Assignment:-

MODULE 2:- INSTALLATION AND MAINTENANCE OF HARDWARE AND ITS

SECTION 1: MULTILPLE CHOICE

1. WHICH OF THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN BEFORE WORKING ON COMPUTER HARDWARE?

A) ENSURE THE COMPUTER IS PLUGGED IN TO PREVENT ELECTROSTATIC DISCHARGE.
B) WEAR AN ANTI-STATIC WRIST STRAP TO PREVENT DAMAGE FROM ELECTROSTATIC DISCHARGE.
C) WORK ON CARPETED SURFACES TO PREVENT SLIPPING.
D) USE MAGNETIC TOOLS TO HANDLE COMPONENTS MORE EASILY

ANS:- B) WEAR AN ANTI-STATIC WRIST STRAP TO PREVENT DAMAGE FROM ELECTROSTATIC

2. WHAT IS THE PURPOSE OF THERMAL PASTE DURING CPU INSTALLATION?
A) TO INSULATE THE CPU FROM HEAT.
B) TO PROVIDE MECHANICAL SUPPORT FOR THE CPU.
C) TO IMPROVE THERMAL CONDUCTIVITY BETWEEN THE CPU AND THE HEAT SINK.
D) TO PREVENT THE CPU FROM OVERHEATING

ANS:- C) TO IMPROVE THERMAL CONDUCTIVITY BETWEEN THE CPU AND THE HEAT SINK.

3. WHICH TOOL IS USED TO MEASURE THE OUTPUT VOLTAGE OF A POWER SUPPLY UNIT (PSU)?

A) MULTIMETER
B) SCREWDRIVER
C) PLIERS
D) HEX KEY

ANS:- A) MULTIMETER

4. Which component is responsible for storing BIOS settings, such as date and time, even when the computer is powered off?

a) CMOS BATTERY
b) CPU
c) RAM
d) Hard drive

ANS:- CMOS BATTERY

SECTION 2:- TRUE OR FALSE

5. True or False: When installing a new hard drive, it is essential to format it before use.

ANS:- TRUE

6.TRUE OR FALSE: A POST (POWER- ON SELF-TEST) ERROR INDICATES A PROBLEM WITH THE CPU

ANS :- TRUE

7. TRUE OR FALSE: IT IS SAFE TO REMOVE A USB FLASH DRIVE FROM A COMPUTER WITHOUT EJECTING IT FIRST.

ANS:- FALSE

SECTION 3: SHORT ANSWER

8. DESCRIBE THE STEPS INVOLVED IN INSTALLING A NEW GRAPHICS CARD IN A DESKTOP COMPUTER.

ANSWER:-

- ✧ **SWITCH OFF THE COMPUTER**
- ✧ **UNPLUG THE WIRE FROM THE WALL.**
- ✧ **OPEN THE SIDE COVER OF THE CPU BOX.**
- ✧ **TOUCH METAL ONCE (TO REMOVE BODY STATIC).**
- ✧ **SEE THE LONG SLOT INSIDE – THAT'S WHERE THE CARD GOES.**
- ✧ **IF OLD CARD IS THERE, REMOVE IT SLOWLY.**
- ✧ **TAKE THE NEW CARD AND PUSH IT INTO THE SLOT.**
- ✧ **PUSH A LITTLE HARD – IT SHOULD FIT PROPERLY.**
- ✧ **PUT SCREW TO HOLD THE CARD TIGHT.**
- ✧ **IF CARD NEEDS POWER WIRE, PLUG THAT IN.**
- ✧ **CLOSE THE CPU COVER AGAIN.**
- ✧ **NOW PLUG ALL WIRES – POWER, MONITOR, ETC.**
- ✧ **TURN ON THE COMPUTER.**
- ✧ **IF SCREEN COMES ON**

9. WHAT IS RAID, AND WHAT ARE SOME COMMON RAID CONFIGURATIONS?

ANSWER:- RAID IS A WAY TO USE TWO OR MORE HARD DRIVES TOGETHER IS KNOWN AS RAID.

- ❖ **IN WHICH THE RAID MEANS USING 2 OR MORE HARD DRIVES TOGETHER.**

- ✧ **IN WHICH THE COMMON RAID CONFIGURATIONS ARE THE USUAL WAYS PEOPLE SET THEM UP EASILY.**

- ◆ **IN WHICH THE SOME SETUPS MAKE THE COMPUTER FASTERS**

- ✓ **SOME KEEP YOUR DATA SAFE IF ONE DRIVE BREAKS.**

- ● **SO, IT'S JUST ABOUT HOW YOU CONNECT HARD DRIVES FOR SPEED, SAFETY, OR BOTH**

- **RAID 0 – FAST**
  TWO HARD DRIVES WORK TOGETHER.
  MAKES THINGS FASTER.
  IF ONE BREAKS, EVERYTHING IS LOST.

