

M.Sc. (Electronics) (NEP Pattern) Semester-I
NEP-33 / PSCELT103 - Paper-III : Advanced Microprocessors

P. Pages : 2

Time : Three Hours



GUG/S/25/15089

Max. Marks : 80

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

Either:

1. a) Explain the block diagram of internal architecture of 8087 co-processor. 8
b) Explain register organization of 8086 microprocessor. 8

OR

- c) Discuss the any four conditional branch instructions of 8086 microprocessor. 8
d) Explain any four data transfer instruction of 8086 microprocessor. 8

Either:

2. a) Explain various assembler directives. 8
b) With suitable examples explain the role of PUSH and POP instructions. 8

OR

- c) Discuss MASM and DEBUG utility in assembly language. 8
d) What is stack? Explain stack structure. 8

Either:

3. a) Draw and discuss the block diagram of 8279 keyboard/display controller. 8
b) Explain control word format of 8279. 8

OR

- c) Discuss the operating modes of Programmable Peripheral Interface (PPI) 8255. 8
d) Explain the various modes of operation of 8254 timer/counter. 8

Either:

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| 4. | a) | Explain the special features of 80286 processor. | 8 |
| | b) | What is superscalars? Explain the architecture of superscalar. | 8 |

OR

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|-----------|----|---|----------|
| | c) | State advantages and disadvantages of SIMD technology. | 8 |
| | d) | Discuss the real mode and protected mode memory addressing. | 8 |
| 5. | | Solve the following. | |
| | a) | Give any four arithmetic instructions with their meanings. | 4 |
| | b) | What is subroutine? Explain. | 4 |
| | c) | Explain control word format of 8255 PPI. | 4 |
| | d) | Discuss MMX technology. | 4 |
