PAPER ID-310112

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

B.TECH
(SEM V) THEORY EXAMINATION 2020-21
MICROPROCESSOR & ITS APPLICATIONS

Time: 3 Hours   *Total Marks: 100*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.**   **2 x 10 = 20**

a.	Explain the role of Buses in microprocessor.
b.	Illustrate the difference between Microprocessor and central processing unit.
c.	Explain the need of ALE signal in Microprocessor.
d.	Define instruction cycle and machine cycle.
e.	What is the role of instruction queue in microprocessor 8086?
f.	Explain the following instructions: MOV rd, rs STC
g.	Explain the assembly language program.
h.	Explain all the perspective of END directive.
i.	Explain the Direct memory access.
j.	Compare the serial and parallel communication.

SECTION B

2. **Attempt any *three* of the following:**   **10x3=30**

a.	With the help of suitable diagram, explain the general architecture of a microcomputer system.
b.	Classify the different type of instruction used in 8085 microprocessor.
c.	Describe the role of different units in microprocessor 8086 architecture with suitable diagram.
d.	With the help of flow chart, Write an assembly language program for addition of ten numbers.
e.	Draw and explain the block digram of 8257 DMA controller.

SECTION C

3. **Attempt any *one* part of the following:**   **10x1=10**

a.	Explain the different type of addressing modes of microprocessor with examples.
b.	Justify the need of assembly language in microprocessor with suitable example.

4. **Attempt any *one* part of the following:**   **10x1=10**

a.	Draw the architecture of 8085 microprocessor and explain it.
b.	Illustrate the timing diagram of: MVI A, 30H

5. **Attempt any *one* part of the following:**   **10x1=10**

a.	With suitable examples, explain the different addressing modes of 8086 microprocessor.
b.	Illustrate the need of memory segmentation in 8086 microprocessor with diagram.

6. **Attempt any *one* part of the following:**   **10x1=10**

a.	Write an assembly language program for addition of two 8-bit numbers with flow chart.
b.	Explain the different type of assembler directives.

7. **Attempt any *one* part of the following:**   **10x1=10**

a.	With the help of suitable diagram, explain the 8255 PPI.
b.	Draw the architecture of 8259 PIC and explain its operation.