B.TECH. - VIEP-ELECTRICAL ENGINEERING

Term-End Examination

December, 2012

BIEE-015 : MICROPROCESSOR AND APPLICATIONS

Time : 3 hours   *Maximum Marks : 70*

*Note :   Attempt **any seven** questions. All questions carry **equal** marks i.e. Ten each.*

1. Define microprocessor. Discuss the evolution of   **10**
    microprocessor upto 64-bit giving examples.

2. Draw the pin-out diagram of 8085 and explain   **10**
    the function of each pin.

3. Discuss the instruction set of 8085 based on   **10**
    functional categories and word size. (i.e. give
    instruction classification.)

4. Explain the three basic steps required to read from   **10**
    the memory. Draw timing diagram for memory
    read cycle of 8085 microprocessor.

5. A micro computer system is build around 8085 **10** with two i/p ports $F1_H$ and $F2_H$ and one o/p port $F3_H$. Five conveyor belts are connected to the o/p port from line D_0 to D_4. D_6 is connected to an alarm, D_5 and D_7 are reserved for future use. 5 switches S_0-S_4 on i/p port $F1_H$ control the conveyor belts. Switch S_7 on port $F1_H$ is for emergency. Port $F2_H$ is handled manually by a foreman as a precaution and its line switch S_7^1 indicates an emergency on floor. Rest of the switches are don't care on port $F2_H$. Write a program to read both input ports, check lines S_7 and S_7^1 for emergency, if both are set to 1 shutdown the plant and generate an alarm else run the plant as per switch conditions of port $F1_H$ cheek switch conditions coutinuously.

6. Compare 8085, Z80 and 6800 microprocessors on **10** various parameters like memory addressing capacity, speed, instruction set etc.

7. Discuss the 8155 MPD (Multipurpose **10** Programmable Device) with its pin configuration and block diagram.

8. Explain 8086 architecture with suitable block **10** diagram.

9. Discuss different addressing modes of 8086 **10** microprocessors.

10. Write short notes on **any two** : **2x5=10**

   (a) Memory classification.

   (b) Vectored Interrupts of 8085.

   (c) Error checking in data communication.

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