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

Seat No.	

[4857]-1075

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

EXAMINATION, 2015

MICROPROCESSOR ARCHITECTURE

(2012 PATTERN)

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

N.B. **:—** (*i*) Answer any *four* questions **1** *or* **2**, **3** *or* **4**, **5** *or* **6** and **7** *or* **8**.

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

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

1. (*a*) Explain registers available in 8086 microprocessor. [3]

(*b*) Explain how physical address is formed in 80386 Dx microprocessor. [6]

(*c*) Explain the following signal function of 80386 Dx microprocessor : [3]

(1) Lock #

(2) BE0 # – BE3 #

(3) HOLD and HLDD.

P.T.O.

Or

2. (*a*) Explain *four* level of hierarchical protection in 80386 Dx microprocessor. [3]

(*b*) Draw and explain the architecture of 8086 microprocessor. [6]

(*c*) What is maximum size of each segment in 80386 Dx microprocessor ? Why ? [3]

3. (*a*) Explain non-pipelined read cycle with timing diagram. [5]

(*b*) List and explain iteration control instructions of 80386 Dx microprocessor. [4]

(*c*) Briefly explain how to set V86 mode [3]

Or

4. (*a*) Explain *four* different processor control instructions. [4]

(*b*) Explain non-pipelined write cycle with timing diagram. [5]

(*c*) Briefly explain how to be protected mode. [3]

5. (*a*) What is multicore architecture ? Explain. [3]

(*b*) Explain the execution model of SIMD with neat diagram. [6]

(*c*) Explain software developer's viewpoint about multicore processor. [4]

Or

6. (*a*) Write different advantages of multicore design. [3]

(*b*) Explain different multiprocessor architectures. [6]

(*c*) What is front side bus, back side bus ? Explain. [4]

7. (*a*) Explain different instruction sets for I-A-64 architecture. [6]

(*b*) Explain Intel Hyperthreading Technology. [4]

(*c*) What are the differences between IA-32 basic execution environment and 64 bit mode execution environment ? [3]

Or

8. (*a*) Explain X86 virtualization technology in detail. [6]

(*b*) Explain data types of 64 bit architecture. [4]

(*c*) Enlist features of SSE. [3]