

**B.Tech. – VIEP – ELECTRICAL ENGINEERING  
(BTELVI)**

**Term-End Examination**

**June, 2015**

00536

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

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt total of seven questions out of 10 questions. Assume suitable missing data, if any.*

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1. Draw the pin-diagram of 8085 microprocessor and give the name of signals associated with timing and control circuit and explain. 10
2. What is a Bus ? What are the different types of buses supported by 8085 ? How does the processor send and receive information from memory and I/O devices ? Explain. 10
3. Define opcode and operand. Consider the following instructions of 8085 :
  - (a) MOV H, L
  - (b) MVI H, 47H
  - (c) ADI F5 H
  - (d) SUB C

Specify the operand in each of the above instructions and explain the task performed by each of the above instructions. 10

4. Explain the following :

- (a) Data Bus
- (b) Address Bus
- (c) Control Bus

Also mention their significance and limitations. 10

5. Draw the timing diagram for the execution of instruction MVI A, 24H stored at memory location 2000H and explain it. Machine codes for the above instruction are 3EH, 24H. 10

6. Six bytes of data are stored in memory locations starting at XX50H. Add all the data bytes. Use register B to save any carries generated while adding the data bytes. Display the entire sum at two output ports, or store the sum at two consecutive memory locations XX70H and XX71H. Write a flow chart and the 8085 assembly program for it. 10

7. (a) What do you understand by Memory Mapped I/O and Peripheral I/O ? 5

(b) Explain the functions of the following instructions : 5

- (i) RIM
- (ii) RST 4
- (iii) ADD M
- (iv) IN 20H
- (v) DAA

8. (a) Explain the concept of segmented memory in 8086. What are its advantages? 5
- (b) Explain the instruction pipelining scheme in 8086. 5
9. What do you mean by the following modes of operation of 8255? 10
- (a) Bit set-reset (BSR) mode
- (b) I/O modes
- How can one of the above two modes be selected through control word?
10. (a) Write down the main functions of segment unit and page unit of 80386 giving details of address translation. 5
- (b) Give the main differences between protected mode of the 80286 and 80386 microprocessors. 5
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