B.C.A. Part - II Semester - IV

Advance Microprocessors and Microcontroller Paper - 4ST5

P. Pages : 3

Time : Three Hours Max. Marks : 60

Notes : 1. Assume suitable data wherever necessary.
2. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain the following addressing mode with example. **6**
i) Indexed addressing mode.
ii) Immediate addressing mode.
iii) Base-plus-index mode.

b) Write down the features of 80286 MP. **6**

OR

2. a) Explain the flag register of 80286 MP in detail. **6**

b) Explain the internal architecture of 80286 MP. **6**

3. a) Explain the Register organization of 80386 MP. **6**

   b) Explain the flag register of 80486 MP. **6**

OR

4. a) Explain the following addressing modes of 80386 with example. **6**
   i) Scaled indexed mode.
   ii) Base scaled Indexed mode.
   iii) Base scaled Indexed mode with displacement.

   b) Write down the register organization of 80586 MP. **6**

5. a) Explain. **9**
   i) 8051 oscillator and clock.
   ii) Program counter.
   iii) Data pointer (DPTR)

   b) Explain the timer modes of operation. **3**

OR

6. a) Explain the internal RAM architecture. **6**

   b) Explain the following interrupts. **6**
   i) Timer flag interrupt.
   ii) Serial port interrupt.
   iii) External interrupts.

7. a) Explain any six boolean processing instruction on single bit. **6**

   b) What is mean by addressing mode. Explain the direct and indirect addressing mode. **6**

OR

8. a) Write down the LCALL and ACALL instructions in detail. **6**

   b) Write any six data transfer instructions with example. **6**

9. a) Differentiate between parallel data transfer and serial data transfer. **6**

   b) Explain the interfacing of 8255 to 8051. **6**

OR

10. a) Explain half duplex and full duplex mode of communication. **6**

    b) Explain the power saving option available in 8051 micro controllers. **6**

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