Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

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.

1. 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.

2. 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.

4. a) MOS transistors could be worked as switch. Verify this statement with the help of suitable example.

74

   b) Explain the verbal description of any MOS equivalent state machines.

5. a) What are the consequences of controllers in state machine? Explain.
   b) 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
   b) Explain the principle of Fault detection using Boolean difference method. How does it different from the path sensitization method.

7. 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

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75