

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE – NOVEMBER – 2022**

**ADVANCED MICROPROCESSORS**

(Maximum Marks : 100)

(Time : 3 hours)

**PART – A**  
(Maximum Marks : 10)

Marks

**I.** Answer **all** questions in one or two sentences. Each question carries 2 marks.

1. Write the importance of pin No. 33 of 8086 Microprocessor.
2. List the different types of interrupts in 8086.
3. Specify the two functional units of Memory Management Unit of 80386 CPU.
4. Name the two integer pipelines in Pentium processor.
5. Define Homogeneous multi core processor. (5x2=10)

**PART –B**  
(Maximum Marks : 30)

**II.** Answer any **five** of the following questions. Each question carries 6 marks.

1. Describe the flag register of 8086 processor.
2. Explain addressing mode. Illustrate register addressing mode and immediate addressing modes of 8086 with proper examples.
3. Define Assembler. Explain the following assembler directives.  
(i) ASSUME (ii) DB (iii) MACRO (iv) ENDP (v) EQU
4. Mention any 6 features of Intel 80386 processor.
5. Explain the concept of Hyper threading technology.
6. List the main features of Pentium Pro processor.
7. List the advantages of multi core processors.

(5x6=30)

**PART – C**  
(Maximum Marks : 60)

(Answer **one full** question from each unit. Each full question carries 15 marks)

**UNIT – I**

**III.** (a) Explain the architecture of 8086 with the help of a neat block diagram. (10)

(b) Explain the physical address generation in 8086 CPU. (5)

**OR**

**IV.** (a) Draw the pin diagram of 8086 CPU. (8)

(b) Discuss the register set of 8086 CPU. (7)

**UNIT – II**

**V.** (a) Briefly explain the arithmetic instruction set of 8086. (9)

(b) Write an ALP in 8086 to find the largest of 10 numbers. (6)

**OR**

**VI.** (a) Explain the various steps involved in the processing of an interrupt in 8086. (9)

(b) Describe interrupt vector table. (6)

**UNIT –III**

**VII.** (a) With the help of a neat block diagram explain the architecture of 80386. (12)

(b) List the control registers of 80386. (3)

**OR**

**VIII.** (a) Explain superscalar architecture with reference to Pentium processor. (8)

(b) Briefly explain paging mechanism in 80386. (7)

**UNIT – IV**

**IX.** (a) Draw and explain the internal architecture of Intel Core 2 Duo processors. (10)

(b) Compare core i3, i5 and i7 processors. (5)

**OR**

**X.** (a) Discuss the major issues in multi core processors. (9)

(b) Discuss the technological features of IA processors. (6)

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