PROGRAM NO:3

Short note about SMPS(Switched-Mode Power Supply)

Switched-Mode Power Supply

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. It can be abbreviated as SMPS.

SMPS Parts and connectors:

Power-IN: A power cable is inserted to MAIN, the other end of which is connected to mains supply. The input supply gets converted to DC supply.

Power-OUT: The power-OUT connector is connected directly to the Power-IN connector from inside the supply unit. It supplies the same AC supply that is fed to power-IN socket. The power-OUT connector is used to give supply to monitors or any display unit.

FAN: At the back side of Computer-SMPS, find a FAN at the right side. The FAN blows the air out and is only used to dissipate the internal heat from the SMPS since the switching is done at high frequencies which create a lot of heat inside.

ATX Connector: It is a 24-pin female connector which is used to supply DC supply to the motherboards. Various color-coded wires connect to this connector and each colored wire supplies distinct DC voltage.

ATX-12V connector: Latest SMPS power supplies are accompanied by an extra 4-pin connector which supplies 12 volts to energize the central processing unit and other components of a mother board.

AT Connectors: Earlier motherboards used to support AT connectors(6-pin each) also called P8 and P9 connectors to supply power to these motherboards(upto 486 boards).

4-PIN connectors: There are multiple 4-pin connectors that draw out from the SPMS unit. These connectors are used to supply DC power to various peripherals of computer like a floppy disk drive, hard disk drive or DVD-writers.

SATA-output connector. To feed the power to latest SATA hard drives, these connectors are used.