BICS-012

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)
Term-End Examination
June, 2016

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BICS-012 : MICROPROCESSOR

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any **seven** questions. Each question carries equal marks. Question no. **1** is **compulsory**.*

1. (a)   What is memory segmentation ?

    (b)   Explain the modes of operation of 8086.

    (c)   What is the purpose of INCLUDE directives ?

    (d)   Distinguish amongst 'Short Jump', 'Near Jump' and 'Far Jump'.

    (e)   What are the important points to be considered in memory interfacing ?   *5×2=10*

2. Explain the different types of registers in 8086 microprocessor architecture, in detail.   *10*

3. Describe the series of actions that a DNA controller will perform after it receives a request from a peripheral device to transfer data from the peripheral device to memory with the help of a timing diagram.   *10*

4. Briefly describe the function of 8255, 8251A and 8279 devices in the SDK-86 microcomputer system. *10*

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. (a) What do you mean by bus demultiplexing and buffering in 8086 ? *5*

(b) Explain 8086 maximum mode operation with a suitable diagram. *5*

7. With a neat block diagram, explain the working of 8255A. Also explain the various modes of 8255A. *10*

8. Discuss the upgradations in a Pentium processor over 80486 microprocessor. *10*

9. (a) Describe the main advantages of multiprogramming system over uniprogramming system. *5*

(b) What do you mean by hardware and software interrupts ? *5*

10. Write short notes on any *two* of the following : *2×5=10*

(a) 8254 as a counter

(b) GDTR and LDTR in reference to 80386

(c) Assembler