

TEC-504

1109

Odd Semester Examination 2018-19

**B.TECH. (ECE) (Semester-V)**

**Advance Microprocessor**

**Time: 03:00 Hours**

**Max. Marks:100**

**Note:** Attempt all questions. All questions carry equal marks.

1. Attempt any four parts: [4x5=20]
- (a) Draw internal Architecture of 8085 Microprocessor and explain function of each block in brief.
  - (b) Draw and explain flag register of 8085?
  - (c) The instruction code 0100 1111(4FH) is stored in memory location 2005H. Illustrate the data flow and list the sequence of events when the instruction code is fetched by the 8085.
  - (d) Draw and explain power on reset function of 8086?
  - (e) If the 8085 add 87H and 79H, specify the contents of the accumulator and the status of the S, Z, and CY flags. Find the number of bytes of the following instructions and also identify the opcodes and operands. (1) MVI H, 47H (2) ADI F5H (3) SUB C.
2. Attempt any four parts: [4x5=20]
- (a) Write an assembly language program to add the following Hex numbers. Both the numbers should be saved for future use. Save the number in the accumulator. Numbers: A2H and 18H. Specify the control signals commonly used by the 8085MPU.
  - (b) Explain 8251A (USART) with the help of block diagram. Define the modes word register of 8251 for asynchronous mode.
  - (c) Explain the functional block diagram of 8255PPI.

(d) Explain the function of 8 pins of 8086 microprocessor, which changes their operation in minimum and maximum mode of operation.

(e) Explain the different modes of operation of 8253.

3. Attempt **any two** parts: [2x10=20]

(a) Draw register organization of 8086 and explain function of each register with example.

(b) Briefly explain the concept of memory management and protection in case of 80286. Explain the features of 80286

(c) Explain the operating modes and floating points of Pentium microprocessor.

4. Attempt **any two** parts: [2x10=20]

(a) Draw the block diagram of 8051 and how it differs from microprocessor. Explain memory organization in 8051.

(b) Write difference between 8086 and 80186 microprocessors? Explain PSW of 80186

(c) Explain the different Addressing Modes of 8051. Explain POP and PUSH instruction of 8051.

5. Attempt **any two** parts: [2x10=20]

(a) Explain the basic operation and show the circuit diagram of interfacing keyboard to 8051.

(b) Explain the use of latch in microcontroller interfacing. Explain 7-segment display and its digit pattern for 8051.

(c) Write program for arranging the following numbers in ascending order using 8086 microprocessor; no. are: 2, 8, 18, 8, 33, 22.

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