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Roll No

EC-6004 (CBGS)

B.E. VI Semester

Examination, May 2019

Choice Based Grading System (CBGS) VLSI Circuits and Systems

Time: Three Hours

Maximum Marks: 70

Note: i) Attempt any five questions.

- ii) All questions carry equal marks.
- iii) Assume suitable data, if required.
- a) Draw and explain the Y chart for VLSI design flow.
 - b) Why design strategies are prove to be the important part for VLSI design? Give your statements to justify your answer.
- a) Draw and explain any of the combinational circuit using CMOS and verify their result with help of suitable truth tables.
 - b) Write some rules for using CAD tools.
- 3. a) Define asynchronous sequential machine.
 - b) Write and explain finite state machine sequence and prove the results with the help of mealy model.
- a) MOS transistors could be worked as switch. Verify this statement with the help of suitable example.

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- Explain the verbal description of any MOS equivalent state machines.
- a) What are the consequences of controllers in state machine? Explain.
 - Write any example that shows races and hazards condition in sequential state machine and explain it's remedial.
- 6. a) How many types of secondary assignments are there in asynchronous sequential machine? Name them and explain any one. http://www.rgpvonline.com
 - Explain the principle of Fault detection using Boolean difference method. How does it different from the path sensitization method.
- a) Define Pulse mode asynchronous sequential machine with example.
 - b) Explain Stuck at 1 and stuck at 0 conditions with examples.
- 8. Write short notes (any four)
 - a) PROM
 - b) FPGA
 - c) PALASM
 - d) Modularity of circuit
 - e) Data System Designing
