

*This question paper contains 4 printed pages.*

Your Roll No. ....

Sl. No. of Ques. Paper: 8308 HC  
Unique Paper Code : 32347504  
Name of Paper : Microprocessors  
Name of Course : Computer Science : DSE for  
Hons.  
Semester : V  
Duration : 3 hours  
Maximum Marks : 75

*(Write your Roll No. on the top immediately  
on receipt of this question paper.)*

*Attempt all questions from Section A.  
Attempt any four questions from Section B.  
Attempt all parts of a question together.*

### SECTION A

1. (a) What is the purpose of Carry, Interrupt, Sign and Trap flags? 4
- (b). Suppose that DS=1000H, BX=1200, NUMB=0320H, SI=1500H, SS=2000H, and BP=0600H. Determine the address accessed by following instructions, assuming real mode operation:
- (i) MOV NUMB[SI], EDX.
  - (ii) MOV CL, NUMB [BX+SI]
  - (iii) MOV AL, [BP]

- interrupts. Explain the steps involved in operation of real mode interrupt. 4
5. (a) Describe mode 1 strobed input operation of 8255 PPI with the help of timing diagrams. 6
- (b) Describe the initialization control words (ICW's) of Programmable Interrupt Controller 8259A. 4
6. (a) Briefly describe the purpose of each T state of 8086 read and write bus cycle. 6
- (b) Describe the register indirect data addressing with an example. 4
7. (a) Give the software commands used to control the operation of DMA 8237. 4
- (b) Why is demultiplexing of buses required in 8086? How is demultiplexing done using ALE pin? Explain. 6