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

Seat No.	

[5252]-165

S.E (Computer Engineering) (I semester) EXAMINATION, 2017
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 whenever necessary.

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

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

1. (*a*) How many segment registers are used by 8086 ? Mention their use. [3]

(*b*) Explain memory organization and segmentation in 80386DX. [6]

(*c*) What is TSS descriptor ? [3]

Or

2. (*a*) Explain the difference between 8086 and 80386. [3]

(*b*) Explain the various data types supported by 80386DX. [6]

(*c*) What is LDT descriptor ? [3]

3. (*a*) What is the use of bit test and modify instructions ? [3]

(*b*) Draw the timing diagram for read cycle with non-pipelined address. [6]

(*c*) How to define and use macro in assembly language programming ? [3]

Or

4. (*a*) Enlist program flow control instructions. [3]

P.T.O.

(*b*) Draw the timing diagram for write cycle with non-pipelined address. [6]

(*c*) How is IMUL different than MUL ? [3]

5. (*a*) What are the differences between dual and quad core CMP ? [3]

(*b*) What is Front Side Bus, Back Side Bus and I/O Bus ?[6]

(*c*) What is single instruction multiple data model for parallel processing ? [4]

Or

6. (*a*) Define Chip Multiprocessors (CMP). [3]

(*b*) What are different architectures of multicore ? Explain. [6]

(*c*) What are the advantages of cache memory ? [4]

7. (*a*) What are the advantages of Hyper-threading Technology ?[4]

(*b*) Draw and explain the block diagram of 64-bit architecture.[6]

(*c*) What are the features of Intel Microarchitecture code name Nehalem ? [3]

Or

8. (*a*) What are the advantages of virtualization technology ? [4]

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

(*c*) Enlist data types of 64-bit architecture. [3]