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

Seat No.	

[4857]-1049

S.E. (Electronics/E&TC) (Second Semester) EXAMINATION, 2015

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*) Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.

(*iv*) Assume suitable data, if necessary.

1. (*a*) Explain different functional units of computer organization. [6]

(*b*) Perform multiplication of the following positive numbers using Booth's algorithm : [6]

(*i*) 1101

(*ii*) 1011

Or

2. (*a*) Explain IEEE standards for single precision and double precision floating point numbers. [6]

(*b*) Explain pipelining of RISC processor. [6]

3. (*a*) Write the control sequence for ADD R_4, R_5, R_6 using multibus organization with flow chart. [7]

(*b*) Write a short note on universal serial bus. [6]

P.T.O.

Or

4. (*a*) Differentiate between hardwired and microprogrammed control unit. [6]

(*b*) Explain different methods to handle multiple interrupts. [7]

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

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

Or

6. (*a*) Explain the concept of virtual memory. How is virtual address translated to physical address ? [6]

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

7. (*a*) Draw and explain functional block diagram of 8086 processor. [7]

(*b*) State and explain any *three* addressing mode with example for 8086 processor. [6]

Or

8. (*a*) Explain the function of the following pins of 8086 : [6]

(*i*) $\overline{\text{BHE}}$ / S7

(*ii*) MN/$\overline{\text{MX}}$

(*iii*) INTR

(*iv*) NMI

(*v*) $\overline{\text{TEST}}$

(*vi*) READY

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