Recommended Books

- **1st Semester**

1. **Applied Mathematics-1**

Text:
[T1] B. S. Grewal,"Higher Engineering Mathematics" Khanna Publications.
[T2]. R. K. Jain and S.R.K. Iyengar,"Advanced Engineering Mathematics "Narosa Publications.
References:
[R1] E. kresyzig," Advance Engineering Mathematics", Wiley publications
[R2] G.Hadley, " Linear Algebra" Narosa Publication
[R3] N.M. Kapoor, " A Text Book of Differential Equations", Pitambar publication.
[R4] Wylie R, " Advance Engineering mathematics" , McGraw-Hill
[R5] Schaum's Outline on Linear Algebra, Tata McGraw-Hill
[R6] Polking and Arnold, " Ordinary Differential Equation using MatLab" Pearson.

2. **Applied Physics-1**

You won't find the whole syllabus in one book try to attend the classes and take notes if possible !!
Text Books:
[T1]. Arthur Beiser, 'Concepts of Modern Physics', [McGraw-Hill], 6th Edition 2009
[T2]. A. S.Vasudeva, 'Modern Engineering Physics', S. Chand, 6th Edition, 2013.
Reference Books
[R1]. A. Ghatak 'Optics' , TMH, 5th Edition, 2013
[R2]. G. Aruldhas 'Engineering Physics' PHI 1st Edition, 2010.
[R3]. Fundamentals of Optics : Jenkins and White , Latest Edition
[R4]. C. Kittle, "Mechanics", Berkeley Physics Course, Vol.-I.
[R5]. Feynman " The Feynman lectures on Physics Pearson Volume 3 Millennium Edition, 2013
[R6]. Uma Mukhrji 'Engineering Physics' Narosa, 3rd Edition, 2010.
[R7]. H.K. Malik & A. K. Singh 'EngineeringPhysics' [McGraw-Hill],1st Edition, 2009.

3. **Manufacturing Processes**

Text Books:
[T1]. Manufacturing Process by Raghuvanshi.(Dhanpat Rai and Co.)
[T2]. Manufacturing Technology by P.N.Rao (TMH publications)
Reference Books:
[R1]. **Workshop Technology by Hazra-Chowdhary** (Most Recommended)
[R2]. Production Engineering by R.K.Jain (Khanna Publishers)
[R3]. Workshop Technology by Chapman (Elsevier Butterworth-Heinemann)
[R4]. Fundamentals of Modern Manufacturing by Mikell P. Groover (Wiley India Edition)
[R5]. Manufacturing Processes for Engineering Materials by Kalpakjian and Schmid (Pearson)

4. **Electrical Technology**

Text Books:
[T1] J.B. Gupta(Recommended by seniors)
[T2] S.N Singh, "Basic Electrical Engineering" PHI India Ed 2012
[T3] Chakrabarti, Chanda,Nath "Basic Electrical Engineering" TMH India", Ed 2012.
Reference Books:
[R1] William Hayt "Engineering Circuit Analysis" TMH India Ed 2012
[R2] Giorgio Rizzoni "Principles and Application of Electrical Engineering" Fifth Edition TMH India.

5. **Human Values and Professional Ethics**

Text Books:
[T1] Professional Ethics, R. Subramanian, Oxford University Press.
[T2] Professional Ethics & Human Values: S.B. Srivasthva, SciTech Publications (India) Pvt. Ltd. New Delhi.
[T3] Professional Ethics & Human Values: Prof. D.R. Kiran, TATA Mc Graw Hill Education.