- **RAID 1 – SAFE**
  SAME DATA IS SAVED ON TWO DRIVES.
  IF ONE BREAKS, THE OTHER HAS YOUR DATA.
  TAKES DOUBLE THE SPACE.

- **RAID 5 – SAFE + OKAY SPEED**
  NEEDS 3 OR MORE DRIVES.
  IF ONE BREAKS, DATA IS STILL SAFE.
  GOOD FOR BOTH SAFETY AND SPEED.

- **RAID 10 – FAST + SAF**
  NEEDS 4 DRIVES.
  GIVES BOTH SPEED AND SAFETY.
  BEST FOR IMPORTANT WORK.

10. DEMONSTRATE HOW TO REPLACE A CPU FAN IN A DESKTOP COMPUTER

ANS:- 1.FIRST SHUTDOWN THS SYSTEM THEN AND REMOVE PLUG AND WIRES FROM BOARD OR CONNECTOR

2.SECOND USE SCREW DRIVER TO THE CASE OR CABINET OR SIDE PANNEL OF THE CPU

3.MOSTLY THE CPU (FANS ARE LOCATED AT CENTER OF THE MOTHERBOARD AND ITS LOCATED ABOVE THE PROCESSOR .

4.REMOVE THE FAN WIRE FROM MOTHERBOARD

5.REMOVE THE SCREWS OF OLD FAN AND REMOVE SLOWELY

6. AND THEN CLEAN THE OLD PASTE FROM THE CPU USING CLOTH (MUST HAVE DRY) OR TISSUE ALSO

7. USE NEW THERMAL PASTE IN SMALL AMOUNT

AT CENTRE OF THE CPU WHERE

8. PLACE A FAN ON TOP OF THE CPU AND FIX IT WITH SCREWS.
9. PLUG THE FAN WIRED TO MOTHERBOARD AND FIT ALL WIRED AT CPU FAN SLOT GIVEN IN MOTHERBOARD
10. CLOSE THE CABINET AND TURN ON THE PC
11. AND CHECK SYSTEM'S SCREEN ARE COME OR NOT OR SYSTEM ARE START NOT.

11. DISCUSS THE IMPORTANCE OF REGULAR MAINTENANCE FOR COMPUTER HARDWARE AND PROVIDE EXAMPLES OF MAINTENANCE TASKS.

ANSWER:-

COMPUTER WORKS FASTER
→ WHEN YOU REMOVE JUNK FILES AND CLEAN IT, YOUR SYSTEM RUNS SMOOTH.

STOPS THE COMPUTER FROM GETTING TOO HOT
→ CLEANING THE FAN AND VENTS HELPS COOL IT DOWN.

PARTS LIVE LONGER
→ CLEAN PARTS DON'T WEAR OUT QUICKLY.

PREVENTS SUDDEN SHUT DOWN OR CRASH
→ REGULAR CHECKING HELPS CATCH PROBLEMS EARLY.

KEEPS YOUR IMPORTANT FILES SAFE
→ A HEALTHY SYSTEM MEANS FEWER CHANCES OF DATA LOSS.

SAVES MONEY
→ FIXING SMALL PROBLEMS EARLY IS CHEAPER THAN BIG REPAIRS LATER.

IMPROVES PERFORMANCE OF THE WHOLE SYSTEM
→ UPDATES AND CLEANING HELP EVERYTHING RUN BETTER.

KEEPS DUST AWAY FROM DELICATE PARTS
→ DUST CAN DAMAGE THINGS INSIDE LIKE THE MOTHERBOARD OR FAN.

AVOIDS NOISE AND HEATING ISSUES
→ DIRTY FANS MAKE NOISE AND DON'T COOL PROPERLY.

MAKES YOUR COMPUTER FEEL LIKE NEW
→ REGULAR CARE MAKES EVEN OLD SYSTEMS WORK NICELY.

- **EXAMPLES OF SIMPLE MAINTENANCE TASKS:**

CLEAN DUST FROM FANS AND CPU

BACKUP FILES REGULARLY

UPDATE WINDOWS AND DRIVERS

USE ANTIVIRUS TO SCAN FOR THREATS

MOSTLY DELETE UNUSED FILES AND SOFTWARE

AND CLEAN KEYBOARD AND SCREEN

IN WHICH THE CHECK CABLES AND CONNECTIONS