**Lab 3 – Computer Disassembly**

In this lab, you are expected to show your understanding of computer components and safe lab procedures and proper use of tools. In order to demonstrate this, you will disassemble personal computer.

Recommended tolls for computer disassembly are following:

* Safety glasses
* Antistatic wrist strap
* Antistatic mat
* Flat head screwdrivers
* Phillips head screwdrivers
* Torx screwdrivers
* Hex driver
* Part retriever
* Thermal compound
* Can of compressed air
* Cable ties
* Parts organizer
* Containers for storing computer parts
* Antistatic bags for electronic parts

You are given below recommended steps for computer disassembly in a usual case. Please read and follow the steps and answer the given questions. Please answer all questions given in *Italics.*

**Step 1.** **Switch off the computer.**

Please switch off the computer and disconnect the power cable from the wall and the power supply.

**Step 2: Open the Computer Case.**

Look for all of the screws that secure the side panels to the back of the computer. Remove the side panel screws using the proper size and type of screwdriver. Note: do not remove the screws that secure the power supply to the case. Put all of these screws in one place, for example in or small cup. Label the organizer or cup with a sticker written ‘side panel screws’. Remove the side panels from the case. Tip: If you have a camera or smartphone, take a photo of the inside of the computer case to be used as a reference when reassembling the computer.

Note: Some manufacturers do not use screws to fasten components inside of the computer case. Some may use plastic or metal clips that fasten components to the computer chassis. Be careful to remove only screws that are holding components in place, and not the screws that hold components together.

*Questions:*

*What is the most commonly used type of screwdriver to remove the screws?*

*How many screws secured the side panels?*

**Step 3: Antistatic Wrist Strap.**

Put on an antistatic wrist strap. Connect one end of the conductor to the wrist strap. Clip the other end of the conductor to an unpainted, metal part of the case.

If you have an antistatic mat, place it on the work surface and put the computer case on top of it. Ground the antistatic mat to an unpainted, metal part of the case.

**Step 4: Remove the Hard Drive.**

a. Look for the hard drive. Carefully disconnect the power and data cables from the back of the hard drive.

*Which type of data cable did you disconnect?*

Look for all of the screws that hold the hard drive in place. Remove the hard drive screws using the proper size and type of screwdriver. Put all of these screws in one place and label them.

*What type of screws secured the hard drive to the case?*

*How many screws secured the hard drive to the case?*

Note: Do NOT remove the screws that hold the hard drive together.

c. Gently remove the hard drive from the case.

**Step 5: Remove Optical Drive.**

Look for the optical drive (Blu-ray, DVD, etc.) if there are any. Carefully disconnect the power and data cables from the optical drive. Remove the audio cable from the optical drive if there is one connected.

*What type of data cable did you disconnect?*

Find and remove all of the screws that secure the optical drive to the case. Put all of these screws in one place and label them. Place the optical drive in an antistatic bag.

*How many screws secured the optical drive to the case?*

**Step 6: Remove the Power Supply.**

a. Find the power supply. Find the power connection(s) to the motherboard.

b. Gently remove the power connection(s) from the motherboard.

*How many pins are there in the motherboard connector?*

c. Disconnect the power cables from any case fans.

d. Disconnect the power cable from the video card if there are any.

e. Disconnect any other power supply cables from where they were connected.

*If there were additional cables disconnected, to what were they connected?*

f. Find and remove all of the screws that secure the power supply to the case. Put all of these screws in one place and label them.

*How many screws secure the power supply to the case?*

Carefully remove the power supply from the case and place with the other components.

**Step 7: Remove Adapter Cards.**

a. Find any adapter cards that are installed in the computer, such as a video, NIC, or sound card.

b. Find and remove the screw that secures the adapter card to the case. Put the adapter card screws in one place and label them.

c. Carefully remove the adapter card from the slot. Be sure to hold the adapter card by the mounting bracket or by the edges. Place the adapter card in an antistatic bag. Repeat this process for all of the adapter cards.

*What kind of slot types are most commonly used for each type of adapter card?*

*What are the main differences between slot types?*

**Step 8: Remove Memory Modules.**

Find the memory modules on the motherboard.

*How many memory modules are installed on the motherboard?*

**Step 9: Remove Data Cables.**

Remove all data cables from the motherboard. Make sure to note the connection location of any cable you disconnect.

*What types of cables were disconnected?*

**Step 10. Completion.**

You have completed this lab. The computer case should contain the motherboard, the CPU, and any cooling devices. Do not remove any additional components.

*What are the main safe lab procedures you have followed doing this lab? Explain their purposes.*