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

Seat No.	

[4957]-1075

S.E. (Computer Engineering) (First Semester)

EXAMINATION, 2016

MICROPROCESSOR ARCHITECTURE

(2012 PATTERN)

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

N.B. **:—** (*i*) Answer any *four* questions, Q. No. **1** *or* Q. No. **2,** Q. No. **3** *or* Q. No. **4**, Q. No. **5** *or* Q. No. **6**, Q. No. **7** *or* Q. No. **8.**

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

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

1. (*a*) Explain all control registers (CRO to CR3) of 80386DX microprocessor in detail. [6]

(*b*) What is maximum memory addressing capability of 8086 processor ? In what way 80386 system is different from 8086 memory organization ? [4]

(*c*) Explain the significance of the following signals with referance to 80386 microprocessor : [2]

(*i*) BE# to BE#

(*ii*) READY.

Or

2. (*a*) What is MSW (Machine status word) in 80386DX microprocessor ? Draw its format and explain. [6]

P.T.O.

(*b*) Explain various memory /10 interface signals of 80386DX processor [4]

(*c*) Enlist the features of 8086 microprocessor [2]

3. (*a*) What is Virtual 86 mode. Explain in detail. [5]

(*b*) With the help of suitable timing diagram explain the pipelined bus cycles in 80386 processor. [4]

(*c*) Explain the following instructions with examples : [3]

(*i*) BSR

(*ii*) CLTS

(*iii*) DAA.

Or

4. (*a*) Explain in detail how to switch from real mode to V86 mode. [6]

(*b*) Compare and contrast procedure and macro. [4]

(*c*) Differentiate between DIV and IDIV instruction. [2]

5. (*a*) Explain common configurations that support multiprocessing in detail. [6]

(*b*) Explain in detail different points to be considered to take full advantage of multicore platform. [4]

(*c*) What are the differences between multi-processing and multi-tasking. [3]

Or

6. (*a*) Write a short note on multicore design and implementation. [6]

(*b*) Differentiate between multiprogramming and multiprocessing. [4]

(*c*) List the advantages and disadvantages of Virtualization Technology. [3]

7. (*a*) Explain any six 64-bit mode instruction. [6]

(*b*) Write a short note intel Hyper Threading Technology [4]

(*c*) List the features of SSE2. [3]

Or

8. (*a*) Explain with functional block diagram of Intel microarchitecture code name Nehalem. [6]

(*b*) What is single instruction multiple data model for parallel programming. [4]

(*c*) Briefly explain the compatibility mode and 64-bit mode of IA 64 architecture. [3]