

Total No. of Questions—8]

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<b>Seat No.</b>	
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**[5668]-194**

**S.E. (Comp. Engg.) (Second Semester) EXAMINATION, 2019**

**COMPUTER ORGANIZATION**

**(2012 PATTERN)**

**Time : Two Hours**

**Maximum Marks : 50**

**N.B. :—** (i) Attempt questions Nos. 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) Explain Booth's multiplication Algorithm with a suitable example. [6]

(b) Explain IEEE 488 format for single precision and double precision floating point numbers with example. [6]

*Or*

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

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

3. (a) Perform  $1100 \div 11$  using non-restoring division algorithm. [6]

(b) Explain different hazards in pipeline. [6]

P.T.O.

*Or*

4. (a) Explain restoring division algorithm with flowchart. [6]  
(b) What are the different design methods for Hardwired control units ? Explain any *one*. [6]
5. (a) Compare UMA and NUMA architecture. [7]  
(b) Explain Intel Nehalem memory organization with diagram. [6]

*Or*

6. (a) What is bus arbitration ? Describe the centralized and distributed arbitration. [7]  
(b) Write a note on DDR3 memory organization. [6]
7. (a) Draw and explain block diagram of Itanium processor. [7]  
(b) Explain IA-64 architecture. [6]

*Or*

8. (a) Explain the architecture of CBE processor with the help of block diagram. [7]  
(b) Write a note on NVIDIA GPU. [6]