References:
[R1] Success Secrets for Engineering Students: Prof. K.V. SubbaRaju, Ph.D., Published by SMARTstudent. (Do read if you have time!).
[R2] Ethics in Engineering Mike W. Martin, Department of Philosophy, Chapman University and Roland Schinzinger, School of Engineering, University of California, Irvine.
[R3] Human Values: A. N. Tripathy (2003, New Age International Publishers)
[R4] Value Education website, http.//www.universalhumanvalues.info[16]
[R5] Fundamentals of Ethics, Edmond G. Seebauer & Robert L. Barry, Oxford University Press.
[R6] Human Values and Professional Ethics: R. R. Gaur, R. Sangal and G. P. Bagaria, Eecel Books (2010, New Delhi). Also, the Teachers‟ Manual by the same author.

6. **Fundamentals of Computing**

Text:
[T1] **Peter Norton, Introduction to computers, Sixth Edition Tata McGraw Hill (2007).**
[T2] Andrews Jean, A+Guide to Managing & Maintaining Your PC, Cengage Publication 6/e
References:
[R1] Anita Goel, Computer Fundamentals, Pearson Education.
[R2] Joiner Associates Staff, Flowcharts: Plain & Simple: Learning & Application Guide , Oriel Inc
[R3] http://www.openoffice.org/why/ [R4] http://www.libreoffice.org/get-help/documentation/

7. **Applied Chemistry**

Text Books:
[T1] **P. C. Jain & Monika Jain, Engineering Chemistry, Latest edition, Dhanpat Rai Publishing Co., 2002.(More than enough)**
[T2] P. Mathew,Advance Chemistry, 1 & 2 Combined Editions, Cambridge University Press, 2003.
Reference Books:
[R1] P. W. Atkins and J. De Paula, Atkins' Physical Chemistry, Oxford, 2010.
[R2] T. Engel and P. Reid, Physical Chemistry,Pearson Education, 2013.
[R3] K. Qanungo,Engineering Chemistry, PHI Learning Private Limited, New Delhi, 2009.
[R4] O. G. Palanna, Engineering Chemistry, Tata McGraw Hill Education Private Limited, 2012.
[R5] D. A. Jones,Principles and Prevention of Corrosion,Prentice Hall, 2nd Edition, 1996.
[R6] H. K. Chopra and A. Parmar, Engineering Chemistry-A Text Book, Narosa Publishing House, 2012.
[R7] S. Chawla,Engineering Chemistry-All India Edition, Dhanpat Rai & Co., 2003.
[R8] R. Gadi, S. Rattan and S. Mohapatra, Environmental Studies, S.K. Kataria & Sons, 2nd Edition 2009.

- **2nd Semester**

1. **Applied Mathematics-2**

Text:
[T1] B.S. Grewal
[T2] E. kresyzig," Advance Engineering Mathematics", Wiley publications
[T3] Michael Greenberg, "Advance Engineering mathematics", Pearson.
References:
[R1] R.K. Jain and S.R.K. Iyengar,"Advanced Engineering Mathematics "Narosa Publications
[R2] B. S. Grewal,"Higher Engineering Mathematics" Khanna Publications.

[R3] S. Ponnusamy, “Foundation of Complex Analysis” Narosa Publication
[R4] G.B. Thomas and R. N. Finny “ Calculus and Analytic Geometry” Addison Wesley/ Narosa
[R5] Wylie R, “ Advance Engineering mathematics” , McGraw-Hill
[R6] M. Spiegel, “Schaum’s Outline on Laplace Transform, Tata McGraw-Hill

2. **Applied Physics-2**

Text Books:
[T1]. Arthur Beiser ‘Concepts of Modern Physics’, [McGraw-Hill], 6th Edition 2009.
[T2]. A. S.Vasudeva, ‘Modern Engineering Physics’, S. Chand, 6th Edition, 2013.
Reference Books
[R1]. Richard Wolfson ‘Essential University Physics’ Pearson, Ist edition, 2009.
[R2]. H.K. Malik & A. K. Singh ‘Engineering Physics’ [McGraw-Hill],Ist Edition, 2009.
[R3]. C. Kittle, ‘Mechanics’, Berkeley Physics Course, Vol.-I. Latest Edition.
[R4]. Irving Kaplan ‘Nuclear Physics’ Latest Edition.
[R5]. John R. Taylor, Chris D. Zafirator and Michael A. Dubson, ‘Modern Physics For Scientists and Engineers’, PHI, 2nd Edition.
[R6]. D.J. Griffith, ‘Introduction to Electrodynamics’, Prentice Hall, Latest Edition.

