No. of Printed Pages : 2

BIEE-015

B.TECH. - VIEP-ELECTRICAL ENGINEERING

Term-End Examination

June, 2013

BIEE-015 : MICROPROCESSOR AND APPLICATIONS

Time : 3 hours *Maximum Marks : 70*

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

1. Define microprocessor. Discuss the evolution of microprocessor up to 64 bit citing examples. **10**

2. Discuss the 8085 Hardware model and programming model alongwith flag register. **10**

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

4. Draw the timing diagram for execution of instruction MV1 A, 24 H stored at memory location 2000H and explain. **10**

   Machine codes for above instruction are 3EH, 24H.

5. A microcomputer system is build around 8085 with two *i*/p ports F1H and F2H and one o/p port F 3H. Five conveyor belts are connected the o/p port form 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 to S_4 on *i*/p port $F1_H$ control the conveyor belts. S_7 is used for emergency. Port $F2_H$ is handled manually by a foreman as a precaution and its line switch S'_7 indicates emergency on the floor. Write a program to read both *i*/p ports, check the lines S_7 and S'_7 for emergency, if both are set to 1 shutdown the plant and generate an alarm else run the plant as per the switch conditions of port $F1_H$. check switch condition continuously. **10**

6. Discuss 8259 A, Interrupt controller with block diagram. **10**

7. Discuss in detail the structure of control word of 8255 PPI. **10**

8. Discuss the 8086 system configuration in minimum mode. **10**

9. Explain the 8086 programming model. **10**

10. Write short notes on ***any two*** of the following : **10**
    (a) Memory mapped I/O.
    (b) Interrupts of 8085 microprocessor.
    (c) D.M.A.