

7441

BOARD DIPLOMA EXAMINATION, (C-20)

JUNE/JULY—2022

DECE - FOURTH SEMESTER EXAMINATION

MICROPROCESSOR

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

3×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define Microprocessor.
2. State the need of interrupts.
3. State the function of Instruction queue.
4. State the meaning of XCHG AL, DH.
5. List any three string manipulation instructions of 8086.
6. List any three assembler directives.
7. List the any three conditional statements of 8086 microprocessor.
8. Define pipelining.
9. List any three 32 bit processors.
10. Define Cache memory.

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**PART—B**

8×5=40

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** (a) Explain the basic block diagram of a microcomputer.

**(OR)**

(b) Explain briefly the terms instruction opcode, fetch cycle and execute cycle.

**12.** (a) Explain with sketch the functional block diagram of 8086.

**(OR)**

(b) Draw the pin diagram of 8086 and state the function of each pin.

**13.** (a) Explain the working of ALU and Control unit.

**(OR)**

(b) Describe with block diagram the minimum mode of operation of 8086.

**14.** (a) Explain any four data transfer instructions of 8086.

**(OR)**

(b) Explain the logic group of instructions of 8086.

**15.** (a) Write an assembly language program of 8086 to find the biggest of a given series of numbers.

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**(OR)**

- (b) Write an assembly language program of 8086 to perform addition and subtraction on 16 bit numbers.

**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 16.** What is the impact on flags of 8086 after addition of two numbers FA and E9 using 8086? Explain with an assembly language programme of 8086 to add these two numbers.

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