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BTECH
(SEM IV) THEORY EXAMINATION 2021-22
INTRODUCTION TO MICROPROCESSOR

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If you require any missing data, then choose suitably.**SECTION A****1. Attempt all questions in brief.****2*10 = 20**

Q.no	Questions	Marks	CO
(a)	Discuss in brief about the evolution of Microprocessor.	2	2
(b)	What do you mean by address and data buses?	2	1
(c)	Discuss briefly about the Registers in Microprocessor.	2	2
(d)	What do you understand by the Interrupts in Microprocessor?	2	1
(e)	List the difference between Memory Mapped I/O and peripheral I/O.	2	3
(f)	What do you understand by the term Instruction sets?	2	3
(g)	Discuss briefly about the concept of Assembly language.	2	4
(h)	Discuss about the difference between 8253 and 8254.	2	4
(i)	What do you understand by the Peripheral Devices?	2	5
(j)	Find out the physical memory location in 8086 memory when the CS register consist of 7450H and offset register consists 1750H.	2	5

SECTION B**2. Attempt any three of the following:****10*3 = 30**

Q.no	Questions	Marks	CO
(a)	Give a detailed explanation about the 8253 programmable counters.	10	5
(b)	Discuss in detail about the addressing modes of microprocessor. How flow of data and instruction occurs in typical Intel microprocessors?	10	2
(c)	Give the Complete description about the Hardware and Software Interrupts.	10	3
(d)	Discuss in detail about the Conditional call and Return instructions.	10	4
(e)	Discuss in detail about the various logic devices used in interfacing circuits.	10	1

SECTION C**3. Attempt any one part of the following:****10*1 = 10**

Q.no	Questions	Marks	CO
(a)	Draw and explain in detail the pin and functional block diagram of 8086 microprocessor.	10	5
(b)	Explain in detail about the Execution Unit and Memory Segmentation of the Microprocessor.	10	2



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4. Attempt any *one* part of the following: 10 *1 = 10

Q.no	Questions	Marks	CO
(a)	Draw and explain Internal Block diagram of Programmable timer counter and its Modes of operation in detail.	10	1
(b)	Explain in detail about the interrupts used in 8085 in detail. What is the difference between 8085 and 8086?	10	3

5. Attempt any *one* part of the following: 10*1 = 10

Q.no	Questions	Marks	CO
(a)	Write an assembly language program to find the largest number in a block of data. The length of block is in memory location 2200H and the block itself begins from location 2201H. Store the maximum number in 2300H.	10	4
(b)	Write an assembly language program for conversion of BCD to Binary and BCD to seven segments with flow chart.	10	5

6. Attempt any *one* part of the following: 10*1 = 10

Q.no	Questions	Marks	CO
(a)	(i) What is Flag? Explain the flag register of 8085 microprocessor with suitable example. (ii) How many address lines are necessary to address 8 K byte of memory?	10	2
(b)	What are the various types of instructions used in assembly language programming? Explain any one of them in detail.	10	1

7. Attempt any *one* part of the following: 10*1 = 10

Q.no	Questions	Marks	CO
(a)	Write a detailed note on the following: (i) Assembler Level Program(ASMs) (ii) Memory Space	10	4
(b)	Define Direct memory Access (DMA). Draw and explain the block diagram of 8237 DMA controller.	10	3