

1. **"Power Electronics"** - M. H. Rashid 3<sup>rd</sup> edition, PHI / Pearson publisher 2004.
2. **"Power Electronics"** - M. D. Singh and Kanchandani K.B. TMH publisher, 2<sup>nd</sup> Ed. 2007.

#### REFERENCE BOOKS:

1. **"Power Electronics, Essentials and Applications"**, L Umanand, John Wiley India Pvt. Ltd, 2009.
2. **"Power Electronics"**, Daniel W. Hart, McGraw Hill, 2010.
3. **"Power Electronics"**, V Nattarasu and R.S. Anandamurthy, Pearson/Sanguine Pub. 2006.

### EMBEDDED SYSTEM DESIGN

Subject Code	: 10EC74	IA Marks	: 25
No. of Lecture Hrs/Week	: 04	Exam Hours	: 03
Total no. of Lecture Hrs.	: 52	Exam Marks	: 100

#### UNIT 1:

**Introduction to Embedded System:** Introducing Embedded Systems, Philosophy, Embedded Systems, Embedded Design and Development Process.

#### UNIT 2:

**The Hardware Side:** An Introduction, The Core Level, Representing Information, Understanding Numbers, Addresses, Instructions, Registers-A First Look, Embedded Systems-An Instruction Set View, Embedded Systems-A Register View, Register View of a Microprocessor  
**The Hardware Side:** Storage Elements and Finite-State Machines (2 hour)  
 The concepts of State and Time, The State Diagram, Finite State Machines-A Theoretical Model.

#### UNIT 3:

**Memories and the Memory Subsystem:** Classifying Memory, A General Memory Interface, ROM Overview, Static RAM Overview, Dynamic RAM Overview, Chip Organization, Terminology, A Memory Interface in Detail, SRAM Design, DRAM Design, DRAM Memory Interface, The Memory Map, Memory Subsystem Architecture, Basic Concepts of Caching, Designing a Cache System, Dynamic Memory Allocation.

#### UNIT 4:

**Embedded Systems Design and Development :** System Design and Development, Life-cycle Models, Problem Solving-Five Steps to Design, The

*D.V.T.*

H. O. D.

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