length	Single sheets: 3.9" to 14.3", Continuous: 4" to 22", Cut-sheet feeder: 10.1" to 14"
16	Connectivity	Bidirectional Parallel (IEEE 1284 Nibble Mode supported), USB 2.0, Type-B slot for optional interface cards
17	Input Buffer	128 KB
18	Sound Level	55 dB(A) (ISO 7779 pattern)
19	Ribbon Life	12 million characters at 14 dots / character
20	Total Print Volume	52 million lines (not including print head)
21	Power Supply	220-240V, 50/60 Hz, (using ZABS approved plug)
22	Warranty	One (1) Year.

### c) MULTIFUNCTIONAL PHOTOCOPIER SECTION

#### i) Multifunctional Mono Photocopier (Small)

No.	Specifications	Minimum Requirements
1	Copying / Print Technology	Laser
2	Duplex Copying	supported
3	Input: Output Support	1-1, 1-2, 2-1, 2-2
4	Copying Speed	20 ppm
5	Copy Resolution	600 x 600 dpi
6	Memory	256 MB
7	Communication Mode	Duplex
8	Print management software	supported
9	Connectivity	USB 2.0, Parallel Port IEEE 1284;
10	Display/ Operation	Standard( Touch screen panel)Optional

No.	Specifications	Minimum Requirements
11	Trays	3 paper trays including the bypass tray; Automatic, Document Feeder
12	Media Type	Papers, envelops, transparencies
13	Document Feeder Capacity	50 sheets
14	Standard Tray	250 sheets
15	Optional Tray	250 sheets
16	Bypass Tray	50 sheets
17	Output Tray	250 sheets facedown
18	Auto Tray Switching	Capable
19	Media Sizes	Document glass and maximum paper size is legal (8.5 x 14 inches);
20	Monthly Duty Cycle	20,000 pages per month.
21	Warm Up Time	30 Seconds max
22	First Copy Out Time	8 seconds or less
23	Toner Type	Customer replaceable
24	Toner Control Method	Automatic Toner Density monitoring
25	Document Scanner	ADF (full duplex) Optional
26	Zoom Range	25-200% in 1% increments
27	Other Features	Secure print, Delay print, Watermark, Power save mode
28	Power Saver Mode	35 watts
29	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
30	Warranty	One (1) Year.

ii) **Multifunctional Mono Photocopier (Medium)**

No.	Specifications	Minimum Requirements
1.	Copying / Print Technology	Laser
2.	Duplex Copying/Printing	Supported
3.	Input: Output Support	1-1, 1-2, 2-1, 2-2.
4	Copying Speed	30 ppm
5.	Multiple Copying	Up to 999 copies
6.	Copy Resolution	up to 1200 x 1200dpi
7.	Memory	512MB
8.	Hard Disk	20GB (Optional)
9.	Communication Mode	Duplex
10.	Connectivity	USB 2.0 (USB cable included), LAN 10/100/1000 Mbps
11	Print Management Software	Supported
11.	Trays	2 paper trays
12.	Media Feed	Include Duplex unit, Automatic media feeder;
13.	Document Feeder Capacity	50 sheets
14.	Output Tray	250 Sheets
15.	Standard Tray	500 Sheets
16.	Other Features	Secure print, Delay print, Watermark
17.	By Pass Tray	50 Sheets
18.	Auto Tray Switching	Capable
19.	Media Sizes	Document glass and maximum paper size is legal (11 x 17 inches); Automatic media feed.
20.	Media Type	Paper, Envelopes, labels, cards
21.	Monthly Duty Cycle	100,000 ppm.
22.	Display/ Operation	Touch screen panel
23.	Warm Up Time	30 Seconds max

No.	Specifications	Minimum Requirements
24.	First Copy Out Time	5 seconds or less
25.	Toner Control Method	Automatic Toner Density monitoring
26.	Zoom Range	25-400% in 1% step
27.	Finishing Options	with optional multi-position stapling, hole punch, booklet creation.
28.	Document Scanner	ADF (full duplex)
29.	Power Saver Mode	35 watts
30.	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
31.	Warranty	One (1) Year.

iii) **Multifunctional Mono Photocopier (Heavy Duty)**

No.	Specifications	Minimum Requirements
1	Copying / Print Technology	Laser
2	Duplex Copying/Printing	Supported
3	Copying Speed	50 ppm
4	Copy Resolution	Up to 2400 x 600 dpi /4800 x 600 dpi interpolated output
5	Memory Installed	512MB
6	Hard Disk	20GB
7	Communication Mode	Duplex
8	Print Management Software	Supported
9	Connectivity	USB 2.0, Parallel Port IEEE 1284,(USB cable included); RJ45 port
10	Trays	3 paper trays.
11	Multiple Copying	Up to 9999 copies
12	Input: Output Support	1-1, 1-2, 2-1, 2-2.

