

Code No: C7503

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I - SEMESTER EXAMINATIONS, APRIL/MAY-2012
ADVANCED MICROPROCESSORS
(CONTROL SYSTEMS)**

Time: 3hours**Max. Marks: 60**

**Answer any five questions
All questions carry equal marks**

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- 1.a) Explain the maximum mode of operation of 8086 micro processor with a neat sketch.
- b) Explain the timing diagram of memory read cycle for 8086 processor operating in minimum mode.

- 2.a) Explain various addressing modes of 8086 processor with examples.
- b) Explain the following instructions:
 - i) CALL
 - ii) XLATB
 - iii) AAD.

- 3.a) Write an ALP to sort an array of 16-bit numbers in ascending form.
- b) Explain the stack structure of 8086.

- 4.a) Discuss the various interconnection topologies.
- b) Explain the data types associated with 8087 numeric processor.

- 5.a) Explain the architectural features of Pentium processors.
- b) Explain the memory management of 80486 processor.

- 6.a) Differentiate between RISC and CISC Processors.
- b) Explain the architectural features of DEC Alpha AXP.

- 7.a) Explain the architecture of 8051 microcontroller with a neat block diagram.
- b) Define the following SFRs in 8051 microcontroller
 - i) TMOD
 - ii) PSW
 - iii) SCON
 - iv) TCON.

8. Write short notes on any two of the following
 - a) Segmentation
 - b) Paging Mechanism
 - c) Internal RAM organization of 8051 microcontroller.

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