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[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 Direct 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 mechanism. [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]