3.7 COMPARISON BETWEEN MICROPROCESSOR AND MICROCONTROLLER

S.No	Microprocessor	Microcontroller
1	A microprocessor is a general purpose device which is called a CPU	A microcontroller is a dedicated chip which is also called single chip computer.
2	A microprocessor do not contain onchip I/OPorts, Timers, Memories etc..	A microcontroller includes RAM, ROM, serial and parallel interface, timers, interrupt circuitry (in addition to CPU) in a single chip.
3	Microprocessors are most commonly used as the CPU in microcomputer systems	Microcontrollers are used in small, minimum component designs performing control-oriented applications.
4	Microprocessor instructions are mainly nibble or byte addressable	Microcontroller instructions are both bit addressable as well as byte addressable.
5	Microprocessor instruction sets are mainly intended for catering to large volumes of data.	Microcontrollers have instruction sets catering to the control of inputs and outputs.
6	Microprocessor based system design is complex and expensive	Microcontroller based system design is rather simple and cost effective
7	The Instruction set of microprocessor is complex with large number of instructions.	The instruction set of a Microcontroller is very simple with less number of instructions. For, ex: PIC microcontrollers have only 35 instructions**.**

8	A microprocessor has zero status flag	A microcontroller has no zero flag.