

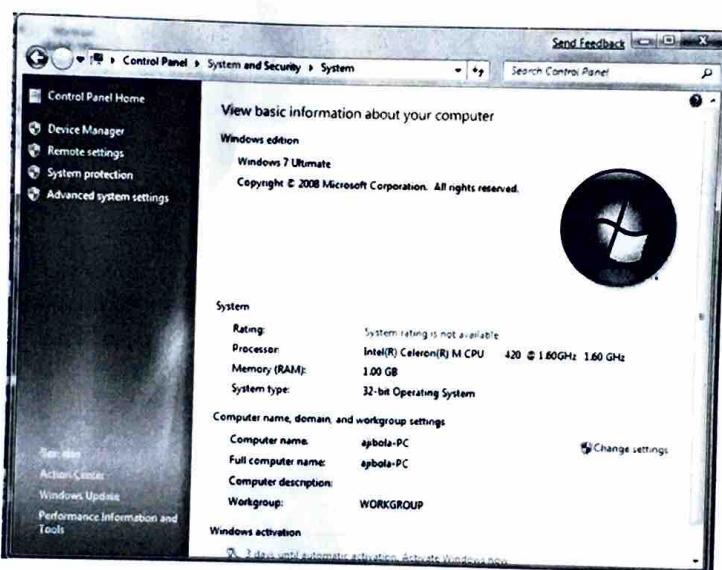
## Program 1

**Aim:-To study about the components and specifications of Computer and Laptop.**

### ❖ Computer:-

A computer is a machine or device that performs processes, calculations and operations based on instructions provided by a software or hardware program. It is designed to execute applications and provides a variety of solutions by combining integrated hardware and software components.

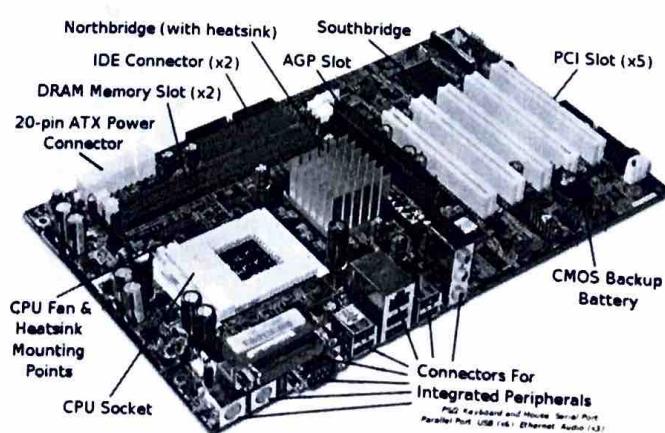
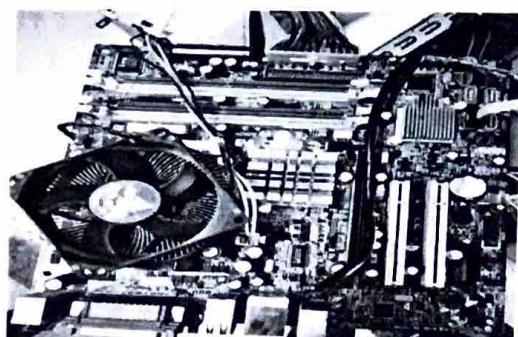
### ❖ Computer Specifications:-



### Motherboard:-

- The motherboard is the backbone of your PC and it provides the electrical connections between every component so that they are able to communicate with each other.

### Motherboard and their parts:-



**Diagram: Motherboard with Label Diagram**

## Processors:-



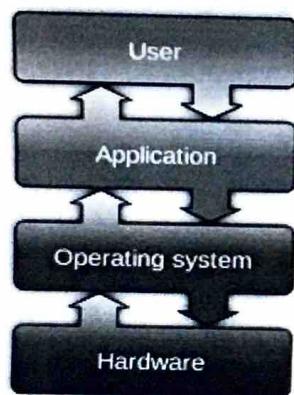
A **processor** (CPU) is the logic circuitry that responds to and processes the basic instructions that drive a computer. The CPU is seen as the main and most crucial integrated circuitry (IC) chip in a computer, as it is responsible for interpreting most of computers commands.

Mentioned computer's processor has **speed of 1.60 GHz**.

## Operating System:-

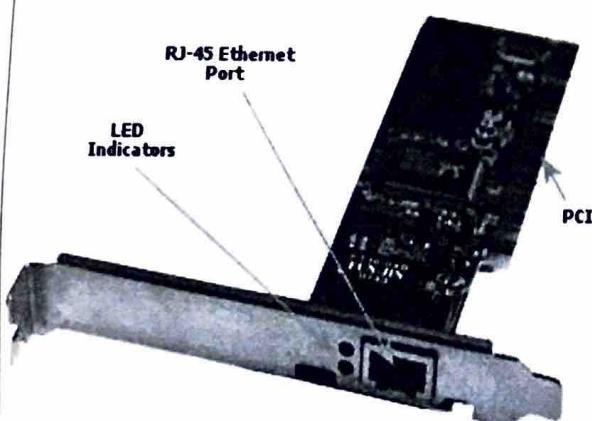
An Operating System (OS) is an interface between a computer user and computer hardware. An operating system is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.

