

B.E. (Electrical Engineering (Electronics & Power)) Eighth Semester (C.B.S.)  
**Elective - III : Advanced Microprocessors & Peripherals**

P. Pages : 2

Time : Three Hours



TKN/KS/16/7661

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Due credit will be given to neatness and adequate dimensions.
  9. Assume suitable data wherever necessary.
  10. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Draw and explain the architecture of 8086 microprocessor. **9**  
b) Differentiate between 8088 and 8086 microprocessor. **5**  
**OR**
2. a) What do you mean by addressing mode? Explain the addressing mode of 8086 microprocessor. **7**  
b) Explain the following Instruction of 8086 **7**  
i) movsw                                  ii) PUSH  
iii) LEA                                      iv) XLAT  
v) AAA
3. a) Draw and explain the block diagram of 8255 PPI. **7**  
b) Draw and explain the interfacing of 8255 with 8086. **6**  
**OR**
4. a) Draw and explain the Block diagram of 8251. **7**  
b) Explain the DMA operation. Also draw & explain the mode set register & status Register of 8257. **6**
5. a) Explain the different operating modes of 8259. **6**  
b) Draw and explain the interfacing of 8259 with 8086. **7**  
**OR**
6. Interface keyboard and display controller 8279 with 8086 at address 0080H. Write an ALP to set up 8279 in scanned keyboard with encoded scan, N-key rollover mode. Use a 16 character display in right entry display format, Then clear the display RAM with zeros. Read the FIFO for key closure. If any key is closed, store its code to register CL. Then Write the byte 55 to all the displays and return to DOS. The clock input to 8279 is 2 MHz, operate it at 100 KHz. **13**
7. a) Explain the multiprocessor system bus with examples. **6**

- b) Draw and explain the architecture of 8087 coprocessor. **8**
- OR**
8. a) Explain the organization of PCXT/AT mother board. **7**
- b) Draw and explain the Tag word & status word Register of 8087. **7**
9. a) Gives the comparison between 80286, 386 & 486 microprocessors. **8**
- b) Explain the concept of Virtual memory. **5**
- OR**
10. a) Draw and explain the structure of DOS. **8**
- b) Explain the concept of cache in details. **5**
11. a) Draw and explain the architecture of 8097 microcontroller. **7**
- b) Explain the interfacing of I/O with 8097 microcontroller with example. **6**
- OR**
12. a) Explain the important features of 8097 microcontroller. **6**
- b) Draw and explain the interfacing of switches & LED'S with 8097. **7**

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