NEP-33 / PSCELT103 - Paper-III : Advanced Microprocessors

P. Pages : 1

Time : Three Hours

GUG/W/23/15089

Max. Marks : 80

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Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat and well-labelled diagram wherever necessary.

1. a) Explain the architecture of 8086 microprocessor. **8**

b) Explain the generation of physical address generation with a suitable example. **8**

OR

c) Explain the addressing modes of the 8086 microprocessor. **8**

d) Explain the block diagram of the 8087 coprocessor. **8**

2. a) What is assembler directives? Explain any three directives. **8**

b) Write the addition of the program for the addition of two 16-bit numbers and the result should be stored in the memory location. **8**

OR

c) Discuss the MASM and DEBUG utility. **8**

d) Explain the function of the stack and its structure. **8**

3. a) Draw the block diagram of 8255 PPI and explain the function of each block. **8**

b) Explain the modes of operation of Timer/Counter 8254. **8**

OR

c) Explain the internal architecture of keyboard interface/display controller 8279. **8**

d) Discuss the command word of programmable interrupt controller 8259. **8**

4. a) Explain the protected mode addressing mode. **8**

b) Explain the architecture of the 80286 microprocessors. **8**

OR

c) Explain the architecture of superscalar architecture. **8**

d) Discuss single instruction multiple data technology. **8**

5. a) Explain the advantages of queue register in 8086 microprocessors. **4**

b) Explain the role of the subroutine. **4**

c) Explain any two operating modes of 8255 PPI. **4**

d) Discuss MMX technology. **4**

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