TEXT BOOKS:
1. **"Digital Logic Applications and Design"**, John M Yarbrough, Thomson Learning, 2001.
2. **"Digital Principles and Design "**, Donald D Givone, Tata McGraw Hill Edition, 2002.

REFERENCE BOOKS:
1. **"Fundamentals of logic design"**, Charles H Roth, Jr; Thomson Learning, 2004.
2. **"Logic and computer design Fundamentals"**, Mono and Kim, Pearson, Second edition, 2001.
3. **"Logic Design"**, Sudhakar Samuel, Pearson/Saguine, 2007

NETWORK ANALYSIS
(Common to EC/TC/EE/IT/BM/ML)

Sub Code	:	10ES34	IA Marks	:	25
Hrs/ Week	:	04	Exam Hours	:	03
Total Hrs.	:	52	Exam Marks	:	100

UNIT 1:
Basic Concepts: Practical sources, Source transformations, Network reduction using Star – Delta transformation, Loop and node analysis With linearly dependent and independent sources for DC and AC networks, Concepts of super node and super mesh.

UNIT 2:
Network Topology: Graph of a network, Concept of tree and co-tree, incidence matrix, tie-set, tie-set and cut-set schedules, Formulation of equilibrium equations in matrix form, Solution of resistive networks, Principle of duality.

UNIT 3:
Network Theorems – 1: Superposition, Reciprocity and Millman's theorems.

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UNIT 4:
Network Theorems - II:
Thevinin's and Norton's theorems; Maximum Power transfer theorem

UNIT 5: Resonant Circuits: Series and parallel resonance, frequency-response of series and Parallel circuits, Q –factor, Bandwidth.

UNIT 6:
Transient behavior and initial conditions: Behavior of circuit elements under switching condition and their Representation, evaluation of initial and final conditions in RL, RC and RLC circuits for AC and DC excitations.

UNIT 7:
Laplace Transformation & Applications : Solution of networks, step, ramp and impulse responses, waveform Synthesis

UNIT 8:
Two port network parameters: Definition of z, y, h and transmission parameters, modeling with these parameters, relationship between parameters sets.

TEXT BOOKS:
1. "Network Analysis", M. E. Van Valkenburg, PHI / Pearson Education, 3rd Edition. Reprint 2002.
2. "Networks and systems", Roy Choudhury, 2nd edition, 2006 re-print, New Age International Publications.

REFERENCE BOOKS:
1. "Engineering Circuit Analysis", Hayt, Kemmerly and DurbinTMH 7th Edition, 2010
2. "Basic Engineering Circuit Analysis", J. David Irwin / R. Mark Nelms, John Wiley, 8th ed, 2006.
3." Fundamentals of Electric Circuits", Charles K Alexander and Mathew N O Sadiku, Tata McGraw-Hill, 3 ed, 2009.

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