Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[5057]-249

S.E. (E&TC/Electronics) (Second Semester) EXAMINATION, 2016
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 Bus structure of Computer. [6]
(*b*) Represent [182-5217] in single precision floating point format. [6]

Or

2. (*a*) Discuss the concept of pipelining and superscalar operation of Computer. [6]
(*b*) Explain IEEE standard for single precision and double precision floating point format. [6]

3. (*a*) Write control sequence for the execution of instruction ADD(R_1), R_2 using single Bus Organization. [6]
(*b*) Write short notes on standard I/O's : [6]
(*i*) PCI
(*ii*) USB.

Or

4. (*a*) Write control sequence for the following instruction for single bus organization for SUB(R_4), R_3. [6]
(*b*) Explain the steps involved in fetching a word form memory. [6]

P.T.O.

5. (*a*) Write a note on asynchronous and synchronous DRAM. [6]

(*b*) Explain different mapping schemes for Cache memory. [7]

Or

6. (*a*) What is virtual memory ? Explain how virtual address is translated to physical address. [7]

(*b*) Explain memory hierarchy of computer system. [6]

7. (*a*) Draw and explain 8086 processor architecture. [7]

(*b*) Explain the following instructions of 8086 with suitable examples : [6]

(*i*) DAA

(*ii*) TEST

(*iii*) LEA.

Or

8. (*a*) Explain any *three* addressing modes for 8086 with suitable examples. [6]

(*b*) Explain interrupt structure of 8086 processor. [7]