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[5559]-189

S.E. (II Semester) (Computer Engg.) EXAMINATION, 2019

COMPUTER ORGANIZATION

(2012 PATTERN)

Time : 2 Hours

Maximum Marks : 50

N.B. :— (i) Answer Q. No. 1 or 2, 3 or 4, 5 or 6, 7 or 8.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if necessary.

1. (a) Draw extended Von Neumann architecture and explain the role of registers in it. [6]

(b) Explain the role of the following registers in processor :

(i) Program counter

(ii) Accumulator

(iii) Stack pointer. [6]

Or

2. (a) Explain speedup techniques for the processor in brief. [6]

(b) Explain data representation using single and double precision. [6]

3. (a) Draw and explain register organization of 80386 DX. [6]

(b) Differentiate between RISC Vs CISC. [6]

Or

4. (a) Explain the architecture of 8086 processor. [6]

(b) Draw and explain single bus organization of CPU. [6]

5. (a) Explain use of DMA controller in computer system. [7]

(b) Compare UMA and NUMA architecture. [6]

P.T.O.

Or

6. (a) Draw and explain four stage floating point adder pipeline.[7]
(b) Differentiate between sequential ALU and combinational ALU. [6]

7. (a) Write a short note on Sun Ultraspare T1. [7]
(b) Explain advantage and disadvantages of parallel processing.[6]

Or

8. (a) Draw and explain the block diagram of NVIDIA's GPU architecture. [7]
(b) List and explain properties of is/it processor. [6]