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

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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]

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