MCA (Sem. - 5ᵗʰ)

ADVANCED MICRO PROCESSORS SYSTEMS (Elective - III)

SUBJECT CODE : MCA - 504-B (N2)

Paper ID : [B0127]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   Maximum Marks : 60

Instruction to Candidates:

1) Attempt any one question from each Sections **A, B, C & D**.

2) Section-E is **Compulsory**.

3) Use of Non-Programmable **Scientific Calculator** is allowed.

Section - A

(1 × 10 = 10)

Q1) Explain the operation of memory system of a x86 series microprocessor?

Q2) Compare and contrast the memory and I/O connections found on the 80386 with those found in earlier microprocessors?

Section - B

(1 × 10 = 10)

Q3) Draw block diagram of a DEC Alpha 2106x processor and explain functions of each block?

Q4) What is hyper threading technology? Compare it with dual processing?

Section - C

(1 × 10 = 10)

Q5) Explain the architecture of 403 GA development system?

Q6) What is an Emulator and how it operates?

Section - D

(1 × 10 = 10)

Q7) Discuss the application of microprocessor for controlling the speed of a stepper motor.

Q8) What are the applications of microprocessors? Also discuss the advantages of these applications?

Section - E

Q9)

a) What is a flat mode memory system?

b) What are the major improvements in the architecture of the pentium processor over the 80486?

c) What is a microcontroller?

d) What are the features of 403GA embedded microcontroller chip?

e) Why different addressing modes are used?

f) Discuss any 2 unconditional jump instructions?

g) How a microprocessor connects to the PCI bus?

h) In order to attach a memory device to the microprocessor, it is necessary to decode the address sent from microprocessor. Why?

i) What task the DRAM controller performs?

j) What is NAN?

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