

ECB

8. Write notes on the following :

- (a) Cache memory. (4)
- (b) Salient features of 80386. (5)
- (c) Architecture of 80486. (5)

[2537/1/I/12]

[05 - 3211]

III/IV B.E. DEGREE EXAMINATION.

Second Semester

Electronics and Communication Engineering
MICROPROCESSORS AND APPLICATIONS

(Effective from the admitted batch of 2006-2007)

Time : Three hours

Maximum : 70 marks

Question 1 is compulsory.

Answer any FOUR from 2 to 8.

1. (a) Explain how do you demultiplex the bus $AD_7 - AD_0$. (2)
- (b) What is the function of HOLD and HLDA signals of 8085 microprocessor? (2)
- (c) Determine the contents of the accumulator and the states of the flags after the execution of the following program
MV1, A, 27H
MOV B, A
INR A
ANA B
DCR A
ALT. (2)

- (d) What is I/O mapped I/O? List its advantages and disadvantages. (2)
- (e) Discuss how do you determine the control word of 8255. (2)
- (f) What is function of EU in 8086 microprocessor? (2)
- (g) Give the register set of 80386 μ P. (2)
2. (a) Explain the operation that takes place after the execution of the following instructions
- (i) LDAX B
 - (ii) RST 6
 - (iii) CALL 3500H
 - (iv) LHL. (7)
- (b) Draw and explain the timing diagrams of the following instructions.
- (i) MOV C, A
 - (ii) OUT PORT. (7)
3. (a) Write an ALP for 8085 to find the largest number in a data array. (7)
- (b) Write an ALP for 8-bit division, dividend being 16-bit number. (7)

4. (a) Discuss about the interrupt structure of 8085 microprocessor. (7)
- (b) Design a memory subsystem to interface to 8085 microprocessor with following memory map. (7)
- 4K \times 8 EPROM -3000 -3FFF
- 2K \times 8 SRAM 40000 -47FF
- Use 1 out of 8 decoder.
5. (a) Draw and explain the internal architecture of 8255. (7)
- (b) Design an interfacing circuit to read data from an A/D converter using 8255 in memory mapped I/O. (7)
6. (a) Discuss the different operating modes of 8253 timer, counter. (7)
- (b) Explain the operation of 8251 USART with a neat block diagram. (7)
7. (a) Draw the architectural block diagram of 8086 microprocessor and explain each block. (7)
- (b) Explain the addressing modes of 8086 with suitable examples. (7)