Week 4 – Bench Safety & Parts ID Worksheet

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Part A: ESD & Safety

1. *List three Electrostatic Discharge (ESD) precautions you must take at the workbench:*

- *Wear an anti-static wrist strap and ground yourself.*
- *Work on an anti-static mat or surface.*
- *Handle components by the edges, avoiding touching the pins or circuitry.*

Part B: PSU Connectors

Match the connector type with its description:

- ***24-pin ATX →*** *Main motherboard power connector*
- ***8-pin EPS (CPU) →*** *Provides power to the CPU socket*
- ***6/8-pin PCIe →*** *Powers dedicated graphics cards*
- ***SATA Power →*** *Powers SSDs, HDDs, and optical drives*
- ***Molex →*** *Legacy connector for older drives, fans, and accessories*

Part C: Memory & Storage

Identify by visual or description:

- ***DDR3 vs DDR4 vs DDR5 →*** *Differ by notch position on the module and labeling; DDR3 notch is closer to the center, DDR4 notch slightly off-center, DDR5 notch even more shifted.*

- ***2.5" SATA SSD vs M.2 SATA vs M.2 NVMe →*** *2.5" SATA uses standard SATA cable, M.2 SATA looks like a stick but uses SATA protocol, M.2 NVMe is also a stick but uses PCIe lanes for much faster speeds.*

Part D: Cables & Ports

Label when to use each:

- ***HDMI →*** *For connecting monitors, TVs, and projectors with audio + video.*
- ***DisplayPort →*** *High-performance monitor connection, often used for gaming or high refresh rates.*
- ***USB-A vs USB-C →*** *USB-A is the standard rectangular connector; USB-C is smaller, reversible, and supports faster data/power.*
- ***RJ-45 (Ethernet) →*** *Wired networking connection for internet or LAN.*