B. Tech Degree V Semester (Supplementary) Examination July 2010

CS/EB 506 MICROPROCESSOR BASED SYSTEM DESIGN

(2006 Scheme)

Time : 3 Hours | Maximum Marks : 100

PART - A

(Answer *ALL* questions)

(8 x 5 = 40)

I. (a) Write the advantages of memory segmentation.
(b) Write a note on Assembler Directives.
(c) What is meant by Bus Buffering?
(d) Draw and explain a port decoder that decodes 8 bit I/O ports and generates active low outputs for ports 80H – 87H.
(e) Write a note on 80386 protected mode.
(f) Write the Advantages of Register Windows in RISC processors.
(g) Write a note on Sensors and Actuators.
(h) Write a note on 'Features of Microcontrollers over microprocessors'.

PART - B

(4 x 15 = 60)

II. (a) Differentiate between Macros and Procedures. (7)
(b) Explain the sequence of events during the service of a maskable interrupt with the help of figure. (8)

OR

III. (a) Write an Assembly Language program to find the factorial of a single digit number. Display the factorial in BCD format. (8)
(b) Describe the Assembler Instruction format. Also explain the advantages of relocation and linking. (7)

IV. (a) Describe the Minimum mode and Maximum mode configurations with the help of figures. (7)
(b) Describe in detail the interfacing of peripheral chip 8259 with the help of figures. (8)

OR

V. (a) Explain the design of a PC based multimicrorprocessor system with the help of figures. (8)
(b) Explain the internal architecture of peripheral chip 8087. (7)

VI. (a) Describe the salient features of Pentium II, Pentium III and Pentium IV? (8)
(b) Compare the RISC and CISC architectures. (7)

OR

VII. (a) Explain various Addressing modes and Data types of 80386. (8)
(b) Describe the Dual Core Architecture in detail with the help of figures. (7)

VIII. (a) Explain various addressing modes in 8051 microcontroller with the help examples. (8)
(b) Describe the Architecture of 8051 microcontroller. (7)

OR

IX. (a) Describe the interfacing of a sensor with a microcontroller 8051. (8)
(b) Explain various addressing modes of 8051. (7)

***