

**B.Tech. – VIEP – ELECTRONICS AND  
COMMUNICATION ENGINEERING  
(BTECVI)**

00525

**Term-End Examination**

**June, 2019**

**BIEL-015 : MICROPROCESSOR AND ITS  
APPLICATIONS**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt any seven questions. Assume suitable missing data, if any.*

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1. (a) Differentiate between 8085 and 8088. 5  
(b) What are the different components of 8085 microprocessor ? Explain each in brief. 5
  
2. List the sequence of events that occurs when the 8085 microprocessor reads from memory and draw the timing waveforms of the memory read cycle. 10

3. (a) What is the primary purpose of the 8085 H-L pair with respect to external memory ? List two of its main functions. 4
- (b) Identify the addressing modes of the following instructions : 6
- (i) MOV A, M
  - (ii) RAR
  - (iii) STAX D
  - (iv) LDA START
4. Write an 8085 assembly language program to move a block of data of length  $(100)_{10}$  from the source block starting at 2000H to destination block starting at 3000H. 10
5. Differentiate between : 10
- (i) Maskable and Non-maskable interrupts
  - (ii) Hardware and Software interrupts
  - (iii) Vectored and Non-vectored interrupts
  - (iv) Memory mapped I/O and Peripheral I/O
6. Discuss various modes of operation of 8259 Programmable Interrupt Controller (PIC). 10
7. What do you understand by DMA ? Discuss the internal block diagram of 8257. 10

8. Interface a hexadecimal keyboard, one seven-segment display and one ADC to an 8085/8255 based microcomputer. Draw a hardware schematic of the design. Show only the pertinent signals. 10
9. (a) What do you mean by Addressing modes ?  
What are the different addressing modes of 8086 ? 6
- (b) Write a short note on memory segmentation. 4
10. (a) Draw and discuss the internal block diagram of 80286. 5
- (b) Write a short note on virtual 8086 mode of 80386. 5
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