No.	Specifications	Minimum Requirements
13	Document Feeder Capacity	100 sheets
14	Output Tray Capacity	500 Sheets
15	Standard Tray	550 sheets
16	Zoom Range	25-400% in 1% step
17	Bypass Tray	100 sheets
18	Auto Tray Switching	Capable
19	Media Sizes	Document glass and maximum paper size is legal (11x 17 inches); Automatic media feed
20	Media Type	Paper, Envelopes, labels, cards
21	Display /Operations	Touch screen
22	Monthly Duty Cycle	200,000 pages per month.
23	Warm Up Time	30 Seconds max
24	First Copy Out Time	4 seconds or less
25	Toner Control Method	Automatic Toner Density monitoring
26	Original document	Maximum A3
27	Finishing Options	Multi-position stapling, fit to new paper size, hole punch, booklet creation
28	Document Scanner	ADF (full duplex)
29	Power Saver Mode	35 watts
30	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
31	Warranty	One (1) Year.

iv) **Multifunctional Colour Photocopier (Heavy Duty)**

No.	Specifications	Minimum Requirements
1	Print Technology	Laser
2	Function	Print, Copy ,Scanner, Fax (Optional)
3	Type	Digital System
5	Monthly Duty Cycle	200,000 pages
6	Printing Speed	55 Ppm
7	Scanning Element	Flatbed With Moving CCD Array Image Sensor
8	Toner	Dry, Dual Component
9	Printing Process	Twin Laser Beam Scanning & Electro Photographic Printing
10	Warm Up Time	6 Minutes or less
11	Copy Resolution	600 X 600 Dpi
12	First Copy Out Colour	11 Seconds
13	Zooming Range	25 To 400% (25 To 200% Using DSPF) In 1% Increments
14	Continuous Copy	999
15	Imaging Modes	Text, Photo, Text / Photo, Auto, Manual, ECO
16	Enhanced Print Resolution	1,200 X 600 Dpi Equivalent With Smoothing
17	Connectivity	LAN 10/100/1000 Mbps, High Speed USB 2.0
18	Print Management Software	Supported
19	PDL Emulation	Standard: PCL 6/5e, Postscript3
20	Additional Fonts	80 Fonts For PCL, 136 Fonts For Ps3 Emulation
21	CPU	800 MHZ
22	Printer Drivers	Emulations PCL 6 , PCL 7
23	Network Protocol	TCP/IP, IPX/SPX, APPLE TALK
24	Scan Type	Flatbed , ADF
25	Scan Resolution	BW: 50 IPM (@200 DPI; Colour: 29 IPM (@200 DPI
26	Compatibility	TWAIN Compliant

No.	Specifications	Minimum Requirements
27	File Format	Tiff, Tiff-F, Tiff-FX, PDF, Linearised PDF
28	Compression Method	MH/MR/MMR/JBIG
29	Communication Protocol	Super G3/G3
30	Transmission Time	Less Than 3 Seconds
31	Modem Speed	33.6 Kbps With Auto Fall back
32	Group Dials	100 (Max. 500 Numbers Per Group)
33	Power Supply	220-240, 50/60Hz (using ZABS approved plug)
34	Warranty	One(1)Year

**d) MULTIFUNCTIONAL PRINTER SECTION**

**i) Multifunctional Printer (Small)**

No.	Specifications	Minimum Requirements
1	Print Technology	Laser
2	Function	Print, copy, scan
3	Multitasking Supported	Yes
4	Print Speed Black	18 ppm
5	First Page Out (Ready)	8.5 sec
6	Memory	64 MB
7	Monthly Duty Circle (A4)	3000 pages
8	Print Quality	600 x 600 dpi (1200 dpi effective)
9	Processor Speed	400 MHz
10	Connectivity	Hi-Speed USB 2.0 port, LAN 10/100/1000 Mbps, RJ-11 Telephone port, (Wi-Fi 802.11n optional)
11	Languages	PCL 5e, PCL6, Postscript



No.	Specifications	Minimum Requirements
12	Media Capacity	150 sheets
13	Media Type	Plain paper, envelopes, transparencies, cardstock, postcards, label
14	Media Sizes	A4, A5, A6, B5, B6, envelopes
15	Scanner Type	Flatbed, ADF
16	Scan File Format	JPEG, TIF, PDF, GIF, BMP
17	Scan Resolution, Optical	1200 dpi
18	Scan Speed (Normal, A4)	7.4 ppm (b&w), up to 3 ppm (colour)
19	Scan Size	Flatbed- 216 x 297 mm, ADF- 216 x 356 mm
20	ADF Capacity	35 sheets
21	Copier Speed	18 ppm
22	Copy Resolution	600 x 400 dpi
23	Copy Reduction /Enlargement	25 to 400%
24	Continuous Coping	99 copies
25	Fax Transmission Speed	33.6 kbps
24	Fax Resolution	300 x 300 dpi
25	Fax Memory	500 pages
26	Speed Dials	100 numbers
27	Power Supply	220-240V, 50/60Hz (using ZABS approved plug)
28	Warranty	One(1)Year

