



Paper ID : 261888

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Subject Code:BEE602

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BTECH
(SEM. VI) THEORY EXAMINATION 2025-26
MICROPROCESSOR

TIME: 3 HRS**M.MARKS: 70**

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1. Attempt all question in brief		02X7=14	
Q. No.	Question	CO	Level
a	Expand ALU and state its function.	CO1	K1
b	What is the evolution tree of microprocessors?	CO1	K1
c	Define multiplexed address/data bus in 8085.	CO2	K1
d	Define segmentation in 8086.	CO3	K2
e	State the advantages of using flowcharts.	CO4	K2
f	What is the role of accumulator in assembly language programming	CO4	K2
g	What is the function of control word register in 8255?	CO5	K2

SECTION B

2. Attempt any three of the following		07X3=21	
Q.No.	Question	CO	Level
a	Explain general architecture of microprocessor.	CO1	K2
b	Explain the execution time computation of an instruction in Intel 8085.	CO2	K3
c	Draw and explain the pin diagram of Intel 8086 microprocessor.	CO3	K2
d	Draw and explain flowcharts for series, parallel, and control structures.	CO4	K2
e	Explain the working of DMA data transfer in microprocessor systems.	CO5	K2

SECTION C

3. Attempt any one part of the following		07X1=07	
Q. No.	Question	CO	Level
a	Differentiate between Harvard architecture and Princeton (Von Neumann) architecture.	CO1	K4
b	Explain different types of buses used in a microprocessor system with suitable examples.	CO1	K3



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4. Attempt any one part of the following		07X1=07	
Q. No.	Question	CO	Level
a	Explain instruction set classification of 8085.	CO2	K2
b	Illustrate the timing diagrams of the following 8085 μ P instruction and explain them in detail. a) MOV A, M b) MVI B, 25H	CO2	K2

5. Attempt any one part of the following		07X1=07	
Q. No.	Question	CO	Level
a	Describe different instruction set groups of 8086 such as data transfer, arithmetic, logic, string, and branch instructions.	CO3	K3
b	Discuss pipelining and maximum mode of 8086.	CO3	K2

6. Attempt any one part of the following		07X1=07	
Q. No.	Question	CO	Level
a	Write an assembly language program to find the largest number in a given data array.	CO4	K3
b	Explain the role of assembler, debugger, and monitor program in assembly language programming.	CO4	K2

7. Attempt any one part of the following		07X1=07	
Q. No.	Question	CO	Level
a	Describe the operating modes and applications of Intel 8253/8254 programmable timer/counter.	CO5	K2
b	Explain interrupt masking, priority management, and cascading operation in Intel 8259.	CO5	K3