M.Sc. F.Y.(Electronics) (Old / New C.B.C.S. Pattern) Sem-I

ELE103 / PSCELET03 / PSELT103 Core-III - Paper-III : Advanced Microprocessors

P. Pages : 2 **GUG/S/19/11156**

Time : Three Hours * 3 0 9 6 * Max. Marks : 80

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

1. Either.

a) Draw the block diagram of 8086 and explain the function of Bus interface unit and execution unit. **8**

b) Explain the function of code segment, data segment, stack segment and Extra segment. **8**

OR

c) Explain the flag register of 8086 μP. **8**

d) Explain the following instruction with suitable example. **8**
i) LEA. ii) LDS.
iii) XCHG. iv) AAA

2. Either.

a) Explain the role of assembler in assembly language programming. Explain the following directives with suitable example. **8**
i) DW ii) ASSUME
iii) END iv) EQU

b) Write a assembly language program for addition of two 16 bit numbers with arrangement for carry using MASM. **8**

OR

c) Explain the stack operation for 8086 μP. **8**

d) What is macro? Explain its necessity in a program with suitable example. **8**

3. Either.

a) Draw the block diagram of 8255 PPI and explain it. **8**

b) Explain the operation of 8255 PPI in mode '0'. **8**

OR

c) Discuss the various operating modes of 8253. **8**

d) Explain the initialization sequence of 8259 A. **8**

4. Either.

a) Explain the protected virtual addressing mode. State it's advantages. **8**

b) Draw block diagram of 80286 μP and explain it. **8**

OR

c) State salient features of 80386 μP. **8**

d) Describe the features of superscalar processor. **8**

5. a) Explain the concept of 8087 coprocessor. **4**

b) Explain the necessity of subroutine with suitable example. **4**

c) Draw a block diagram of 8279 keyboard display interface controller. **4**

d) Discuss Pentium pro-processor. **4**

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