3. **Electronic Devices**

TEXT BOOKS
1. S.Salivahanan, N. Suresh Kr. & A. Vallavaraj, “Electronic Devices & Circuit”, Tata McGraw Hill, 2008
2. Millman, Halkias and Jit, “Electronic devices and circuits” McGraw Hill
3. Boylestad & Nashelsky, “Electronic Devices & Circuits”, Pearson Education, 10TH Edition.
REFERENCE BOOKS
1. Sedra & Smith, “Micro Electronic Circuits” Oxford University Press, VI Edition
2. Robert T. Paynter, “Introducing Electronic Devices & Circuits”, Pearson Education, VII Edition, 2006

4. **Introduction to Programming**

Text Books:
[T1] Herbert Schildt, “C: The Complete Reference”, OsbourneMcgraw Hill, 4th Edition, 2002.
[T2] Forouzan Behrouz A. “Computer Science: A Structured Programming Approach Using C, Cengage Learning 2/e
Reference Books:
[R1] Kernighan & Ritchie, “C Programming Language”, The (Ansi C version), PHI, 2/e
[R2] K.R Venugopal, “Mastering C ”, TMH
[R3] R.S. Salaria "Application Programming in C " Khanna Publishers4/e
[R4] Yashwant Kanetkar “ Test your C Skills ” , BPB Publications
[R5] http://www.codeblocks.org/ [R6] http://gcc.gnu.org/
[R7] Programming in ANSI C, E. Balagurusamy; Mc Graw Hill, 6th Edition.

5. **Engineering Mechanics**

Text Books:
T1. Engg Mechanics by A.K.Tayal (Umesh Publications).
T2. Engg Mechanics by Basudeb Bhattacharya (Oxford university Press)
Reference Books:
R1. Engg Mechanics by Irving H. Shames (Pearson publications).
R2. Engg Mechanics by U.C.Jindal (Galgotia Publications).
R3. Engg Mechanics by Beer & Johnston(TMH).
R4. Engg Mechanics by K.L.Kumar (TMH).
R5. Engg Mechanics by Sadhu Singh (Khanna Publishers).

6. **Communication Skills**

TEXT BOOKS

[T1] Technical Communication: Principles and practice (OUP), (Meenakshi Raman and Sangeeta Sharma) OXFORD UNIVERSITY PRESS

[T2] Communication Skills for Engineers, Murli Krishna, Pearson.

[T3] Wren and Martin: High School English Grammar and Composition; S. Chand

[T4] Exploration of Ideas; An Anthology of Prose: Orient Blackswan.

REFERENCE BOOKS:

[R1] Professional Communication: Aruna Koneru, MCGRAW HILLS EDUCATION PVT. LTD

[R2] Wren and Martin: High School English Grammar and Composition; S. Chand

[R3] Advanced English Grammar and Composition: Gurudas Mukherjee & Inidbar Mukherjee; (ANE BOOKS PVT. LTD.)

7. **Environmental Studies**

Text Books:

[T1] E. Barucha, Textbook of Environmental Studies for Undergraduate Courses, Universities Press (India) Pvt. Ltd., 2005.

[T2] S. Chawla,A Textbook of Environmental Studies, McGraw Hill Education Private Limited, 2012

References Books:

[R1] G. T. Miller,Environmental Science, Thomas Learning, 2012

[R2] W. Cunningham and M. A. Cunningham, Principles of Environment Science: Enquiry and Applications, Tata McGraw Hill Publication, N. Delhi, 2003.

