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

Seat No.	

[4957]-1049

S.E. (Electronics/E&TC) (Second Semester) EXAMINATION, 2016

COMPUTER ORGANIZATION

(2012 Pattern)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Solve Q. **1** or Q. **2**, Q. **3** or Q. **4**, Q. **5** or Q. **6**, Q. 7 or Q. **8**

(*ii*) Neat diagrams must be drawn wherever necessary.

(*iii*) Figures to the right side indicate full marks.

(*iv*) Use of calculator is allowed.

(*v*) Assume suitable data if neccssary.

1. (*a*) Draw the block diagram of basic structure of computer. Explain function of each block. [6]

(*b*) Represent the following number in single precision and double precision IEEE format : $(100.125)_{10}$. [6]

Or

2. (*a*) Compare RISC and CISC processor. [6]

(*b*) Explain Booth algorithm with suitable example. [6]

3. (*a*) Draw and explain single bus organization. [6]

(*b*) Write a short note on PCI BUS. [6]

P.T.O.

Or

4. (*a*) Write a control sequence for instruction SUB(R4), R3 using single bus organization. [6]

(*b*) What is BUS arbitration ? Explain Daisy chain and polling method. [6]

5. (*a*) Write a short note on semiconductor memories. [6]

(*b*) Explain the concept of virtual memory ? How virtual memory address is translated to physical memory address ? [7]

Or

6. (*a*) Explain the cache mapping techniques. [7]

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

7. (*a*) Explain the interrupt structure of 8086 microprocessor. [7]

(*b*) Explain the following addressing modes of 8086 with suitable example : [6]

(*i*) Direct addressing

(*ii*) Register addressing

(*iii*) Immediate addressing.

Or

8. (*a*) Draw the bit pattern for flag register of 8086. Microprocessor and explain significance of each bit. [7]

(*b*) Draw the pin diagram of 8086 microprocessor and explain the significance of the following pins : [6]

(*i*) MN $\overline{\text{MX}}$

(*ii*) NMI

(*iii*) $\overline{\text{TEST}}$.