Code No: R6-11-MCA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA-I Semester Regular Examinations, February 2010
COMPUTER ORGANIZATION

Time: 3hours **Max.Marks:60**

Answer any Five questions
All questions carry equal marks

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1.a) Give the decimal equivalent of $(11010.111)_2$, $(736.5)_8$, $(3FA.8)_{16}$.
b) Obtain the 9's Complement of 1763 in BCD, add it to BCD 8391 and interpret the result obtained.

2.a) Simplify the Boolean function in
i) Sum of products form and ii) Product of sums form:
$F(A,B,C,D) = \Sigma(0,1,2,5,8,9,10)$.
b) Write the graphic symbols, characteristic tables, and excitation tables for RS, JK flip flops.

3.a) What is a multiplexer? With a neat diagram explain the working of 4 by 1 multiplexer.
b) What is an associative memory? Explain how it works.

4.a) Explain the set-associative mapping of cache memory.
b) Discuss the different addressing modes.

5.a) State and explain INTEL-8086 input-output instructions.
b) Explain the shift and rotate instructions in INTEL-8086.

6.a) Explain about zero, one, and two address instructions. Give suitable example to each.
b) What are assembler directives?

7.a) Discuss clearly the microprogrammed control.
b) Explain about memory mapped I/O.

8. Write short notes on any three of the following
a) DMA transfer
b) Priority interrupts
c) Address sequencing
d) ROM chips

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