

**B.TECH SEM – IV(2007 COURSE) (INF. TECH.) : SUMMER -
2018**

SUBJECT : MICROPROCESSOR ARCHITECTURE AND PROGRAMMING

Day : **Saturday**
Date : **09/06/2018**

S-2018-2628

Time : **10.00 AM TO 01.00 PM**
Max. Marks : 80

N. B. :

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining attempt **ANY TWO** questions from Section – I and Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SEPARATE** answer books.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data, if necessary.

SECTION - I

- Q. 1**
- a) How the pipelining improves the performance of 8086 processor? Explain. (05)
 - b) What are the conditional interrupts in 8086 processor? Explain. (05)
 - c) Explain the working of 8237 DMA controller. (04)
- Q. 2**
- a) Explain the minimum mode of 8086 processor with neat diagram. (07)
 - b) Explain the internal architecture of 8085 processor. (06)
- Q. 3**
- a) Describe the detailed classification of 8086 interrupts. (07)
 - b) Draw and explain cascaded mode of 8259 PIC. (06)
- Q. 4**
- a) Draw and explain the internal architecture of 8237 DMA. (07)
 - b) Explain the interfacing of 8255 PPI and 8086 processor. (06)

SECTION – II

- Q. 5**
- a) Explain in brief the architecture of 8087 co-processor. (05)
 - b) Explain the following assembler directives:- (05)
 i) EXTRN ii) PUBLIC iii) RET
 - c) What is POST? Explain. (04)
- Q. 6**
- a) Explain the PUSH and POP operations in 8087 co-processor. (07)
 - b) Explain the closely coupled configuration of 8086 processor. (06)
- Q. 7**
- a) Write an assembly language programme for multiplication of two 16 bit numbers. (07)
 - b) Differentiate between macro and procedure with example. (06)
- Q. 8**
- a) Draw and explain the memory map after the DOS is loaded. (07)
 - b) Explain the structure of TSR. (06)

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