MCA DEGREE I SEMESTER EXAMINATION NOVEMBER 2010

CAS 2104 COMPUTER ORGANISATION (Prior to 2007 Admissions)

Time : 3 Hours. Maximum Marks : 50

PART – A

(Answer ***ALL*** questions)
(All questions carry ***EQUAL*** marks)

(15 x 2 = 30)

I. (a) Write a note on sign and magnitude, 1's complement and 2's complement representations of numbers.
(b) Draw and implement an X-OR gate using minimum number of NAND gates only.
(c) Write various types of registers.

II (a) What is meant by memory refreshing? Why is it needed?
(b) Why SRAM is larger in size than DRAM?
(c) Describe the structure of micro program for control memory.

III (a) Define the term 'Bus Bandwidth'.
(b) What is meant by RAID?
(c) Write the features of any one parallel standard interface.

IV (a) What is meant by 'Directives'?
(b) Write the usage of flag registers.
(c) Write any two mnemonics that can be used for bit level operations.

V. (a) Write the usage of defining subroutine.
(b) Write any two mnemonics to handle I/O devices.
(c) What is the usage of Segment Resgisters?

PART – B

(All questions carry ***EQUAL*** marks) (5 x 4 = 20)

VI. A Write a note on floating number representation in IEEE format.

OR

B. (i) Describe various types of Flip- Flops with their truth tables.
(ii) Compare the features of Synchronous Counters and Synchronous Counters.

VII. A. Describe the features of various designs of Control Unit.

OR

B. Describe the concept of Interfacing a DRAM memory.

VIII. A. Describe various steps of Interrupt I/O data transfer.

OR

B. Categorize and explain various type of Secondary Storage Devices.

IX. A. What is meant by Addressing Mode? Explain various addressing modes and their significance

OR

B. With a program to display a string on the screen in the reversed form.

X. A. Write a subroutine in assembly language to find the average of three numbers.

OR

B. Explain various branching instructions and their operational concept.

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