

**Technical Specification Document**  
**For the Supply of 100 Personal Computers (PCs)**  
**Including Accessories, Peripherals, and all Necessary Upgrade Components**

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## 1. Purpose

To supply internationally branded personal computers for the Public Establishment for Transmission and Distribution of Electricity, in accordance with the technical specifications stated in the compliance tables.

## 2. General Conditions

- All specification tables must be filled, signed, and stamped.
- The bidder is required to respond in detail to all items listed in the compliance tables.
- In all tables, the bidder may write the word "Compliant" in the "Offered Description" column if the proposed specifications match specification exactly.*(It should be noted that, leaving the column blank will be considered as noncompliance).*
- The technical offer must highlight any additional core features that enhance the performance of the equipment and are not listed in the compliance tables.
- All submitted equipment must fully comply with the minimum technical specifications stated in the compliance tables; otherwise, the offer will be rejected.
- An electronic copy of the technical offer in (Word format) must be submitted on a CD or flash drive, identical to the paper version, and include all relevant catalogs for the proposed equipment.  
*(This is a mandatory requirement).*
- In case of any technical discrepancy in the tender document, the more precise *specification shall prevail.*
- Equipment must be delivered exactly as specified. If not feasible, superior specifications may be accepted at no additional cost, subject to prior approval by the relevant authority.
- The manufacturer must have an official website displaying the proposed equipment model . The website address and a direct model link (URL) must be provided.
- The bidder must guarantee the equipment for a full calendar year. The warranty shall start from the date of preliminary acceptance.
- The technical evaluation committee reserves the right to request clarifications or ask any technical questions, the bidder must provide written documentation for all responses, and such clarifications will form an integral part of the contract.
- The offered equipment must be manufactured by a reputable company with expertise and credibility in producing such devices.*( The brand and model must be clearly stated for all offered equipment).*
- All offered equipment and components must be brand new, not refurbished or used

- Any repaired or replaced components under warranty must be granted a new one-year warranty, starting from the repair or replacement date. The bidder must also commit to replace any defective devices resulting from manufacturing issues . The bidder is required to provide a written statement confirming this.
- The bidder must provide a sample for personal computer with a monitor identical to those proposed in the offer.
  - This sample shall be tested and evaluated by the Establishment prior to the opening of financial offers.
  - It should be noted that :Non-compliant samples will lead to rejection of the bid.
- These general conditions are considered as integral part of the technical specifications.

### 3. Minimum Technical Specifications for Personal Computers

The following table outlines the minimum required specifications for the personal computers. The bidder must specify the actual offered specifications and any additional technical features.

Item Description	Minimum Required Specifications	Offered Specifications
<b>Manufacturer</b>	Well-known international brand with a strong reputation and high reliability. Examples: Dell, Lenovo, HP, Acer, Asus, MSI.	
<b>Model</b>	<ul style="list-style-type: none"><li>• Standard product of the brand. All components must be manufactured by or for the brand owner.</li><li>• All offered equipment and components must be brand new, unused, and not refurbished.</li></ul> Compliance with this specification is essential for the consideration of the offer.	
<b>Year of Manufacture</b>	Manufactured in 2023 or newer	
<b>Country of Origin</b>	Must be clearly stated by the bidder.	
<b>Processor</b>	<ul style="list-style-type: none"><li>○ Type: Intel Core i5.</li><li>○ Minimum Cores 6.</li><li>○ Base Frequency <math>\geq</math> 2.5 GHz.</li><li>○ Generation: 12th Gen or newer</li><li>○ Cache: <math>\geq</math> 18 MB.</li><li>○ Supports Virtualization Technology (VT-x)</li><li>○ Supports Intel® Virtualization Technology for Directed I/O (VT-d)</li></ul>	