ii) **Multifunctional Printer (Medium)**

No.	Specifications	Minimum Requirements
1	Print Technology	Laser
2	Function	Print, copy, scan
3	Multitasking supported	Yes
4	Print technology	Monochrome laser
5	Print speed black	27 ppm
6	First page out (ready)	8.5 sec
7	Memory	128 MB
8	Print quality	600 x 600 dpi (1200 dpi effective)
9	Monthly duty circle (A4)	6000 pages
10	Processor speed	400 MHz
11	Connectivity	Hi-Speed USB 2.0 port, LAN 10/100/1000 Mbps, RJ-11 Telephone port, (Wi-Fi 802.11G-optional)
12	Languages	PCL 5e, PCL6, Postscript
13	Media capacity	150 sheets
14	Media Type	Plain paper, envelopes, transparencies, cardstock, postcards, label
15	Media sizes	A4, A5, A6, B5, B6, envelopes
16	Scanner type	Flatbed, ADF
17	Scan file format	JPEG, TIF, PDF, GIF, BMP
18	Scan resolution, optical	1200 dpi
19	Scan size	Flatbed- 216 x 297 mm, ADF- 216 x 356 mm
20	Scan speed (normal, A4)	7.4 ppm (black & white), up to 3 ppm (colour)
21	ADF Capacity	35 sheets
22	Copier speed	27 ppm
23	Copy reduction /enlargement	25 to 400%
24	continuous Coping	99 copies

No.	Specifications	Minimum Requirements
25	Fax transmission speed	33.6 kbps
26	Fax Resolution	300 x 300 dpi
27	Fax memory	500 pages
28	Speed dials	100 numbers
29	Power Supply	220-240V, 50/60Hz , (using ZABS approved plug)
30	Warranty	One(1) Year

### iii) Colour Multifunctional Printer (Small)

No.	Specifications	Minimum Requirements
1	Print Technology	Laser
2	Function	Print, copy, scan
3	Multitasking Supported	Yes
4	Speed	12 ppm colour / 15 ppm black and white
5	Duty Circle	30,000 pages / month
6	Paper Input	Main Tray: 150 sheets, ADF: 15 sheets
7	Paper Out	100 sheets,
8	First Page Out (Ready)	17 seconds colour / 14 seconds black and white
9	Memory	128 MB
10	Print Quality	1200 x 2400 dpi
11	Processor Speed	300 MHz
12	Connectivity	Hi-Speed USB 2.0 port, LAN 10/100/1000 Mbps, RJ11 Telephone port, (WiFi 802.11G optionl)
13	Print Features	Colour calibrated solid-colour simulations, Watermarks, Poster printing, N-up, Custom page sizes, Fit to page, Scaling, Built-in support links,Run Black, Black and white only print mode, Draft mode, Collation, Skip Blank Pages

No.	Specifications	Minimum Requirements
14	Scanning Format	1200 x 1200 dpi resolution, 24-bit colour / 8-bit greyscale, PDF/JPEG/TIFF
15	First Page Out (Ready)	As fast as 37 seconds colour / 20 seconds black
16	Copy Resolution	600 x 600 dpi
17	Copy Features	Collation, Reduce/enlarge, Automatic background suppression, Darkness control, Photo mode, N-up, ID Card Copy
18	Fax Features	33.6 Kbps with MH/MR/MMR/JBIG compression, Auto redial, Auto reduction, Address book (up to 8 one-touch dials, up to 99 address entries), Delay send, Remote receive (with external phone), Junk fax barrier, Last number redial, Memory receive, Polling
19	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
20	Warranty	One(1)Year

iv) **Colour Multifunction Printer (Medium)**

No.	Specifications	Minimum Requirements
1	Printer Technology	Laser
2	Functions	Print, Copier, Scan, Fax (All-In-One)
3	Multitasking	Yes
4	Duplex Print Options	Automatic (standard)
5	Speed	Black: 27 ppm; Colour: 27 ppm; Duplex: 25 ipm
6	Processor Speed	800 MHz
7	Memory	256 MB
8	Media Type	Paper (bond, brochure, colored, glossy, letterhead, photo, plain, preprinted, prepunched, recycled, rough), postcards, transparencies, labels, envelopes
9	Print Languages	PCL 6, PCL 5c, postscript level 3 emulation, PDF (v 1.7),

