

Code No: I6804/R16

M. Tech. I Semester Regular Examinations, January-2017

**HARDWARE SOFTWARE CO-DESIGN**

Common to VLSI&ES (68), ES&VLSI (48), VLSID &ES (77), ES &VLSID (81), VLSI (57), VLSID (72), VLSI System Design (61), VLSI & Micro Electronics (76)

Time: 3 Hours

Max. Marks: 60

---

*Answer any FIVE Questions*  
*All Questions Carry Equal Marks*

---

1. a Explain the FSM model for elevator controller.  
b Explain CISC architecture with neat sketch.
2. a Discuss the parallel architecture.  
b List and explain the different concurrencies.
3. a Explain the prototyping and emulation techniques.  
b Describe the Aptix prototyping system.
4. a Discuss the 8051 an 8-bit microcontroller architecture.  
b Explain mixed systems and less specialized systems.
5. a Discuss the optimizations for embedded processor.  
b What is compiler validation? Explain.
6. a Explain blocking versus non blocking operations.  
b Write about Interface verification.
7. a Discuss the system level specification languages.  
b Explain the architecture oriented intermediate forms.
8. a Explain the automatic generation of cosimulation interfaces.  
b Discuss the COSYMA design flow and user interaction.

\*\*\*\*\*