

C 18232

Name.....

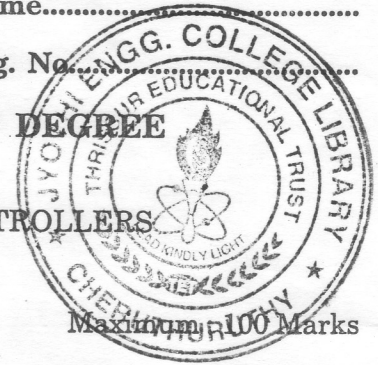
Reg. No.....

**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2011**

EE 04 602—MICROPROCESSOR AND MICROCONTROLLERS

(2004 Admissions)

Time : Three Hours



Answer all questions.

1. (a) Why is 8086 memory organised into two banks of even and odd addresses ? How is bank selection achieved using $\overline{\text{BHE}}$ and A_0 signals ?
- (b) Write a note on 8086 Assembler directives.
- (c) Explain the terms 2-key lock out and N-key roll over.
- (d) Discuss how DACs are interfaced to microprocessor.
- (e) List the salient features of 80386 microprocessor.
- (f) Name any *four* addressing modes of 80386 and give one example for each.
- (g) Brief about the timers present in 8051.
- (h) Define the flag register of 8051 and give any two instructions that affect the OV flag.

(8 × 5 = 40 marks)

2. (a) Explain the functions of various pins of 8086 with respect to maximum mode configuration.

Or

- (b) (i) Compare 8086 and 8088. (3 marks)
- (ii) Explain the Register Indirect, Base plus Index Register Addressing, Register Relative Addressing, Base Plus Register Relative Addressing mode of 8086 with example.

(12 marks)

3. (a) (i) Explain the display modes provided by 8279 . (10 marks)
- (ii) What do you mean by encoded scan and decoded scan ? (5 marks)

Or

- (b) Discuss the organisation and architecture of 8251 A (USART) with functional block diagram.

4. (a) Explain the 80386 processor architecture.

Or

- (b) Elaborate on 80286 Bus Interface Unit.

5. (a) Discuss the architecture of 8051 microcontroller.

Or

- (b) (i) Explain with diagram how external RAM and ROM are interfaced with 8051.
- (ii) Discuss any one application using micro-controller .

(4 × 15 = 60 marks)