No.	Specifications	Minimum Requirements
10	Print Quality	Black and Colour (Best): Up to 600 x 600 dpi
11	Number Of Cartridges	4 (black, cyan, magenta, yellow)
12	Duty Circle (Monthly)	50,000 pages
13	Colour Scanning	Yes
14	Scanner Type	Flatbed ,ADF
15	Duplex Scanning	Yes, dual head duplexing, colour scan
16	Scanner Optical Resolution:	ADF- 300 x 300 dpi; Flatbed - 1200 x 1200 dpi
17	Scan Speed	A4: Up to 20 ipm (b&w), up to 14 ipm (color)
18	Scanning Format	PDF, searchable PDF, JPG, RTF, TXT, BMP, PNG, TIFF
19	Copy Quality	Colour and Black: Up to 300 x 300 dpi
20	Max. Number Of Copies	99 copies
21	Copier Resize /Enlarge	25 to 400%
	<b>Fax Specification</b>	<b>Optional</b>
22.	Fax Speed	33.6 kbps; Letter: 3 sec per page
23.	Fax Memory	250 pages
24.	Fax Quality	300 x 300 dpi
25.	Connectivity	1 Hi-Speed USB 2.0, LAN 10/100/1000 Mbps, (Wi-Fi 802.11G optional)
26.	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
27.	Warranty	One (1) Year

**e) MULTIFUNCTIONAL PROJECTOR SECTION**

**i) Portable LCD Projector**

No.	Specifications	Minimum Requirements
1	Display Technology	3LCD
2	Number of colours	16.7 Million
3	Projector Brightness	At least 3200 ANSI Lumens
4	Resolution	At least 1024 x 800 Pixels
5	Supported Resolution	Up to SXGA
6	Contrast Ratio	500:1
7	Projection Lamp	170W UHE-E-TORL
8	Zoom / Focus	Digital zoom
9	Throw ratio	1.45-1.96:1
10	Aspect ratio	4:3
11	Locking Type	Adjustable Tripod stand screen at least (2032mm*1524mm)
12	Accessories	Premium carrying case, Installation CDs & manuals
13	Video input	VGA,HDMI,AV,USB 2.0 TYPE A USB TYPE B,WIRELESS LAN 802.11 B/G/N.
14	Features	Built in blue ray player, projector tilt, and portable.
15	Lamp life	3000 hrs.
16	Power	220-240VAC 50/60HZ, (using ZABS approved plug).
17	Warranty	One (1) Year

ii) **Wall Mounted LCD Projector**

No.	Specifications	Minimum Requirements
1	Display Technology	Poly-silicon TFT x 3 with micro lens array
2	Number of Colours	16.7 Million
3	Projector Brightness	3200 ANSI Lumens
4	Resolution	XVGA (1024 x 800) Pixels
5	Contrast Ratio	500:1
6	Lamp	271 watts, 1500 hours
7	Zoom / Focus	Digital zoom
8	Aspect Ratio	4:3
9	Accessories	Lens cap, carrying case, computer VGA Cable, Product documentation set, Installation CDs & manuals, HDMI cable (ceiling pipes and ceiling mount optional)
10	Audio	2x2.5 watts stereo
11	Input Signal Format	Video: NTSC, SECAM, SVGA, RGB: VGA, SVGA and XVGA
12	Video Signals	NTSC, PAL, SECAM
13	Lens	Powered zoom and focus
14	Output Terminal	1x RGB, 1 x Audio, PC control, 1x S-Video
15	Remote Control	Wireless Remote Control for projector with pointer, source selection power, size, mouse function, volume, pre-set
16	Connectivity	802.11g wireless, 100/1000 base-TX, USB TYPE A, USB TYPE B, PCMCIA, HDMI in, VGA in.
17	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug).
18	Warranty	One (1) Year

**f) DIGITAL CAMERA SECTION**

**i) Compact Digital Camera**

No.	Specifications	Minimum Requirements
1	Resolution	24.1 Megapixels
2	Sensor Type	CCD
3	Pixel Density	24 MP/cm <sup>2</sup>
4	Still Image Format	JPEG
5	Image Stabilization	Optical/lens
6	Image Resolution	4320 x 3240
7	Minimum Shutter Speed	30 sec
8	Video Capture Resolution	(1280 x 720; 640 x 480 ; 320 x 240) dpi
9	Maximum Frame Rate	30 fps
10	Digital Video Format	MOV, AVI, MPEG-4,MJPEG
11	Optical Zoom	10 x
12	Minimum Wide Angle Zoom	25mm
13	View Finder	LCD
14	Display Resolution	460 000
15	Light Sensitivity	3200 ISO
16	Built In Memory	40MB
17	Expandable Memory Type:	MS Duo / MS PRO Duo / SD / SDHC/SDXC/MMC
18	Exposure Modes	Programmable, automatic
19	Connector Type	USB 2.0, Composite video/audio
20	Battery Life	8 hours
21	Operating System Compatibility	Linux, windows 10 supported
22	Face Detection	Standard
23	Shooting Modes	auto, portrait, night snapshot, indoor and low light,



