

01365

B.TECH. - VIEP-ELECTRICAL ENGINEERING

Term-End Examination

June, 2012

BIEE-015 : MICROPROCESSOR AND APPLICATIONS

Time : 3 hours

Maximum Marks : 70

Note : Answer any seven questions. Each question carries ten marks.

1. Explain the architecture and the bus organisation of 8085. Briefly explain the instruction sets used. **10**

2. Define Instruction cycle, Machine cycle and T-state, calculate the time required to execute the following two instructions if the system clock frequency is 750 kHz. **10**
MOV C, B 5 T-states
JMP 2050H 10 T-states

3. Explain Multiple Interrupts of 8085. Write an Assembly Language Program to enable all the interrupts in an 8085 system. **10**

4. Explain the Operation and Priority Modes of 8259A Programmable Interrupt controller with the help of a neatly labelled block diagram. **10**

5. Draw the block diagram of a typical A/D dual slope converter. Summarise the characteristics of an Integrating A/D converter. 10
6. Draw the Pin-out of an 8086 micro-processor. Explain the minimum mode and maximum mode briefly. 10
7. Interface 1024 (1k) bytes of R/W memory to an 8085 system, with the memory map from 3000 H to 33FFH. Use 2114 (1024x4) memory chips and Decoder 74LS138 (3 to 8 decoder). 10
8. What is Direct Memory Access. Using a 8257 DMA controller, represent the Block diagram of pin out and structure of the device. 10
9. Interface a Seven - Segment LED - Output ports using 8155 parallel data transfer scheme. Draw the configuration for the same. 10
10. Write short notes on *any two* : 2x5=10
- (a) SOD and SID
 - (b) R/2R Ladder Network type D/A converter
 - (c) Timing Diagram