Item Description	Minimum Required Specifications	Offered Specifications
<b>Motherboard</b>	<ul style="list-style-type: none"> <li>○ Advanced, Modern motherboard.</li> <li>○ The motherboard must be compatible with Intel Core i5 CPUs. Must include at least one graphics card slot.</li> <li>○ Must include at least one PCIe slot.</li> <li>○ The offered motherboard must be of the same brand as the PC.</li> </ul>	
<b>Expansion slots</b>	<ul style="list-style-type: none"> <li>○ Expansion Slots: PCI, PCI Express.</li> <li>○ Quantity to be specified.</li> </ul>	
<b>RAM</b>	<ul style="list-style-type: none"> <li>○ At least 8 GB DDR4 (single module).</li> <li>○ The bidder must specify the memory frequency.</li> <li>○ The optimal frequency compatible with the motherboard is preferred.</li> <li>○ The number of memory expansion slots and the maximum supported capacity must also be stated.</li> </ul>	
<b>Optical Drive</b>	DVD RW ( Not mandatory)	
<b>Storage Drive (SSD)</b>	<ul style="list-style-type: none"> <li>○ Type: NVMe SSD</li> <li>○ Capacity: ≥ 1 TB.</li> <li>○ Interface: PCIe Gen 4.0 or 5.0 (Cooling: Must include Heat sinks).</li> <li>○ NAND Type: Preferred MLC or TLC</li> </ul>	
<b>Network Interface Card</b>	<ul style="list-style-type: none"> <li>○ Built-in Ethernet RJ-45 network port.</li> </ul>	
<b>Graphics card</b>	<ul style="list-style-type: none"> <li>○ The motherboard must include at least one HDMI port.</li> <li>○ If a discrete graphics card is included, must be stated by the bidder.</li> </ul>	
<b>Monitor</b>	<ul style="list-style-type: none"> <li>○ same brand as the PC.</li> <li>○ Minimum size: 19 inches at least.</li> <li>○ Display Technology: LED-backlit.</li> <li>○ Resolution: at least Full HD.</li> <li>○ Must include HDMI port.</li> </ul>	

Item Description	Minimum Required Specifications	Offered Specifications
<b>Keyboard</b>	<ul style="list-style-type: none"> <li>○ Bilingual Arabic-English Keyboard Layout.</li> <li>○ Laser-etched Characters.</li> <li>○ Same brand as PC.</li> </ul>	
<b>Mouse</b>	<ul style="list-style-type: none"> <li>○ Optical Mouse with Scroll Wheel.</li> <li>○ Same brand as PC.</li> </ul>	
<b>Sound Card</b>	<ul style="list-style-type: none"> <li>○ Integrated HD Audio Chipset.</li> </ul>	
<b>Ports</b>	<ul style="list-style-type: none"> <li>○ Minimum 6 external USB ports, including at least 2 USB 3.0.</li> <li>○ 1 HDMI port .(mandatory)</li> <li>○ 1 VGA port. (optional)</li> <li>○ 1 RJ-45 Ethernet port.</li> <li>○ Audio line-in port (microphone/stereo input).</li> <li>○ Audio line-out port (headphone/speaker output).</li> <li>○ Any additional ports and I/O interfaces should be listed. A higher number of available ports is preferred.</li> </ul>	
<b>Operating System OS</b>	<ul style="list-style-type: none"> <li>○ The offered pc must be fully compatible with (Windows 10/11 or Linux)operating systems.</li> <li>○ Installation is not mandatory by bidder.</li> </ul>	
<b>Power Supply Unit (PSU)</b>	<ul style="list-style-type: none"> <li>○ Equipped with a Certified high-efficiency power supply unit (PSU) of sufficient capacity to support all components of the system, with consideration for future expansion.</li> <li>○ Specifications must be stated.</li> </ul>	
<b>Accessories</b>	<ul style="list-style-type: none"> <li>○ Ergonomic mouse pad with wrist rest.</li> </ul>	
	<ul style="list-style-type: none"> <li>○ High-quality multi-socket power strip compatible with computer cables(Minimum 4 Outlets) .</li> </ul>	
<b>Form Factor</b>	Tower.	
<b>Additional Features</b>	Any additional features must be clearly stated by the bidder.	

#### 4. Minimum Specifications for Upgrade Components to Enhance Performance of Personal Computers

*The table below outlines the Minimum required specifications for upgrade components to enhance the performance of 10 personal computers.*

*The bidder must specify the actual offered specifications and any additional technical features.*

Item	Minimum Required Specifications	Offered Specifications
<b>Additional discrete Graphics Card</b>	<ul style="list-style-type: none"><li>○ At least 4 GB, compatible with motherboard.</li></ul>	
<b>Additional RAM module</b>	<ul style="list-style-type: none"><li>○ At least 8 GB DDR4.</li></ul>	
<ul style="list-style-type: none"><li>○ <b>Additional 240W Power Supply Unit</b></li></ul>	<ul style="list-style-type: none"><li>○ Same brand as main PC.</li><li>○ Minimum power capacity of 240 W.</li><li>○ 220 v</li></ul>	

### 5. Bill of Quantities and Prices

The bidder must clearly state the unit price and total price for each offered item, as shown in The bill of quantities shown below:

Item No.	Item Description	Quantity	Unit Price	Total Price
<b>1</b>	Personal Computer – Intel Core i5	100 units		
<b>2</b>	Additional Discrete graphics card with 4 GB	10 units		
<b>3</b>	Additional 8 GB RAM module	10 units		
<b>4</b>	Additional power supply unit (PSU) with a capacity of 240 W	10 units		