BTS – V – 11.14 – 0924 Reg. No. | | | | | | | | |

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B.Tech. Degree V Semester Examination November 2014

CS/EB 1506 MICROPROCESSOR BASED SYSTEM DESIGN

(*2012 Scheme*)

Time: 3 Hours Maximum Marks: 100

PART A

(Answer *ALL* questions)

(8 × 5 = 40)

I. (a) Write the functions of pins BHE and TEST in 8086 microprocessor.
(b) Write the usage of DIV and MUL instructions with an example.
(c) What is the usage of RAS and CAS pins for interfacing a DRAM with the processor?
(d) Write a short note on various command words of 8259.
(e) Write a short note on VM and RF flags 80386.
(f) Explain the four types of descriptor tables supported by 80386.
(g) Write the usages of TCON and TMOD registers in 8051
(h) Write a note on various port registers available in 8051.

PART B

(4 × 15 = 60)

II. (a) Write the usage of directives DUP and EVEN in 8086 assembly language programming. (5)
(b) Differentiate between indexed, based indexed and based indexed with displacement addressing modes, with an example. (5)
(c) Write an assembly language program to count the number of capital letters and lower case letters in a given string. (5)

OR

III. (a) Write the usage of any three DOS function calls. (5)
(b) Explain how the 8086 processor uses RQ/GT pin to handle the local bus masters. (5)
(c) Explain, with an example, the usage of LOOP/LOOPE/LOOPZ mnemonics in 8086 assembly language programming. (5)

IV. (a) Explain various operational modes of 8259. (7)
(b) Explain maximum mode operation of 8086, with the help of block diagram. (8)

OR

V. (a) Draw the block diagram of 8087 and explain how it interfaces with 8086. (10)
(b) Explain various operational modes of 8237. (5)

VI. (a) Explain the protected mode operation of 80386. (7)
(b) Write a short note on features of Pentium pro processor. (8)

OR

VII. (a) Explain the architectural characteristics of RISC processors. (10)
(b) What is meant by register windowing in RISC processors? (5)

VIII. Explain the memory and register organisation of 8051. (15)

OR

IX. (a) Explain various addressing modes of 8051. (7)
(b) Explain any three assembler directives available in 8051. (8)

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