No.	Specifications	Minimum Requirements
24	Self – Timer	2 Sec/10 Sec
25	Flash Type	Built-in;
26	Flash Mode	Flash On/off, red eye reducer, auto
27	Sound	Microphone and speakers built in
28	Accessories	Rechargeable Battery, Battery Charger, Remote Control, USB Cable, Audio/Video Cable, case and strap
29	Lens Type	Built in
30	White Balance	Custom, Automatic, Presets
31	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug).
32	Warranty	One (1) Year

ii) **Standard User Digital Camcorder**

No.	Specifications	Minimum Requirements
1	Image sensor Technology	CMOS/CCD or Equivalent
2	Image Sensor Size	1/8 inch
3	Minimum Filter Diameter	40 mm
4	Total Minimum Pixels	10 MP
5	Minimum Digital Zoom	200 X
6	Optical Zoom	12 X
7	Min Focal Length	40 mm (35 mm equivalent)
8	Minimum Shutter Speed	1/30 (Auto slow shutter On); 1/60(Auto slow shutter Off)
9	Image Stabilization	Optical
10	Audio Support	Stereo
11	Video Capture Format	MPEG-4, H.264/AVC

No.	Specifications	Minimum Requirements
12	Video Capture Resolution	(1920 x 1080) dpi
13	Display Type	LCD
14	Display Resolution	200,000 pixels
15	Video Broadcast Standard	NTSC
16	Recording Media	Flash Media, SD Card
17	Flash	Accessory Shoe, Red-Eye Reduction
18	Still Camera Resolution	10MP
19	Still Image Format	JPEG
20	White Balance	Auto, outdoor, indoor, daylight, sunny, shade, cloudy, manual
21	Exposure Settings	Auto Exposure, Manual Exposure
22	Internal Memory Type	Flash Memory
23	Included Components	Battery Recharger, Cables - A/V (RCA Composite), Cables - Component Video, Cables - USB, Docking /Cradle Stand, Remote, Carrying case
24	Interface Connection	A/V Output, Component Video, LANC Terminal, Microphone, Proprietary, S-Video, USB - Universal Serial Bus 3.0
25	Additional Features	Backlight Compensation, Built-in Light, Built-in Speaker, Fader Function, PictBridge Support, Touch Screen, Viewfinder Power
26	Focus Features	Auto Focus, Face Recognition Auto Focus, Manual Focus, Spot Focus
27	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
28	Battery life	8 hours
29	Focus	Auto/Manual
30	Iris	Auto/Manual
31	Warranty	One (1) Year

**g) SCANNER SECTION**

**i) Barcode Scanners**

<b>No.</b>	<b>Specifications</b>	<b>Minimum Requirements</b>
1	Scan Technology	2D Array Imaging technology (1D,2D,EAS &PDF)
2	CPU Speed	100 scans per second
3	Scan Type	Omni-directional
4	Data Rates	54 Mbps per 802.1 or 11 Mbps per 802.11b
5	Interfaces Type	Keyboard Wedge, USB 2.0, Bluetooth, IBM 468X/9X, Synapse and Undecoded
6	Keyboard Interface	IBM PC/XT/AT, PS-55
7	Reading Width	4"
8	Operating System	Microsoft Windows/ Mac
9	Memory	64 MB RAM
10	Reading Depth/Scan Range	0.79" to 5"
11	Symbology Supported	Code 39/Full ASCII, Coda bar, Code 11, Code 32,,Industrial 2 of 5, Interleave 2 of 5, Matrix 2 of 5, Code,93, Code 128, EAN 128, MSI, EAN 8&13, UPCA & E, Plessey, MSI, ISBN, ISSN
12	Standards Compliant	IEEE 802.11g
13	Security	WEP, WPA2
14	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug).
15	Warranty	One (1) Year.

ii) **Scanner (Standard)**

No.	Specifications	Minimum Requirements
1	Scan Technology	48 bit colour depth, 256 grayscale
2	Recommended Daily Out Put	500 pages per day
3	Throughput Speeds	At least 8 pages per minute/4 images per minute
4	Scan Resolution	2400 x 2400 dpi,
5	Scan Speed Preview Mode	7 sec
6	Optical Resolution	6400 dpi
7	Maximum Documents Size	8.5 in x 11in
8	Minimum Document Size	3.5 in x 5 in
9	ADF	50 sheets of 60/m2
10	Enlargement Range	10 – 2000% in 1% increment
11	Connectivity	Hi-Speed USB - compatible with USB 2.0 specifications, LAN 10/100/1000Mbps , (WIFI 802.11g optional)
12	Image Features	Perfect page scanning, thresholding, adaptive threshold processing, auto copy, relative cropping, aggressive cropping, electronic colour drop out dual stream scanning ,interactive colour, brightness and contrast adjustment
13	Media Type	Paper (banner, inkjet, photo, plain), envelopes, labels, cards (greeting, index), 3-D objects, 35 mm slides and negatives (using transparent materials adapter), iron-on transfers
14	Scan File Formatter	Windows: BMP, JPEG, GIF, TIFF, TIFF compressed, PNG, PCX, Flashpix (FPX), PDF, PDF searchable, RTF, TXT; Macintosh: TIFF, PICT, JPEG,GIF, Plain Text, PDF, HTML, Rich Text
15	Software	Windows 10 supported, Mac OS X v10.3.9, 10.4.11, 10.5, 10.6
16	Power Supply	220v-240V, 50/60HZ, (using ZABS approved plug).
17	Warranty	One (1) Year

