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C09-CM-405

3462

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**MARCH/APRIL—2017**  
**DCM—FOURTH SEMESTER EXAMINATION**  
**MICROPROCESSORS**

Time : 3 hours ]

[ Total Marks : 80

**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. Write about any three general purpose registers of 8086.
2. List the components of execution unit in 8086.
3. Write about MUL instruction.
4. Write about JMP instruction with an example.
5. List the three classes of interrupt.
6. Write any three features of programmable interrupt controller 8259.
7. Write the purpose of procedure RETURN instruction.
8. Differentiate between parallel and serial data communications.
9. Draw the structure of keyboard interface using ports.
10. List any three features of 80486 processor.

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**PART—B**

10×5=50

**Instructions :** (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11.** (a) Draw the pin diagram of Intel-8086 microprocessor.  
(b) Explain about any two predefined interrupts of 8086.
- 12.** Explain any five addressing modes of 8086 with examples.
- 13.** (a) Explain the following data transfer instructions of 8086 with examples :  
(i) MOV  
(ii) POP  
(b) Explain the following assembler directive of 8086 with examples :  
(i) ASSUME  
(ii) DW
- 14.** Define procedure. Explain the following types of procedures used in 8086 with examples :  
(a) NEAR procedure  
(b) FAR procedure
- 15.** (a) Define an interrupt. Explain the need for interrupt.  
(b) Write an assembly program to add two 16-bit numbers and store result at SUM.
- 16.** (a) Explain briefly about parallel data transfer schemes.  
(b) Differentiate between asynchronous and synchronous serial data communications.
- 17.** Explain the DMA controller Intel-8257 with functional block diagram.
- 18.** (a) Draw the functional block diagram of Pentium processor.  
(b) Write any four features of Pentium-III processor.

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