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

Roll No .....

MEVD-301(B)

M.E./M.Tech. III Semester

Examination, June 2016

System On Chip (SOC) Design (Elective-IV)

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions out of eight.
ii) All questions carry equal marks.

1. a) What are various recent advancement in semiconductor technology? Explain in brief.
   b) What do you mean by SOC? How the implementation of a complex system is perform on a single programmable chip?

2. a) Write short note on FPGA architecture.
   b) Explain about tools and techniques used for designing System On Chip (SOC) design using programmable logic.

3. a) Describe various applications of embedded system with suitable diagram and description.
   b) How the system level hardware-software design of embedded system is performed? Explain briefly.

4. a) Write down the consequence and properties of any kind of ARM system on chip architecture.
   b) Explain implementation aspects of ALU.

5. a) Describe various operator types provided in verilog.
   b) Explain gate level modelling used in verilog with relevant example.

6. a) Write verilog code for 4 × 1 MUX.
   b) Write verilog code for 4 bit ripple carry full adder.

7. a) How verification using simulation is performed in verilog?
   b) What are the steps used for synthesis and programmable device implementation on a FPGA board?

8. Write short notes on (any two) :
   a) CISC / RISC
   b) Memory hierarchy
   c) Delays in verilog
   d) Sequential and parallel blocks

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