

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, APRIL - 2024**

**ADVANCED MICROPROCESSORS**

[Maximum marks: 100]

[Time: 3 Hours]

**PART – A**

**Maximum marks: 10**

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

1. List four segment registers in 8086.
2. List any 2 sources of interrupts in 8086.
3. Which are the 3 operating modes of 80386?
4. Define the term multi core.
5. Differentiate between HOLD and HLDA.

(5 x 2 = 10)

**PART – B**

**Maximum marks: 30**

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

1. Draw the pin configuration of 8086 microprocessor.
2. Briefly explain the data transfer instructions in 8086.
3. List any six features of Pentium processor.
4. Discuss limitations of single core processor.
5. Explain DB, DW and DD directives of 8086.
6. Draw the flag register of 80386.
7. State major issues in multi core processing.

(5 x 6 = 30)

**PART – C**

**Maximum marks: 60**

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

**UNIT – I**

- III.** (a) Draw a neat diagram of 8086 in minimum mode configuration. (8)
- (b) Draw and explain the flag register format of 8086. (7)

**OR**

- IV.** (a) Briefly discuss the function of NMI, INTR, ALE and DEN pins of 8086. (8)  
(b) Explain the function of BIU in 8086 microprocessor. (7)

**UNIT - II**

- V.** (a) Draw and explain interrupt vector table of 8086 microprocessor. (8)  
(b) Write an ALP using assembler directives of 8086 to find largest number in an array. (7)

**OR**

- VI.** (a) Define assembler directives. Briefly explain different types of assembler directives in 8086. (8)  
(b) Briefly explain the different types of interrupts in 8086 microprocessor. (7)

**UNIT - III**

- VII.** (a) Briefly explain real mode and virtual 86 mode in 80386. (8)  
(b) List the main features of Pentium pro-processor. (7)

**OR**

- VIII.** (a) Explain the different functional units of 80386 microprocessor. (8)  
(b) Briefly explain PVAM when paging is disabled. (7)

**UNIT - IV**

- IX.** (a) Differentiate single core and multi core processor with general block diagram. (8)  
(b) Describe the (i) hyper threading technology (ii) core in microprocessor. (7)

**OR**

- X.** (a) Distinguish between homogeneous & heterogeneous multi core processors. (8)  
(b) Compare i5 and i7 processors. (7)

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