



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 131409

Roll No.

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B. Tech.

**(SEM. IV) THEORY EXAMINATION, 2014-15
INTRODUCTION TO MICROPROCESSOR**

Time : 3 Hours]

[Total Marks : 100

- 1 Attempt any FOUR questions of the following : 4×5=20
- Explain the evolution of microprocessor in brief. Determine the result of A after the execution of the following program-
MVI A, 13H ADI 41 H
INR A ADD A
XRA A
 - How instruction cycle, machine cycle and clock cycle are related? Explain them with proper sketches?
 - Write ALP to load A with 40 H & subtract 29 H from it. Multiply the result by 2 & store the result in the Register L.
 - Explain the difference between (i) RAM and ROM (2) SIM and RIM.
 - Explain the Memory mapped I/O and Peripheral Mapped I/O.

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- 5 Attempt any TWO questions of the following : $2 \times 10 = 20$
- Discuss the various logic devices used in interfacing circuits.
 - Explain the function of the following instructions :
 - SIM
 - PUSH
 - DAA
 - XCHG
 - CALL
 - Draw the timing diagram of the following instruction :
 - ADD B
 - CALL 2050 H.

- 2 Attempt any FOUR questions of the following : $4 \times 5 = 20$
- List the four operations commonly performed by the MPU.
 - What is flag? Explain each flag of 8085 microprocessor.
 - How many address lines are necessary to address 8 K byte of memory?
 - What is function of accumulator?
 - What is transparent latch, and why it is necessary to use a latch with output device?
 - If the clock frequency is 5 MHz, how much time is required to execute an instruction of 18-T states?

- 3 Attempt any two questions of the following : $2 \times 10 = 20$
- Explain the interrupts used in 8085 briefly. What is the difference between 8085 & 8086?
 - With a neat diagram describe the internal architecture of 8085. State the function of each block shown.
 - What is the difference between Maximum and Minimum mode of operation in 8086?