iii) **Scanner (Heavy Duty)**

No.	Specifications	Minimum Requirements
1	Scanning technology	Single CCD; i1220 Plus: Dual CCD; Grayscale output bit depth is 256 levels (8 bits); Colour capture bit depth is 48 bits (16 x 3); Colour output bit depth is 24 bits (8 x 3)
2	Recommended daily output	Up to 5000 pages per day
3	Throughput speeds	Bitonal/grayscale: Up to 45 pages per minute at 200 dpi Colour: Up to 30 pages per minute at 200 dpi and 300 dpi
4	Output resolution	Output resolution 75, 100, 150, 200, 240, 300, 400, 600 and 1200 dpi
5	Optical resolution	600 dpi (1200 dpi A4 flatbed accessory)
6	Min./Max. documents size	A3, A4, A5, B5, A8 (15 mm x 863 mm (8.5 in. x 34 in.)/50 mm x 63.5 mm (2 in. x 2.5 in.)
7	Illumination	LED, Xenon, Dual fluorescent (cold cathode)
8	ADF	Up to 200 sheets of 75 g/m <sup>2</sup> (20 lb.) paper. Handles small documents, such as ID cards, embossed cards and insurance cards.
9	Multi feed Detection	With ultrasonic technology
10	Connectivity	Hi-Speed USB - compatible with USB 2.0 specifications, LAN 10/100/1000Mbps, (WIFI 802.11g optional)
11	Imagines features	Perfect page scanning, thresholding, adaptive threshold processing, autcrop, relative cropping, aggressive cropping, electronic colour drop out dual stream scanning ,interactive colour, brightness and contrast adjustment
12	File formatter output	Multiple Page TIFF,JPEG,RTF,PDF
13	Software	Windows 10 supported
14	Power supply	220v-240V, 50/60HZ, (using ZABS approved plug).
15	Warranty	One (1) Year.

## **h) TELEVISION SECTION**

### **i) Television**

<b>No.</b>	<b>Specifications</b>	<b>Minimum Requirements</b>
1	Screen Size	32”
2	Connectivity	USB 2.0, HDMI, A/V , Component Video in (Y,PB,PR), SVideo,
3	Media Capacity	Intelligent sensor
4	Screen Format	LED, OLED, 4K,QLED or equivalent
5	Display Resolution	1080 pixels
6	System	DTV Tuner/Digital Cable Tuner
7	Aspect Ratio	16:9
8	Contrast Ratio (DCR)	100,000:1
9	Remote Control	Standard Remote
10	Audio	5w + 5w output, Dolby, SRS Theatre Sound HD
11	HD	Full HD 1080p
12	Other Features	OSD Language: English and On/Off Timer
13	Broadcasting System	ATSC/NTSC/Clear QAM
14	Picture Mode	7 Modes (Intelligent Sensor/Vivid/Standard/Cinema/ Game/ISF Expert 1/ISF Expert 2)
15	Power Supply	220-240 v 50/60Hz, 13A, Under 0.5watts standby power, (using ZABS approved plug)
16	Warranty	One (1) Year

ii) **Smart Television**

No.	Specifications	Minimum Requirements
1	Screen Size	32 inch
2	CPU / Processor	Quad Core, Mali G51 MP3
3	Screen Format	LED, OLED, 4K,QLED or equivalent
4	RAM	3GB
5	Smart TV	Web Browser, Android and Video conferencing supported.
6	Connectivity	USB 2.0, HDMI, A/V , Component Video in (Y,PB,PR), SVideo, Remote Controlled, Wireless 802.11g, Ethernet, 3.0 Bluetooth
7	Video Features	H.265, H.264, MPEG2/4, VC1, VP8/9/10
8	Audio Features	DTS-HD, Dolby Atmos, Dolby Digital Plus
9	Connectivity Options	3 HDMI ports
10	Audio	5w + 5w output, Dolby, SRS Theatre Sound HD
11	Picture Mode	7 Modes (Intelligent Sensor/Vivid/Standard/Cinema/ Game/ISF Expert 1/ISF Expert 2)
12	Power Supply	220-240 v 50/60Hz, 13A, Under 0.5watts standby power, (using ZABS approved plug)
13	Warranty	One (1) Year