The computer has **Window 7 & 32 bit** operating system.



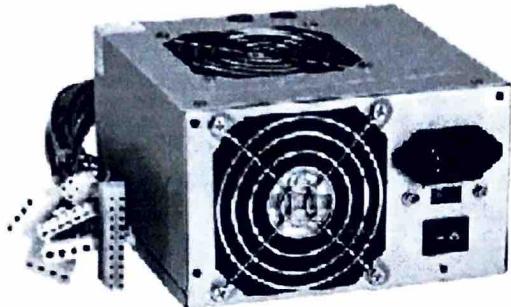
## Network Interface Card:-

*A network interface card (NIC) is a hardware component without which a computer cannot be connected over a network.* It is a circuit board installed in a computer that provides a dedicated network connection to the computer. It is also called network interface controller, network adapter or LAN adapter.



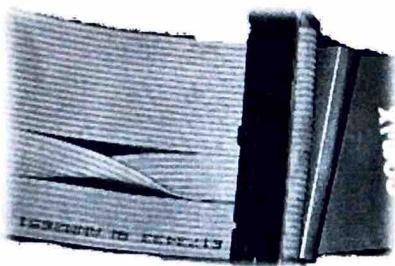
✓ **SMPS:-**

Switched-Mode Power Supply (SMPS) is an electronic circuit which converts the power using switching devices that are turned on and off at high frequencies, and storage components such as indicators or capacitors to supply power when the switching device is in its non-conduction state.



✓ **Buses used in computer:-**

A bus is a high-speed internal connection. Buses are used to send control signals and data between the processor and other components. Three types of bus are used. Address bus - carries memory addresses from the processor to other components such as primary storage and input/output devices.

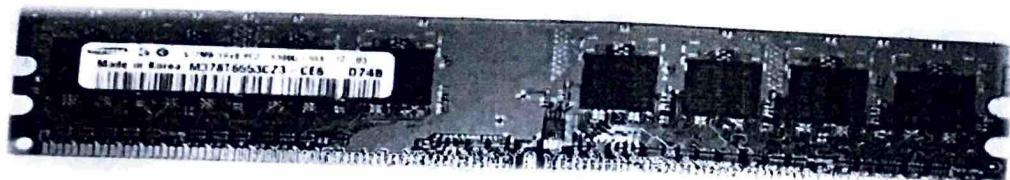


**Memory:-**

It is *used to store data and instructions*. Computer memory is the storage space in the computer, where data is to be processed and instructions required for processing are stored. The memory is divided into large number of small parts called cells. Each location or cell has a unique address, which varies from zero to memory size minus one.

**1. RAM:-**

RAM is the working memory of your computer. The higher the RAM, the more multi-tasking the computer can do. Mentioned Computer have **1 GB** RAM.

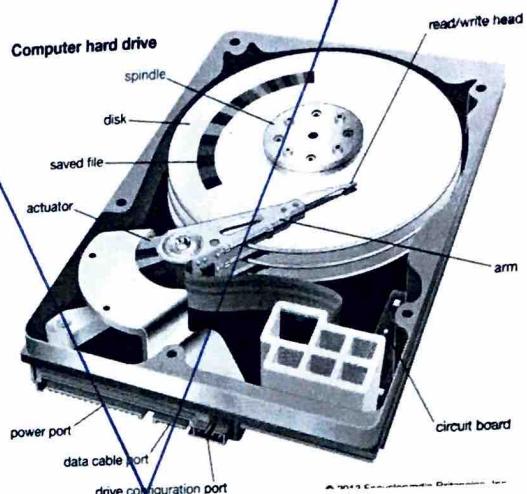


## 2. Hard Disk drive:-

HDD is an electro-mechanical storage device, which is an abbreviation of Hard Disk Drive. It uses magnetic storage for storing and retrieving the digital data. It is a non-volatile storage device. Mentioned computer have HDD of 1 TB.



HDD 1TB



Internal architecture of HDD

## Laptop:-

Laptop is a small, portable personal computer(pc) with a screen and alphanumeric keyboard. It is also known as laptop computer, notebook computer.