[R3] R. Rajagopalan, Environmental Studies: From Crisis to Cure, 2nd Edition, Oxford University Press, 2011.

[R4] A.K. De,Environmental Chemistry, New Age Int. Publ. 2012,,

[R5] A. Kaushik and C.P. Kaushik, Perspectives in Environment Studies, 4th Edition, New Age International Publishers,2013 .

[R6] Environmental Engineering by Gerard Kiely, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2010.

- **3rd Semester**

1. **Applied Mathematics-3**

Text Books:

[T1]R.K. Jain and S.R.K. Iyengar," Numerical methods for Scientific and Engineering Computation", New Age Publishing Delhi-2014.

[T2] B. S. Grewal,"Higher Engineering Mathematics" Khanna Publications, 2014 Edition.

Reference Books:

[R1] E. kresyzig," Advance Engineering Mathematics", Wiley publications

[R2] P. B. Patil and U. P. Verma, " Numerical Computational Methods", Narosa

[R3]. Partial Differential Equations" Schaum's Outline Series, McGraw Hill.

[R4] Michael Greenberg, " Advance Engineering mathematics" , Pearson.

[R5] Schaum's Outline on Fourier Analysis with Applications to Boundary Value Problem, Tata McGrawHill

2**. Analog Electronics**

Text Books:

[T1] B.Kumar ,Shail Bala Jain, "Electronic Devices and Circuits" PHI.

[T2] Salivahanan , Suresh Kumar, Vallavaraj, "Electronic Devices and Circuits" TMH, 1999

Reference Book

[R1] J. Millman and Halkias, “Integrated Electronics, Analog & Digital Circuits &Systems” TMH – 2000.
[R2] Boylestad & Nashelsky, “Electronic Devices & Circuit Theory” Pearson Publication.
[R3] Electronic devices and circuits,DAVID A BELL,Oxford University Press, 2000.
[R4] Problems and solutions in basic electronic ,Albert Malvino, David J.Bates,TMH.
[R5] Sedra & Smith, “Micro Electronic Circuits” Oxford University Press, 2000

3. **Materials in Electrical Systems**

Text Books:

[T1] B.Kumar ,Shail Bala Jain, “Electronic Devices and Circuits” PHI.
[T2] Salivahanan , Suresh Kumar, Vallavaraj, “Electronic Devices and Circuits” TMH, 1999

Reference Book

[R1] J. Millman and Halkias, “Integrated Electronics, Analog & Digital Circuits &Systems” TMH – 2000.
[R2] Boylestad & Nashelsky, “Electronic Devices & Circuit Theory” Pearson Publication.
[R3] Electronic devices and circuits,DAVID A BELL,Oxford University Press, 2000.
[R4] Problems and solutions in basic electronic ,Albert Malvino, David J.Bates,TMH.
[R5] Sedra & Smith, “Micro Electronic Circuits” Oxford University Press, 2000

4. **Circuits and Systems**

TEXT BOOKS:

[T1] W H Hayt “Engineering Circuit Analysis” TMH Eighth Edition
[T2] Kuo, “Network analysis and synthesis” John Weily and Sons, 2nd Edition.

REFERENCE BOOKS

[R1] S Salivahanan “Circuit Theory ” Vikas Publishing House 1st Edition 2014 [R2] Van Valkenburg, “ Network analysis” PHI, 2000.
[R3] Bhise, Chadda, Kulshreshtha, “ Engineering network analysis and filter design” Umesh publication, 2000.
[R4] D. R. Choudhary, “Networks and Systems” New Age International, 1999
[R5] Allan H Robbins, W.C.Miller “Circuit Analysis theory and Practice”Cengage Learning Pub 5th Edition 2013
[R6] Bell “Electric Circuit” Oxford Publications 7th Edition.

