Paper ID [EC502]

(Please fill this Paper ID in OMR Sheet)
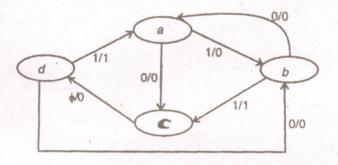
MAY 2008

M.Tech. (Sem. - 1ˢᵗ)

ELECTRONICS SYSTEM DESIGN (ECE - 502)

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

1) Attempt any **Five** questions.

2) **All** questions carry equal marks.

Q1) Design and implement half and full adder using only NOR gates?

Q2) Design a circuit that will compare two 2-bit numbers. Implement the circuit using only NOR gates and then again repeat using only NAND gates?

Q3) What are basic clocking aspects with flip flops? What is clock skew? Describe why clock skew create data transmission problems?

Q4) Design a circuit that will function according to the state diagram given below. Use only T flip flop.

Q5) What are different design phases in design of system controller? What is the importance of system documentation?

Q6) What is the main purpose of using MSI decoders and multiplexers in system controller design? Discuss in detail.

Q7) What are the different steps that lead to asynchronous machine design?

Q8) What is electromagnetic interference in digital circuits and what are the ways by which we can avoid it?

× × ×