

**B TECH****(SEM V) THEORY EXAMINATION 2017-18
MICROPROCESSOR & ITS APPLICATIONS**

Time: 3 Hours

Total Marks: 100

Notes: Attempt all Sections. Assume any missing data.

SECTION -A

1. Attempt all question in brief: (2x10=20)

- a) Write about the basic difference between microprocessor and microcontroller.
- b) What are interfacing logical devices?
- c) Define following: (i)Nibble(ii)word
- d) Define following:(i) Mnemonics(ii)Program
- e) Write basic operations of microprocessor with block diagram.
- f) Write about different languages of digital computer.
- g) Define compiler or interpreter in programming languages.
- h) Explain different types of interrupts in 8085.
- i) Draw flag register of 8085.
- j) Write about types of addressing modes in 8086

SECTION -B

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

- a) Explain Minimum Mode operation of 8086 microprocessor with block diagram.
- b) Compare Procedure & Macros in assembler directives of 8086.
- c) Explain the following instructions of 8085 microprocessors
 - a) POP PSW
 - b) XTHL
 - c) SPHL
 - d) PUSH PSW
 - e) CMP M
- d) Give the features and functional block diagram of 8237 DMA controller.
- e) Explain the internal architecture of 8255.

SECTION -C

3. Attempt any **one** parts of the following: (10x1=10)
- a) Explain evolution of microprocessor with its different generation. What do you mean by Addressing mode, explain Different addressing mode used in 8085 with suitable example.
 - b) Draw architecture of 8086 explain its different unit. What do you mean by pipelining and explain the concept of memory segmentation.
4. Attempt any **one** parts of the following: (10x1=10)
- a) Explain assembler level programming and draw the flowchart of assembler level programming?
 - b) Explain following:
 - (i) 8259 Programmable interrupt controller.
 - (ii) Development tools: Editor, Library builder, Linker, Emulator.
5. Attempt any **one** parts of the following: (10x1=10)
- a) Explain different MODES OF OPERATION of 8259.
 - b) Explain minimum and maximum operating modes of 8086 with timing diagram
6. Attempt any **one** parts of the following: (10x1=10)
- a) Draw and explain block diagram and pin configuration of IC-8253.
 - b) Write an assembly level program to find square root of given number
7. Attempt any **one** parts of the following: (10x1=10)
- a) Explain the interrupts sequence and types of interrupt in 8086.
 - b) Draw explains the memory and I/O read cycle of 8085.