Total No. of Questions—**8**] [Total No. of Printed Pages—**3**

Seat No.	

[5057]-261

S.E. (I.T.) (First Semester) EXAMINATION, 2016

COMPUTER ORGANIZATION

(2012 PATTERN)

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

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

(*ii*) Figures to the right indicate full marks.

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

1. (*a*) Use Booth's algorithm for signed multiplication. Perform multiplication operation on the following numbers : [7]

Multiplicand = 1011 Multiplier = 0010.

(*b*) Explain how logical, Arithmetic and data transfer operation handled by microprocessor with example of each. [6]

Or

2. (*a*) Describe function of various signals used in Minimum mode operation of 8086. [7]

P.T.O.

(*b*) Explain the significance of the following registers : [6]

(*i*) MBR

(*ii*) MAR

(*iii*) IR.

3. (*a*) Provide example with explanation of Dircet addressing, Register addressing and Immediate addressing mode of 8086. [6]

(*b*) With diagram describe single bus organization. [6]

Or

4. (*a*) List out the signals of 8086 used for handling hardware and software interrupt. Explain those in detail. [6]

(*b*) Draw format of Horizontal micro-programming organization and describe it. [6]

5. (*a*) Classify Semiconductor memory. Describe Static RAM and EEPROM in detail. [6]

(*b*) Write a note on a paging mechanims. [6]

Or

6. (*a*) Explain direct mapping technique of cache memory. [6]

(*b*) Write a notes on : [6]

(*i*) Virtual Memory

(*ii*) Blue ray Disk.

7. (*a*) What is Interrupt Driven I/O ? Explain with flowchart. [7]

(*b*) Elaborate the feature and functions of DMA. [6]

Or

8. (*a*) Draw Block diagram of 8255. [5]

(*b*) Differentiate synchronous and asynchronous bus. [4]

(*c*) Describe USART in short. [4]