YMCA UNIVERSITY OF SCIENCE& TECHNOLOGY, FARIDABAD

B. TECH. 4th SEMESTER (UNDER CBS)

01/01/19 E

Microprocessor and Interfacing (CE-210)

Time: 3 Hours Max. Marks:60

Note: 1. *It is compulsory to answer the questions of Part -1. Limit your answers within 20-40 word in this part.*
2. *Answer any four questions from Part -2 in detail.*
3. *Different parts of the same question are to be attempted adjacent to each other.*

01/01 E

PART -1

Q1 (a) What is a microprocessor? (2)
(b) Distinguish between 8085 and 8086 microprocessor. (2)
(c) How instruction cycle, machine cycle and clock cycle are related? (2)
(d) Explain the DAA instruction with an example. (2)
(e) Explain the following instructions as below (2)
(i) LXI (ii) XCHG (iii) SUB B
(f) What is the role of ALU, stack pointer and program counter in a MPU? (2)
(g) Explain the role of ALE signal in 8085 microprocessor. (2)
(h) How interrupts are handled by the system? (2)
(i) Write the applications of microcontrollers. (2)
(j) What is a UART? (2)

PART -2

Q2 (a) Draw and explain the pin diagram of 8085 microprocessor. (5)
(b) What are the addressing modes? Explain addressing modes of 8085 microprocessor. (5)

Q3 (a) Explain the signal description of 8086 microprocessor in minimum mode. (5)
(b) Draw the block diagram of 8086 microprocessor and explain the BIU (5)

Q4 (a) Write a program in assembly language of 8085 to subtract two 16-bit numbers. (5)
(b) Draw the block diagram of 8255 PPI and explain its function. (5)

Q5 (a) What are the different modes of 8253/8254 timer? Explain. (5)
(b) Explain the modes of data transfer used in the micro processing unit. (5)

Q6 (a) Explain the working of the 80386 MPU in real and protected addressing mode. (5)
(b) What is DMA? Explain the operation modes of 8237 Controller. (5)

Q7 (a) Write a program to calculate the factorial of a given number using 8086 MPU. (5)
(b) Explain in brief about (5)
(i) Looping (ii) Counting iii) Subroutine

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