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

Roll No ....

MEVD-301(B)

M.E./M.Tech., III Semester

Examination, December 2016

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

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions out of eight questions.

ii) All questions carry equal marks.

iii) Assume suitable data, if required.

1. a) Enlist various advances in semiconductor technology which proves very helpful for electronic industries.

   b) How can a complex system be implemented on a single chip?

2. a) Explain PLD's. Give its classification.

   b) Discuss the tools and techniques used for designing. Verifying and implementing SOC using programmable logic.

3. a) Differentiate between CISC and RISC.

   b) What is Cache Memory? How is MMU different from the main memory?

4. a) Draw and explain ARM based system on chip architecture with detailed functionality.

   b) Discuss about the cache memory and MMU.

5. a) How is verification performed using simulation in Verilog?

   b) Explain synthesis and device implementation on an FPGA development board using Verilog HDL.

6. a) Give an introductory note on programmable chip architecture. Discuss about the logic synthesis of programmable chip.

   b) Explain any one embedded system application and mention its hardware and software designing.

7. a) Differentiate between concurrent statement (combinational) and procedural statement (sequential) in Verilog using suitable example.

   b) Write a Verilog module for full adder.

8. Write short notes on any two :

   a) VHDL Vs Verilog

   b) Multipliers

   c) SOC concept

   d) Simulation

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