

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

J-3413[S-1269]

[2037]

MCA (Semester - 5th)

ADVANCED MICROPROCESSOR SYSTEMS (MCA - 504(B))

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A.

Q1)

(15 x 2 = 30)

- a) What is the difference between minimum mode and maximum mode operation of 8086 microprocessor
- b) Explain the importance of ALE signal in a microprocessor.
- c) Explain how the no. of pins are reduced in a dynamic RAM.
- d) What do you understand by $\overline{\text{TEST}}$ signal.
- e) What is multi-tasking?
- f) Explain the operation of INTR and $\overline{\text{INTA}}$ signals.
- g) Explain the difference between synchronous and asynchronous communication.
- h) Draw the schematic showing various signals to interface an 8-bit D/A converter with 8086 microprocessor.
- i) Define conversion efficiency of an A/D converter. Explain its physical significance.
- j) What is an Interrupt service Routine.
- k) Explain the difference between protected and real mode operation of 8086.
- l) Explain the use of segmentation of memory in 80186 microprocessor.
- m) Describe the important features of Pentium pro microprocessor.
- n) Explain Task State Segment (TSS) in 80286.
- o) Describe the importance of local descriptor table and global descriptor table.

P.T.O.

Section - B

(9 x 5 = 45)

- Q2)* Draw the pin diagram of 8086 showing all the signals.
- Q3)* How will you interface microprocessor with DRAM.
- Q4)* Explain the interface of 8284a (clock generator) with 8086 microprocessor.
- Q5)* Explain the various decoding techniques with examples.
- Q6)* Explain the peripheral and memory mapped I/O interfacing techniques
- Q7)* Explain the block diagram of 8237 DMA controller.
- Q8)* Draw and explain the block diagram of programmable interrupt controller.
- Q9)* Explain RS232C serial communication interface.
- Q10)* Explain the advantage of Instruction queue in a microprocessor
- Q11)* Explain the concept of paging with suitable example.
- Q12)* Write a short note on Pentium memory management.
- Q13)* Explain multi media instructions of Pentium.

