PAPER ID-310481

Roll No:

BTECH
(SEM V) THEORY EXAMINATION 2024-25
MICROPROCESSOR & MICROCONTROLLER

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

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

SECTION A

1.   Attempt *all* questions in brief.   **2 x 07 = 14**

Q no.	Question	CO	Level
a.	Enumerate the term, Memory.	1	K1
b.	Enumerate the meaning of Memory Mapped I/O.	1	K1
c.	Enumerate the term, Flow Chart.	2	K1
d.	Determine the use of Interrupts.	2	K3
e.	Discuss the term Interfacing.	3	K2
f.	Clarify the term Microcontrollers.	4	K2
g.	Outline the functions of the Serial Port in 8051.	5	K1

SECTION B

2.   Attempt any *three* of the following: **07 x 3 = 21**

a.	Demonstrate the Address-Data Bus Demultiplexing process in 8085, with neat diagram.	1	K3
b.	Explain the types of interrupts in 8085.	2	K2
c.	Interpret the functions associated with BIU architecture in 8086.	3	K5
d.	Demonstrate the Special Function Registers in 8051.	4	K3
e.	Explain the functions and programming associated to Interrupt Controller block in 8051.	5	K4

SECTION C

3.   Attempt any *one* part of the following: **07 x 1 = 07**

a.	Explain the circuit diagram to connect one RAM of 32KB and one ROM of 32 KB memory size to 8085.	1	K2
b.	Discuss the Functions associated to the 8085 pins: Vpp, CLK (OUT), RESET IN', X1-X2, INTA', RD' and IO/M'.	1	K2

4.   Attempt any *one* part of the following: **07 x 1 = 07**

a.	Demonstrate the output value, Register A content and Flag Register content after executing the below program on 8085: MVI A, 02H MVI C, A4H CMP C ADD C HLT	2	K3
b.	Discuss the Functions associated to the 8085 instructions: STAX, PUSH, SBI, CMA, RAR, RSTn and JNC.	2	K2

5.   Attempt any *one* part of the following: **07 x 1 = 07**

a.	Explain different Addressing Modes associated to 8086.	3	K5
b.	Interpret the functions associated with bits of Control Word in 8253/54 chip.	3	K5

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6.	**Attempt any *one* part of the following:**		07 x 1 = 07
a.	Discuss the Functions associated to all four I/O Port pins in 8051.	4	K2
b.	Discuss the Functions associated to the 8051 pins: PSEN', T1, Vcc, RST, AD5, TxD and WR'.	4	K2

7.	**Attempt any *one* part of the following:**		07 x 1 = 07
a.	Demonstrate interfacing of a 4x4 (16-key) keyboard with 8051, with neat circuit diagram.	5	K3
b.	Discuss the Functions associated to the 8051 instructions: XCH, DIV, XRL, SETB, JZ, MOV and SWAP.	5	K2