

C 074

B.E. DEGREE EXAMINATION, APRIL/MAY 2009.

FOURTH SEMESTER

ELECTRONICS AND INSTRUMENTATION ENGINEERING

EC 1312 — DIGITAL LOGIC CIRCUITS

(Common to Instrumentation and Control Engineering)

(REGULATION 2007)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the two primary building blocks used to construct more complex digital components in IC technology?
2. Show the circuit of n channel MOS inverter.
3. Write procedural steps of the design of combinational logic circuits.
4. How many full adders are required for a n bit binary adder? How many BCD adders are required for a n digit decimal parallel adder?
5. Give the truth table of a 4 input Priority encoder.
6. List any four HDL operators.
7. Define a State table. What are the four sections of a state table?
8. What are the three methods of state assignments?
9. Draw the block diagram of a Asynchronous sequential circuits.
10. How the race conditions can be avoided?