Computer Science and Engineering Lab Report

Exp No: *01*
Exp Name: ***Introduction to computer hardware***.
Equipments: 1.Processor 2.RAM 3.Hard disk 4.DVD 5.Power supply

Now describing each of the equipments with their definition below.

1.Processor In computing and computer science, a processor or processing unit is an electrical component (digital circuit) that performs operations on an external data source, usually memory or some other data stream.It typically takes the form of a microprocessor, which can be implemented on a single metal–oxide–semiconductor integrated circuit chip. In the past, processors were constructed using multiple individual vacuum tubes, multiple individual transistors or multiple integrated circuits. Today, processors use built-in transistors.

fig0.1: Processor

2.RAM Random-access memory (RAM; /ræm/) is a form of computer memory that can be read and changed in any order, typically used to store working data and machine code.A random-access memory device allows data items to be read or written in almost the same amount of time irrespective of the physical location of data inside the memory, in contrast with other direct-access data storage media (such as hard disks, CD-RWs, DVD-RWs and the older magnetic tapes and drum memory), where the time required to read and write data items varies significantly depending on their physical locations on the recording medium, due to mechanical limitations such as media rotation speeds and arm movement.

RAM contains multiplexing and demultiplexing circuitry, to connect the data lines to the addressed storage for reading or writing the entry. Usually more than one bit of storage is accessed by the same address, and RAM devices often have multiple data lines and are

said to be "8-bit" or "16-bit", etc. devices.

fig0.2: RAM

3.Hard Disk A hard disk drive (HDD), hard disk, hard drive, or fixed disk is an electro-mechanical data storage device that stores and retrieves digital data using magnetic storage with one or more rigid rapidly rotating platters coated with magnetic material. The platters are paired with magnetic heads, usually arranged on a moving actuator arm, which read and write data to the platter surfaces.Data is accessed in a random-access manner, meaning that individual blocks of data can be stored and retrieved in any order. HDDs are a type of non-volatile storage, retaining stored data when powered off.Modern HDDs are typically in the form of a small rectangular box.

fig0.3: Hard disk

4.DVD The DVD (common abbreviation for Digital Video Disc or Digital Versatile Disc) is a digital optical disc data storage format. It was invented and developed in 1995 and first released on November 1, 1996, in Japan. The medium can store any kind of digital data and has been widely used for video programs (watched using DVD players) or formerly for storing software and other computer files as well. DVDs offer significantly higher storage capacity than compact discs (CD) while having the same dimensions. A standard DVD can store up to 4.7 GB of storage, while variants can store up to a maximum of 17.08 GB.

fig0.4: DVD

5.Power Supply A power supply unit (PSU) converts mains AC to low-voltage regulated DC power for the internal components of a computer. Modern personal computers universally use switched-mode power supplies. Some power supplies have a manual switch for selecting input voltage, while others automatically adapt to the mains voltage.

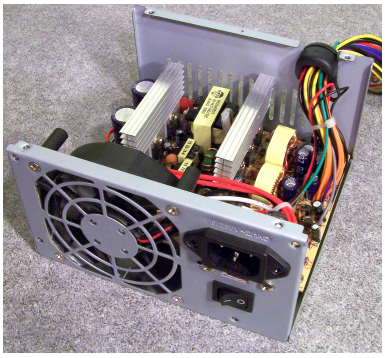

fig0.5: Power supply