## i) PBX SECTION

### i) PBX Hybrid

No.	Specifications	Minimum Requirements
1	Type	Hybrid (Legacy and IP)
2	Trunk Capacity	3 lines (2-Trunks, 1- SIM Card)
3	Extension Capacity	8 ports
4	Intercom Path	4 Speech path
5	Concurrent calls	15 calls
6	Conference attendees	15
7	Auxiliary Ports	1 Hi-Speed USB 2.0, 1 Fast Ethernet
8	Expansion Slots	Expandable
9	Dialling Method-External	Tone (GTMF)/Pulse (10PPS, 20PPS)
10	Dialling Method-Internal	Tone (GTMF)/Pulse (10PPS, 20PPS)
11	Dialling Convention	Pulse to Tone
12	Features	Voice over IP (VoIP), Voice messaging, Automatic routing selection, PIN set (Security), Call forwarding, Call Transfer
13	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
14	Warranty	One (1) Year



## j) UPS SECTION

### i) UPS (Small)

No.	Specifications	Minimum Requirements
1	Power Rating	1000VA , 700 Watts
2	Wave Form	True Sine Wave
3	Distortion	Less than 5%
4	Back-Up Time	15 Mins
5	Battery Type	Replaceable maintenance free in built battery System, Lithium battery type
6	No. Of Outlet Sockets	04 Minimum
7	Switch Time	10 milliseconds
8	Protection	Overload, Over/Under Voltage, Battery Low
9	Surge Energy Rating	340 joules
10	Noise	Noise less than 55 DBA
11	Indicators	<b>Visuals:</b> Line input, Overload, Inverter on/off, Battery low, <b>Audio :</b> Battery in use, Overload, Battery Low
12	Connectivity	USB 2.0, Smart Slot
13	Power Supply	220-240V, 50/60Hz, (using ZABS approved plug)
14	Warranty	One (1) Year

ii) **UPS (Medium)**

No.	Specifications	Minimum Requirements
1	Power Rating	2000 VA, 1400 Watts
2	Wave Form	True Sine Wave
3	Distortion	Less than 5%
4	Back-Up Time	25 Minutes
5	Battery Type	Replaceable maintenance free in built Lead/Lithium battery system
6	No Of Sockets	08 Minimum
7	Protection	Overload, Over/Under Voltage, Battery Low
8	Surge Energy Rating	340 joules
9	Noise	Noise less than 45 DBA
10	Data Line Protection	RJ-11 Modem/Fax/DSL Protection (2 Wire Single line), RJ-45 10/100 Base-T Ethernet protection
11	Indicators	<b>Visuals:</b> Line input, Overload, Inverter on/off, Battery low
12		<b>Audio :</b> Battery in use, Overload, Battery Low
13	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
14	Warranty	One (1) Year

iii) UPS (Heavy Duty)

No.	Specifications	Minimum Requirements
1	Power Rating	6000 VA , 4800 Watts
2	Wave Form	True Sine Wave
3	Distortion	Less than 5%
4	Back-Up Time	30 minutes
5	Battery Type	Replaceable maintenance free Lithium-acid batteries (leak proof)
6	No Of Sockets	08 Minimum
7	Protection	Overload, Over/Under Voltage, Battery Low
8	Surge Energy Rating	555 joules
9	Noise	Noise less than 45 DBA
10 11	Data Line Protection	RJ-11 Modem/Fax/DSL Protection (2 Wire Single line), RJ-45 10/100 Base-T Ethernet protection
12	Indicators	<b>Visuals:</b> Line input, Overload, Inverter on/off, Battery low <b>Audio :</b> Battery in use, Overload, Battery Low
13	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
14	Warranty	One (1) Year

## k) Other Office Equipment

### i) Manual Typewriter

No.	Specifications	Minimum Requirements
1.	Manual Typewriter	Yes
2.	Carriage Size	15”
3.	3 Ribbon Selector	Yes
4.	Tabulator Setting/Clear	Yes
5.	Line Spacing	-1/1.5
6.	Material Type	Metal
7.	Font Type	Elite or Pica typestyle
8.	Keyboard	English Standard
9.	Warranty	One (1) year.

### ii) Electronic Typewriter

No.	Specifications	Minimum Requirements
1	Pitch	10,12 or 15 character per inch
2	Line Space	1, 1.5
3	Paper Capacity	15”
4	Writing Line	1.5”
5	Keyboard	English Standard
6	Print Speed	20CPS bi-direction
7	Display	Yes
8	Spell Check	Yes
9	Document Storage	25 pages
10	Power Supply	220-240V, 50/60 Hz,50watts (using ZABS approved plug)
11	Warranty	One (1) year.

