

DEPARTMENT OF COMPUTER ENGINEERING
GOVERNMENT ENGINEERING COLLEGE DAHOD
GUJARAT TECHNOLOGICAL UNIVERSITY

Semester 4
Term: Odd 2017-18 [26th Dec 2017 – 20th April 2018]
COMPUTER ORGANIZATION [2140707]

Possible Viva Questions

Name of Faculty: V J Patel, Asst. Prof. Computer Engineering
Weeks In Term: 17 Weeks – 2 Weeks for MidSem & Remid – 2 Weeks Submission & Leaves
Actual Weeks: 13 Weeks

NOTE:

- 1) Students can prepare the answers from reference books listed in syllabus or the Internet.
- 2) It is advisable (not compulsory) to prepare notes for these questions.
- 3) These questions are only small subset of questions from whole syllabus. Other questions can also be asked.
- 4) This list will be continuously updated as semester proceeds.

#	Topic
1	Computer architecture refers to which attributes of system? Give example.
2	Computer organization refers to which attributes of system? Give example.
3	What is the difference between structure and function of a computer system?
4	Give any four components inside CPU.
5	Give any three components inside Control Unit.
6	Describe ENIAC computer, how did it work?
7	Describe Von Neumann architecture.
8	What is stored programmed concept?
9	When was Von Neumann architecture proposed?
10	How was the basic design of IAS?
11	What was IBM 7094? What were its special properties?
12	What was System/360?
13	What was special about DEC PDP-8?
14	Give clock speeds of 4004, 8008, 8080, 8086, 8088, 80286, 486TM SX, Pentium ... so on
15	Give bus widths of 4004, 8008, 8080, 8086, 8088, 80286, 486TM SX, Pentium ... so on
16	Addressable memory of 4004, 8008, 8080, 8086, 8088, 80286, 486TM SX, Pentium ... so on
17	No of transistors in 4004, 8008, 8080, 8086, 8088, 80286, 486TM SX, Pentium ... so on
18	Name the first personal computer and which processor was used in it?
19	What is multicore architecture?
20	Which was the first Intel processor to support multitasking?
21	What are embedded systems?
22	What are ARM chips? In which phones/computers are they used?
23	How can we calculate CPI (Average Cycles Per Instruction) ?
24	What is MIPS rate? Give its formula.
25	What is MFLOPS rate? Give its formula.
26	What are SPEC benchmarks?
27	List different SPEC benchmarks.
28	Explain Amdahl's law.
29	What are Interrupts?
30	What is BUS? Is SCSI a bus?
31	What is PCI bus?

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32	What is associative method of memory access?
34	Explain principle of "Locality of Reference".
35	What is Cache memory? What are "lines" in cache memory?
36	What is line size?
37	Give cache memory size of some popular processor.
38	What is write through technique, write back , dirty bit ?
39	What is access time, hit ratio, cache hit, HPC, split cache, spatial locality, multilevel cahce?
40	What is the distinction between spatial locality and temporal locality?
41	What are the differences among sequential access, direct access and random access?
42	What are general relationship among access time, memory cost and capacity?
43	For a direct mapped cache, a main memory address is viewed as consisting of three fields. List and define the three fields.
44	In general, what are the strategies for exploiting spatial locality and temporal locality?
45	Compare disk layout methods (CAV vs. MZR).
46	What is a cylinder?
47	What is rotational delay?
48	What is seek time?
49	Give three common characteristics of RAID?
50	Explain all levels of RAID. Eg. RAID level 0 RAID level 6.

*Refer William Stallings "Computer Organization and Architecture – Designing for Performance", 8th Edition