

END TERM EXAMINATION

SIXTH SEMESTER [B.TECH/M.TECH] MAY-JUNE 2014

Paper Code: IT-302

Subject: Microprocessor

Time: 3 Hours

Maximum Marks: 60

Note: Attempt any five questions including Q.no.1 is compulsory. Select one question from each Unit.

- Q1 Difference between following (Any two appropriate difference + example):-
(a) Microprocessor vs. Microcontroller.
(b) Minimum mode vs. Maximum mode of 8086.
(c) 8086 vs. 8088 microprocessor.
(d) Assembler vs Compiler.
(e) TEST vs. TEST in 8086.
(f) Maskable vs. Non Maskable interrupts.
(g) Tightly coupled vs. loosely coupled configuration.
(h) Synchronous vs. Asynchronous mode of IC-8251.
(i) Pipeline vs. memory segmentation.
(j) Mode 0 vs. Mode 1 of IC-8253. (10x2=20)

Unit-I

- Q2 (a) Draw and explain 8086 register bank organization. (7)
(b) What is the use of 6-byte instruction queue in 8086? (3)
- Q3 Short notes (Any two):- (5+5=10)
(a) Microcontroller Architecture (IC-8051c)
(b) Pentium Processors.
(c) 8085 Addressing modes.

Unit-II

- Q4 Draw and explain the General bus (read and write) cycle timing diagrams of 8086. (5+5=10)
- Q5 (a) Explain the flag register of 8088. (5)
(b) Give an example program which uses DI flag in auto incrementing mode. (5)

Unit-III

- Q6 Explain different instruction types in 8086. Give example for each instruction type. (10)
- Q7 (a) What is stack, stack segment and stack pointer in 8086? (2)
(b) Explain stack structure and stack top address calculations. (3)
(c) Give an example program of using PUSH and POP instructions. (5)

Unit-IV

- Q8 What is IC-8255? Draw a block diagram and discuss the architecture of it. (10)
- Q9 What is IC-8279? Draw a block diagram and discuss its various modes of operation. (10)

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