

**B.Tech. - VIEP - COMPUTER SCIENCE AND  
ENGINEERING (BTCSEVI)**

**Term-End Examination**

**June, 2019**

00595

**BICS-012 : MICROPROCESSORS**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : (i) Attempt any seven questions.*

*(ii) All question carry equal marks.*

1. (a) What is an instruction queue ? Explain. 2x5=10  
(b) What is REP prefix ? How it functions for string instructions ?  
(c) What is a parallel processor ?  
(d) Distinguish amongst 'Short Jump', 'Near Jump' and 'Far Jump'.  
(e) What are important points to be considered in memory interfacing ?
2. Explain different types of registers in 8086 10  
microprocessor architecture.
3. Explain 8254 internal block diagram. Also 10  
explain its operating modes.
4. Briefly discuss the function of 8255, 8251A and 10  
8279 devices in the SDK-86 micro computer system.

5. (a) Draw and explain the pin diagram of 8086. 5  
(b) With a timing diagram, explain the activities of HOLD and HLDA pins of 8086. 5
6. What is software interrupt and hardware interrupt ? How many hardware and software interrupts can 8086 support ? Describe in detail. 10
7. Discuss the software and hardware feature of 80486 microprocessor. 10
8. What is DMA ? Explain the functioning of a typical DMA controller with the help of a block diagram. 10
9. With neat block diagram, explain the working of 8255A ? Also explain the various modes of 8255A. 10
10. Write short notes on **any two** : 5x2=10  
(a) 8254 as a counter  
(b) VSART  
(c) Addressing modes in 8086
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