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[5352]-170

S.E. (Comp. Engg.) (Second Semester) EXAMINATION, 2018

COMPUTER ORGANIZATION

(2012 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Neat diagrams must be drawn wherever necessary.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data if necessary.

1. (a) Draw and explain Von Neumann architecture. [6]
- (b) Using “Add and Shift” method multiply the following numbers :
Multiplicand 10, Multiplier 6. Verify result in decimal number system. [6]

Or

2. (a) Represent 12.125 and 10.50 in single and double precision floating point format. [6]
- (b) Explain any THREE addressing modes of 8086 with suitable examples. [6]
3. (a) List and explain machine instruction characteristics. [6]
- (b) Divide the following number using restoring division algorithm : [7]
- Dividend – 1100 and Divisor – 11.

P.T.O.

Or

4. (a) Explain the communication between processor and coprocessor. [6]
(b) Explain the Register organization in i7 microprocessor. [7]
5. (a) Compare memory mapped I/O and I/O mapped I/O with merits and demerits. [6]
(b) Explain the need of bus arbitration ? Explain daisy chaining scheme. [6]

Or

6. (a) Differentiate between UMA and NUMA. [6]
(b) What is DMA ? Explain DMA cycle stealing. [6]
7. (a) Draw and explain the block diagram of NVIDIA's GPU architecture. [7]
(b) Write short notes on the following with an example : [6]
(i) IA-64 model
(ii) AMD Multi core Opteron.

Or

8. (a) Explain advantages and disadvantages of Parallel Processing. [7]
(b) Differentiate between desktop and mobile version of i7 processor. [6]