### iii) Standard Shredder

No.	Specifications	Minimum Requirements
1	Throat	10mm
2	Shred Capacity	10-20 Sheet
3	Speed	20FPM
4	Waste Bin Capacity	20 Litres
5	Features	Auto start/stop, reverse, thermal protection for motor
6	Weight	10 kg
7	Working Cycle On/Off	7mins on/90mins off
8	Power Supply	220V-240V, 50/60 Hz 170 watts , (using ZABS approved plug)
9	Warranty	One (1) Year

### iv) Heavy Duty Shredder

No.	Specifications	Minimum Requirements
1	Throat	20mm
2	Shredding Capacity	30-35 sheets
3	Waste Bin Capacity	40 Litres
4	Weight	19.1kg
5	Power Supply	220V-240V, 50/60 Hz, 270 watts (using ZABS approved plug)
6	Shred Size	4x30 mm
7	Working Cycle On/Off	12mins on/40mins off
8	Warranty	One (1) Year

v) **Thermal Binding Machine**

No.	Specifications	Minimum Requirements
1.	Binding Capacity	300 sheets
2.	Heat Up Time	4 minute
3	Binding Cycle	Fixed 30 seconds interval
4.	Binding Element Selector	Yes
5.	Auto Shut Off	Yes
6.	Paper Size	A4 &A5
7.	Automatic Power Save	Turn off if not in use for 5 minutes
8.	Cooling	Built in
9.	Ready Light Indicator	Yes
10.	Safety Feature	Heat shield
11.	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
12.	Warranty	One (1) year.

vi) **Electric Binding Machine**

No.	Specifications	Minimum Requirements
1.	Material Type	Plastic/Metal
2.	Binding Capacity	300 sheets
3.	Punch Capacity	15 Sheets
4.	Binding Type	Plastic comb
5.	Electric Punch	Yes
6.	Vertical Punching	Yes
7.	Auto Shut Off	Yes

8.	Paper Size	A4
9.	Depth Margin Control	Yes
10.	Manual Adjustments	Yes
11.	Comb Size	8
12.	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
13.	Warranty	One (1) year.

**vii) Manual Binding Machine**

No.	Specifications	Minimum Requirements
1.	Material Type	Plastic/ Metal
2.	Binding Type	Plastic comb
3.	Binding Element Selector	Yes
4.	Punching Type	Manual
5.	Punching Capacity	15 Sheets
6.	Vertical Punching	Yes
7.	Binding Capacity	300 sheets
8.	Removable Binding System	Yes
9.	Warranty	One (1) year.

**viii) Cheque Signer (Cheque Franking Machine)**

No.	Specifications	Minimum Requirements
1	Security Level	3 high security locks for controlled entry
2	Security Type	Duo lock system
3	Purpose	For single sheet and manual cheques
4	Counter	Non-resettable audit counter, Batch counts
5	Perforated Signature	Option
6	Fixed Speed	65 pieces per minute
7	Paper Size	Envelope
8	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
9	Warranty	One (1) Year.

**ix) Note Counting Machine (Money Counter)**

No.	Specifications	Minimum Requirements
1	Note Size Range	Up to 190 x 85mm
2	Speed	1000 notes per minute
3	UV Detection	Yes
4	Watermark/Fake Note Detection	Yes
5	Automatic Start / Stop	Yes
6	Manual	Yes
7	Fast And Accurate Counting	Yes
8	Batching, Adding Mode	0 to 999
9	Digital Display	3 digits (min. Display 999)
10	Whopper Capacity	200
11	Stacker Capacity	200
12	Power Supply	220-240V, 50/60 Hz, (using ZABS approved plug)
13	Warranty	One (1) year.



**x) Laminating Machine (Small)**

<b>No.</b>	<b>Specifications</b>	<b>Minimum Requirements</b>
1	Feed Width (mm)	238 mm
2	Roller Type	Silicon
3	No. of Rollers	4
4	Warm uptime	1 Minute
5	Laminating Thickness of pouches	75-150 microns
6	Laminating Speed	200mm/minute
7	Laminating film	Thermal, Bopp, Pet
8	Laminating Temperature	0-180 Degree Celsius
9	Reverse/ Anti-Jam mechanism	Yes
10	Touch Panel Operation	On/Off switch
11	Power & Ready indicator	Yes
12	Weight	5 Kg
13	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
14	Warranty	One (1) year.

**xi) Laminating Machine (Heavy Duty)**

No.	Specifications	Minimum Requirements
1	Feed Width (mm)	238 mm
2	Roller Type	Silicon
3	No. of Rollers	6
4	Warm uptime	3-5 Minute
5	Laminating Thickness of pouches	75-150 microns
6	Laminating Speed	600mm/minute
7	Handling Capacity	180 A4 pouches per hour
8	Laminating film	Thermal, Bopp, Pet
9	Laminating Temperature	100-180 Degree Celsius
10	Reverse/ Anti-Jam mechanism	Yes
11	Touch Panel Operation	On/Off switch
12	Laminating Type	Hot & Cold
13	Power & Ready indicator	Yes
14	Power Supply	220V-240V, 50/60 Hz, (using ZABS approved plug)
15	Weight	180 kg
16	Warranty	One (1) year.