

Code No: R32024

**R10**

**Set No. 1**

**III B.Tech II Semester Supplementary Examinations, November - 2018**

**MICROPROCESSORS AND MICROCONTROLLERS**

(Electrical and Electronics Engineering)

**Time: 3 hours**

**Max. Marks: 75**

**Answer any FIVE Questions  
All Questions carry equal marks**

\*\*\*\*\*

- 1 a) Explain the physical address formation in 8086 microprocessor. [3M]  
b) With a neat diagram, discuss the internal architecture of 8086 microprocessor. [12M]
- 2 a) Write and explain any five string instructions of 8086 microprocessor. [5M]  
b) What are various addressing modes supported by the 8086 microprocessor? Explain with suitable example instructions. [10M]
- 3 a) Explain the implementation of FOR loop in 8086 programming. [5M]  
b) Write an assembly language program in 8086 to arrange the given 16-bit numbers in lowest to highest order. [10M]
- 4 a) Explain the modes of operation of 8255 PPI. [8M]  
b) Explain about interfacing of a DAC 0809 with 8086 using 8255? [7M]
- 5 a) Explain the interfacing of static RAMs to 8086 with neat interface diagram. [8M]  
b) Explain the need of DMA. Discuss in detail about the DMA data transfer scheme. [7M]
- 6 a) List the basic differences between a microprocessor and a microcontroller. [3M]  
b) Draw the architectural diagram of 8051 microcontroller and explain in detail about each block. [12M]
- 7 a) List and explain different data transfer and arithmetic instructions of 8051 microcontroller. [10M]  
b) An array of 10 numbers is stored in the internal data RAM of 8051 starting from location 30H. Write a program to move the array starting from location 40H. [5M]
- 8 a) Explain the applications of relays and push buttons. [6M]  
b) Explain the steps taken to interface a seven segment display with 8051 microcontroller. [9M]

\*\*\*\*\*

[WWW.MANARESULTS.CO.IN](http://WWW.MANARESULTS.CO.IN)

