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AIM: To study various processors and controllers as special purpose computer systems.

1. Keyboard controller
2. Interpreter
3. General purpose processor
4. Multi processor system
5. High throughput
6. Routing header
7. Multi core processor
8. Digital signal processor
9. Super scalar processor
10. Media processor

1. Keyboard controller : In computing, a keyboard controller is a device that interfaces a keyboard to a computer. Its main function is to inform the computer when a key is pressed or released. When data from the keyboard arrives, the controller raises an interrupt (a keyboard interrupt) to allow the CPU to handle the input.

2. Interpreter : An interpreter is a program that directly executes the instructions in a high-level language, without converting it into machine code. In programming, we can execute a program in two ways. Firstly, through compilation and secondly, through an interpreter. The common way is to use a compiler.

3. General purpose processor: The general-purpose processor provides a stack, a push-down data structure that is stored in memory and used to implement procedure calls. When calling a procedure, the caller pushes arguments of the called procedure (the callee) on the stack.

4. Multi processor system: A multiprocessor system is defined as "a system with more than one processor", and, more precisely, "a number of central processing units linked together to enable parallel processing to take place". The key objective of a multiprocessor is to boost a system's execution speed.

5. High throughput: High-throughput computing (HTC) is the use of distributed computing facilities for applications requiring large computing power over a long period of time. HTC systems need to be robust and to reliably operate over a long time scale.

6. Routing header: The routing header is used to identify a set of nodes that must be traversed by the packet along its path to the destination, also known as “source routing.” This does not require listing all the nodes along the paths: a subset of some nodes along the path can be listed as opposed to all nodes (a source routing technique referred to as loose source routing).

7. Multi core processor: A multicore processor is an integrated circuit that has two or more processor cores attached for enhanced performance and reduced power consumption. These processors also enable more efficient simultaneous processing of multiple tasks, such as with parallel processing and multithreading.

8. Digital signal processor : Digital Signal Processors (DSP) take real-world signals like voice, audio, video, temperature, pressure, or position that have been digitized and then mathematically manipulate them. A DSP is designed for performing mathematical functions like "add", "subtract", "multiply" and "divide" very quickly.

9.Superscalar processor: A superscalar processor is a specific type of microprocessor that uses instruction-level parallelism to help to facilitate more than one instruction executed during a clock cycle. This depends on analysis of the instructions to be carried out and the use of multiple execution units to triage these instructions.

10. Media processor: A media processor, mostly used as an image/video processor, is a microprocessor-based system-on-a-chip which is designed to deal with digital streaming data at real-time rates. These devices can also be considered a class of digital signal processors.