PAPER ID-420701

Subject Code: KEE602

Roll No: | | | | | | | | | | | | | |

BTECH
(SEM VI) THEORY EXAMINATION 2021-22
MICROPROCESSOR AND MICROCONTROLLER

Time: 3 Hours **Total Marks: 100**

Notes:

- Attempt all Sections and Assume any missing data.
- Appropriate marks are allotted to each question, answer accordingly.

SECTION-A	Attempt **All** of the following Questions in brief	Marks **(10 X 2=20)**
Q1(a)	List all the maskable and non-maskable interrupts of 8085 microprocessor.	
Q1(b)	What is a subroutine program?	
Q1(c)	What is the difference between the microprocessor and microcontroller?	
Q1(d)	Define the term RISC and CISC.	
Q1(e)	What is pipelining?	
Q1(f)	What is USART?	
Q1(g)	What is BSR mode?	
Q1(h)	What is PSW?	
Q1(i)	List the various addressing modes of 8051 microcontroller.	
Q1(j)	Is ARM processor better than Intel?	

SECTION-B	Attempt **ANY THREE** of the following Questions	Marks **(3X10=30)**
Q2(a)	Explain the various logical instructions related to 8085 microprocessor, in detail.	
Q2(b)	State the feature of 8086. Also explain the difference between 8085 and 8086 microprocessor.	
Q2(c)	Draw the block diagram of programmable interrupt controller and explain its operation.	
Q2(d)	Draw the block diagram of microcontroller and explain each block in detail.	
Q2(e)	Write a short note on assembly language programming. Explain it with an example.	

SECTION-C	Attempt **ANY ONE** following Question	Marks **(1X10=10)**
Q3(a)	Illustrate the functional pin diagram of 8085 microprocessor.	
Q3(b)	Write the difference between memory mapped I/O and peripheral I/O.	

SECTION-C	Attempt **ANY ONE** following Question	Marks **(1X10=10)**
Q4(a)	Explain the architecture of 8086 microprocessor.	
Q4(b)	What is memory segmentation in 8086? Explain the advantages of segmentation	

SECTION-C	Attempt **ANY ONE** following Question	Marks **(1X10=10)**
Q5(a)	Discuss the various operating modes of 8253 timer with necessary control words.	
Q5(b)	Draw the pin diagram and block diagram of DMA controller, and explain its operation.	

SECTION-C	Attempt **ANY ONE** following Question	Marks **(1X10=10)**
Q6(a)	Draw the diagram of 8031 connection to external program ROM and 8255.	
Q6(b)	What do you understand by addressing mode? List various types of addressing modes in 8051 microcontroller and give one example of each type.	

SECTION-C	Attempt **ANY ONE** following Question	Marks **(1X10=10)**
Q7(a)	Discuss the various data transfer and branching instructions available in 8051 controller along-with suitable examples.	
Q7(b)	How does an instruction differ from directive? Discuss the different types of assembler directives of 8051 microcontroller.	

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