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Ans to the Q: No: 2.4b)

Logical cache:

- * It is known as a virtual cache.
- * It stores data using virtual addresses.
- * The processor accesses cache directly without going through mmu
- * Advantage it is faster than physical cache because the cache can respond before the mmu performs an address translation.
- * Logical cache (virtual cache) stores data using virtual addresses.

* Physical caches:- A physical cache stores data using main memory physical addresses. So cache addresses.

* cache access speed of the logical cache is faster than for a physical cache because the cache can respond before the mmu performs an address translation.

Ans to the Q: NO: 3: b

Indirect addressing in x86 family:-

* The address of the memory location in a Register (SI, DI, or BX only).

* The physical address is calculated using the content of DS.

* In an x86 one of those register is called BP or base pointer.

* If we load BD with a number then that number can then be used as the address of a variable.

* e.g. mov BP # 344; loaded the base pointer with the number 344.

mov AX, [BD]; load the AX register with the contents of the memory location pointed to by BP

* E, SI.

* mov CL, [SI]; move the contents of DS:SI into CL.

* mov [DI], AH; move the content of AH into DS:SI.

* mov [SI], AX; move the content of AX into memory. ; location DS:SI and DS:SI+1

* As with the x86 [bx] addressing mode the effective address makes reference the byte of the offset found in the bx, bp, si, or di registers respectively.

Cache memory:-

* Cache memory is a special very high speed memory. It is used to speed up and synchronizing with high speed CPU.

* Cache memory is costlier than main memory or Disk memory but economical than CPU Registers.

* ~~Cache~~ Cache memory is an extremely fast memory type that acts as a buffer between RAM & the CPU.

* It holds frequently requested data an instruction so that they are immediately available to the CPU when needed.

Main memory:-

Primary memory is the main memory of computer. It is a chip mounted on the motherboard of computer. Primary memory

(main memory) is categorized into two main types: Random Access Memory (RAM) and Read only

Memory (ROM). RAM is used for the temporary storage of input data, output and intermediate

Result. Therefore, ROM is used to store the data that does not require a change.

Ans to the Q NO 3. (2)

cpu main component and with the main memory and I/O:

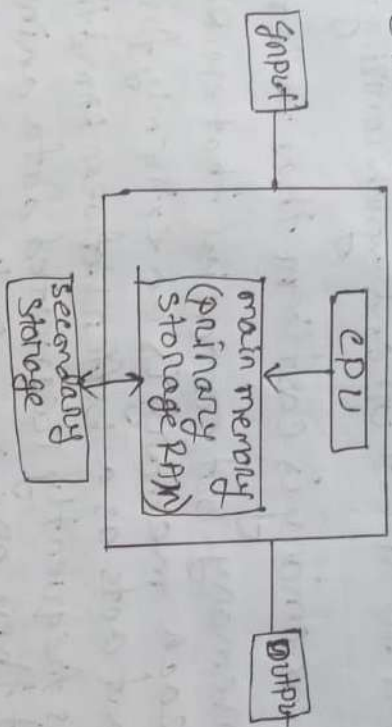


Fig: Block diagram of computer.

A standard fully featured desktop configuration has basically four types of featured device (I/O unit memory).

- ① Input Device;
- ② output Device
- ③ memory
- ④ Storage Devices

- ① Introduction to cpu
- ② CPU
- ③ The Arithmetic Logic Unit (ALU)
- ④ the control unit
- ⑤ main memory
- ⑥ External memory
- ⑦ Input/output Device
- ⑧ the System bus.