## Laptop Specifications:-

View basic information about your computer

Windows edition

Windows 10 Home Single Language

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Windows 10

### System

Processor: AMD A6-9210 RADEON R4, 5 COMPUTE CORES 2C+3G 2.40 GHz

Installed memory (RAM): 4.00 GB (3.67 GB usable)

System type: 64-bit Operating System, x64-based processor

Pen and Touch: No Pen or Touch Input is available for this Display

### Computer name, domain, and workgroup settings

Computer name: DESKTOP-P7HEN8N

Change settings

Full computer name: DESKTOP-P7HEN8N

Computer description:

Workgroup: WORKGROUP

### Windows activation

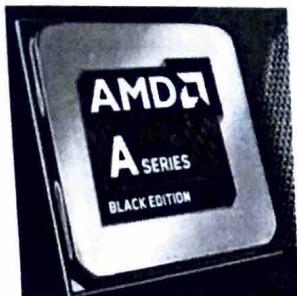
Windows is activated [Read the Microsoft Software License Terms](#)

Product ID: 00327-70000-00001-AA386

Change product key

## **Processor:-**

A processor is an integrated electronic circuit that performs the calculations that run a Laptop. A processor performs arithmetical, logical, input/output (I/O) and other basic instructions that are passed from an operating system (OS).



Mentioned laptop has **AMD A6 processor with 2.40 Ghz speed.**

## **Operating System:-**

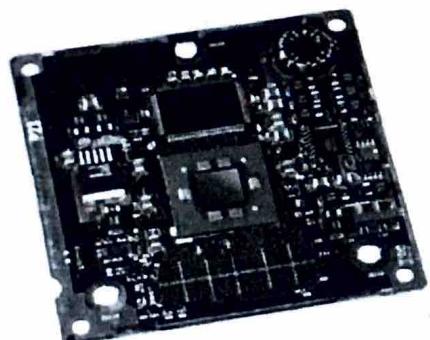
An operating system is a program that acts as an interface between the user and the computer hardware and controls the execution of all kinds of programs.

Mentioned Laptop has **Windows 10 & 64 bit** operating system.

## **Types of Memory Used:-**

### **✓ Cache Memory:-**

It is an extremely fast memory type that acts as a buffer between RAM and the CPU. It holds frequently requested data and instructions so that they are immediately available to the CPU when needed. Cache memory is used to reduce the average time to access data from the Main memory.  
Mentioned Laptop has **8 MB cache Size.**



### **✓ RAM:-**

RAM (Random Access Memory) is the internal memory of the CPU for storing data, program, and program result. It is a read/write memory which stores data until the machine is working.

Mentioned Laptop has **4GB RAM size.**



### ✓ Hard disk drive:-

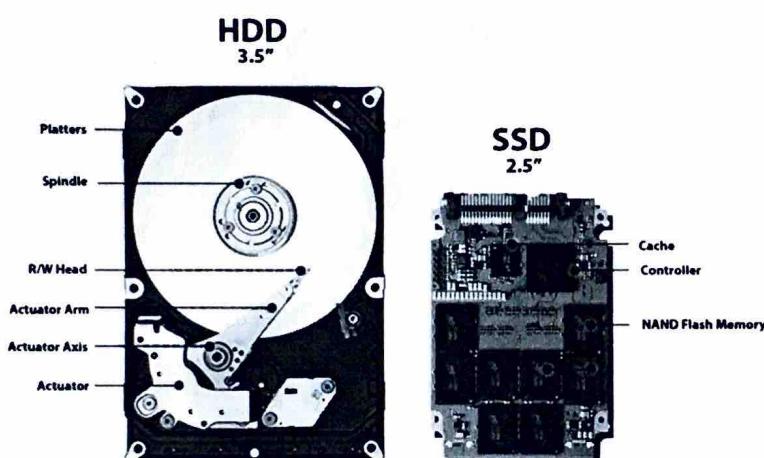
HDD is used in computer to facilitate the user to store data permanently as it is non volatile.

Mentioned Laptop has **1 TB HDD Size**



### ✓ Solid State Drive:-

It is a new generation of storage device .It is faster but expensive than HDD.



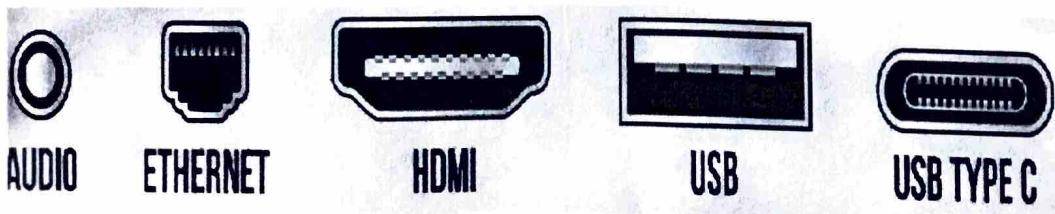
### ✓ Screen resolution:-

Mentioned Laptop has 1920 x 1080 screen resolution.

### ✓ Ports in Laptop:-

Laptops generally have 5 types of ports.

- i. Charging port (used to charge laptop).
- ii. USB type C port (used for Bidirectional data transfer, taking power supply).
- iii. RJ-45 port for Ethernet connection.
- iv. HDMI port.
- v. Headphone 2.0 port.



**Touch:-** It allows you to complete intuitive control.