



Competitive Exam – Post Gradute (MSc-Program) 2025-2026

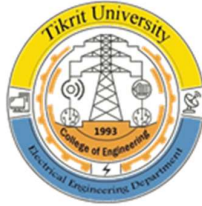
Basic of Electrical Engineering :

Refrences:

1) Robert L. Boylestad, "Introductory circuit analysis", 10th edition, Prentice Hall, March 4, 2002.

	Subject
1	Analysis of D.C circuits
2	Analysis of single phase A.C. circuits
3	Resonance
4	Power factor correction





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Mathimatics :

Refrences:

- 1) George B. Thomas, Jr., "Thomas' calculus : early transcendentals", Twelfth Edition, Addison Wesley, 2010.
- 2) C. Ray, " Advanced Engineering Analysis", Wylie.

	Subject
1	Transcendental Functions
2	Methods of Integration
3	Partial Differentiation
4	Ordinary Differential Equations
5	Multiple Integral
6	Matrices
7	Fourier series
8	Fourier transform



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Electrical Networks :

Refrences:

1) James W. Nilsson , Susan A. Riedel , “Electrical Circuits”, 8 Edition, Pearson Prentice Hall, 2008.

	Subject
1	Transient Analysis of RLC Circuits
2	S-Plane Circuits Analysis
3	Two Port Networks
4	Filters





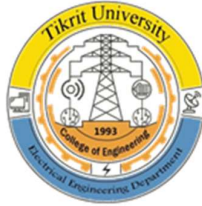
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Electical Machines :

Refrences:

- 1) Stephen J Chapmans, "Electrical Machinery Fundamentals", 4th edition, MicGraw Hill, 2005.
- 2) D. P. Kothari and I. J. Nagrath, "Electrical Machines", 4th edition, MicGraw Hill, 2010
- 3) Fitzgerald, Arthur Eugene, et al. "Electric machinery". Vol. 5. New York: McGRAW-hill, 2003.
- 4) Mehta, V. K., and Rohit Mehta. "Principles of electrical machines". S. Chand Publishing, 2008

	Subject
1	D.C. Machines
2	Transformers
3	Single & Three Phase Induction Motors
4	Synchronous Machines



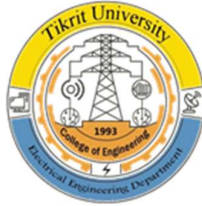
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Electrical Power Systems:

References:

- 1) Gobta , “A course in electrical power”
- 2) John .J.Grainger wiliam D.stevenson "power system analysis" McGraw-Hill 1994
- 3) Hadi Saadat "power system analysis" McGraw-Hill 1999
- 4) Paul M. Anderson, Charles and etal :Power System Protection: Willy 2021
- 5) V. Jagannathan, “Power Electronics Devices and Circuits”, 2011

	Subject
1	Transmission line parameters
2	Underground cables
3	Distribution
4	Load Flow Study
5	Faults Analysis
6	Stability
7	Protection
8	Types and Characteristics of Switching Devices
9	AC to AC, AC to DC, DC to DC and DC to AC Converters



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Electronics :

Refrences:

- 1) Robert L. Boylestad and Louis Nashelsky, “Electronic Devices and Circuit Theory” ,11th ed. Taylor & Francis, 2013.
- 2) Jacob Millman ,Christos Halkias , Chetan Parikh, “Integrated Electronics” , 2nd ed, 2017
- 3) Thomas l. Floyd,, “Digital Fundamental”, Pearson Prentice Hall
- 4) Charles H. Roth, Jr. and Larry L. Kinney , “Fundamentals of Logic Design” , Cengage Learning, 6th ed., 2010

	Subject
1	Frequency Response
2	Operational Amplifiers
3	Analysis & design of synchronous systems
4	Digital to analogue & analogue to digital converters
5	digital devices



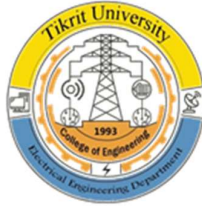
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Communications:

References:

- 1) Ferrell G. Stremmler, "Introduction to Communication Systems", Eddition Wesley publishing company, 1990.
- 2) B. P. Lathi, "Modern Digital and Analog Communication System", Rinehart and Winston, Inc 1989.
- 3) R. E. Ziemer and W.H. Tranter, "Principles of Communications", John Wiley and Sons, Inc., 1995.
- 4) Symon Haykin, "Communication Systems", John Wiley and Sons, Inc. 2001.
- 5) Digital Signal Processing by Li Tan

	Subject
1	Signals and Systems
2	Linear CW modulation :Amplitude modulation and angle modulation
3	Digital modulation: ASK, FSK, PSK, PAM, PCM and QAM
4	Multiplexing : Frequency division and time division
5	Convolution: continous and discrete
6	Discrete Fourier transform and fast Fourier transform
7	Digital filters: FIR and IIR
8	Information Theory.



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Control System Engineering:

References:

- 1) Smarajit Ghosh. Control Systems Theory and Applications PEARSON.2007
- 2) Ogata. Modern Control Engineering.3rd ED, Prentice Hall,1997
- 3) Ogata. Modern Control Engineering.5th ED, Prentice Hall,2010
- 4) Norman Nise.Control System Engineering.6th Ed ,John wiley & Sons,2011
- 5) Richard C. Dorf &Robert H Bishop. Modern Control Systems.12th Ed, Prentice Hall,2011

Subject	
1	State Space
2	.Stability of Linear Control System
3	PID Controller Design
4	Frequency Response Analysis
5	Compensation Methods