

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

P. Pages : 2

Time : Three Hours



GUG/W/24/15089

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labeled diagrams wherever necessary.

EITHER:

1. a) What is flag? Explain various types of flags in 8086 μ P. 8
b) Explain with a functional diagram of the Coprocessor 8087. 8

OR

- c) Draw a diagram showing internal architecture of microprocessor 8086 and explain. 8
d) State and explain any four arithmetic instructions of microprocessor 8086. 8

EITHER:

2. a) Describe any four assembler directives with suitable examples in ALP. 8
b) What is subroutine? Explain how subroutine program is executed with example. 8

OR

- c) What is stack? Discuss stack structure in microprocessor 8086. 8
d) Explain PUSH and POP instructions of microprocessor 8086. 8

EITHER:

3. a) Draw internal architecture of the PPI 8255 and write its control word format. 8
b) Describe the various modes of operation of the 8254 with timing diagrams. 8

OR

- c) Describe in detail the structure of Keyboard interface Controller 8279. 8
d) Draw the block diagram of the Programmable interrupt controller 8259-A and explain it. 8

EITHER:

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| 4. | a) | Explain physical address formation in protected virtual addressing of the 80826. | 8 |
| | b) | Compare the special feature of 80286 with 80386. | 8 |

OR

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|-----------|----|---|----------|
| | c) | Describe in brief Single Instruction Multiple Data (SIMD) technology. | 8 |
| | d) | Describe the superscalar Architecture. | 8 |
| 5. | | Solve the followings: | |
| | a) | Write any four conditional instructions. | 4 |
| | b) | Explain the MASM and DEBUG utility. | 4 |
| | c) | Describe 8279 commands for blanking of display. | 4 |
| | d) | State any four features of microprocessor 80486. | 4 |
