EE101: topics and references

M. B. Patil
mbpatil@ee.iitb.ac.in
www.ee.iitb.ac.in/~sequel

Department of Electrical Engineering
Indian Institute of Technology Bombay

Overview:

* introduction, basic physical laws, circuit elements
* KVL, KCL, and circuit theorems, simple circuits
* transients in *RL*, *RC*, *RLC*, sinusoidal steady state, real/reactive power, three-phase circuits
* working principles of transformers, AC/DC machines
* characteristics of diodes, BJT, Op-Amp
* analog circuit Examples: rectifiers, amplifiers, oscillators
* digital circuits: AND/OR gates, flip flops, DAC/ADC

References

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* S. Franco, *Design with Operational Amplifiers and Analog Integrated Circuits*, McGraw-Hill, 1997.
* W. H. Hayt and J. Kemmerly, *Engineering Circuit Analysis*, McGraw-Hill, 2006.
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* M. M. Mano, and M. D. Ciletti, *Digital Design*, 4th edition, Prentice Hall (Pearson education), 2007.
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* A. S. Sedra, K. C. Smith, and A. .N. Chandorkar, *Microelectronic Circuits*, Oxford University Press, 2004.
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