C 27149

Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2003

CS. 2K/IT. 2K. 406. HARDWARE SYSTEM DESIGN

Time : Three Hours

Maximum : 100 Marks

Answer **all** *questions.*

I. (a) What are the functions of Network Interface Card ?

(b) What is a ROM-BIOS ? What it does ?

(c) Distinguish Real and Protected mode.

(d) How files are stored in a disk ?

(e) Describe 8279 chip.

(f) Distinguish Static and Dynamic RAM.

(g) Explain the concept of cycle stealing DMA operation.

(h) Distinguish EISA and VESA Bus features.

(8 × 5 = 40 marks)

II. (a) Distinguish MIN/MAX mode of operation of 8086. Draw the relevant diagrams and explain the working.

Or

(b) Draw the Bus timing showing address latching, Ready and wait states in an Intel microprocessor. Explain the working.

III. (a) What is a stack ? How stack works ? Explain with various examples the status of stack with figures.

Or

(b) How a keyboard can be connected to a processor ? Draw diagrams and explain the working.

IV. (a) What is a timer ? How it works ? Draw 8254 timer interface and explain its working with diagrams.

Or

(b) How an A/D convertor works ? Draw a typical ADC interface and explain its proper functioning.

V. (a) What are Hardware interrupts ? Draw 8259A PIC block diagram and explain its working.

Or

(b) How a video display works ? Draw diagram of video display interface and explain its proper functioning.

(4 × 15 = 60 marks)