5. **Data Structures**

Text Books:

[T1] R. F. Gilberg, and B. A. Forouzan, “Data structures: A Pseudocode approach with C”, Thomson Learning.
[T2] A .V. Aho, J . E . Hopcroft, J . D . Ulman “Data Structures and Algorithm”, Pearson Education.

Reference Books:

[R1] S. Sahni and E. Horowitz, “Data Structures”, Galgotia Publications.
[R2] Tanenbaum: “Data Structures using C”, Pearson/PHI.
[R3] T .H . Cormen, C . E . Leiserson, R .L . Rivest “Introduction to Algorithms”, PHI/Pearson.
[R4] A.K.Sharma, “Data Structures”, Pearson
[R5] Ellis Horowitz and Sartaz Sahani “Fundamentals of Computer Algorithms”, Computer Science Press.

6. **Electrical Machines-1**

TEXT BOOKS:

[T1] Electric Machinery, A Fitzgerald, Charles Kingsley, Stephen Umans, Tata McGraw Hill Education, 6th Edition, 2002.
[T2] Electrical Machines with MATLAB, Turan Gnen, CRC Press,Taylor&Francis, 2nd edition, 1998.

REFERENCE BOOKS:
[R1] The Performance and Design of Alternating Current Machines, M.G. Say, CBS Publishers, 2005
[R2] Electro-Mechanical Energy Conversion with Dynamics of Machines, Rakosh Das Begamudre, Wiley- Blackwell, 1988.
[R3] Performance and Design of Direct Current Machines: AE Clayton and NN Hancock, CBS Publishers, 2014
[R4] Oblems in Electrical Engineering: Power engineering and electronics with answers Partly Solved in I. Units: Parker Smith , CBS Publishers, 9th edition, 2003
[R5] Electric Machines, I J Nagrath D P Kothari, Mc Graw-Hill Education, 3rd edition, 2011
[R6] Samarjit Ghosh, "Electrical Machines", Pearson

- **4th Semester**

1. **Electrical Machines-2**

Text Books:
[T1] A Fitzgeral, Charles Kingsley, Stephen Umans, "Electric Machinery", Tata McGraw Hill Education, 6th Edition, 2002
[T2] I J Nagrath D P Kothari, "Electric Machines", McGraw-Hill Education, 3rd edition, 2011.
Reference Books:
[R1] The Performance and Design of Alternating Current Machines, M.G. Say, CBS Publishers, 2005
[R2] Direct and Alternating Current Machinery, Jack Rosenblatt, CBS Publishers,2nd edition, 2001
[R3] Fractional and Sub fractional Horse-power Electric Motors, Cyril G. Veinott, Joseph E. Martin, McGraw Hill.
[R4] Problems in Electrical Engineering: Power engineering and electronics with answers Partly Solved in S.I. Units: Parker Smith, CBS Publishers, 9th edition, 2003
[R5] Electrical Machines with MATLAB, Turan Gönen, CRC Press,Taylor&Francis, 2nd edition, 1998.
[R6] Samarjit Ghosh, "Electrical Machines", Pearson

2. **Control Systems**

Text Books:
[T1] B. C. Kuo, "Automatic control system", Prentice Hall of India, 7th edition 2001.
[T2] Nagraath Gopal "Control Systems Engineering -Principles and Design" New Age Publishers
Reference Books:
[R1] Norman S. Nise, "Control systems engineering" John Wiley & Sons (Asia) Singapore.
[R2] Raymond T. Stefani, Design of Feedback Control System, Oxford University Press.
[R3] K. Ogata, "Modern control engineering", Pearson 2002.
[R4] S. P.Eugene Xavier, "Modern control systems", S. Chand & Company.
[R5] M. Gopal "Control Systems-Principles and Design" TMH 4th Edition 2012

3. **Power System-1**

Text Books:
[T1] C.L.Wadhava, "Electrical Power Systems", New Age International, 2004
[T2] Hadi Saddat, "Electric power systems", Tata McGraw Hill. 2014.
Reference Books:
[R1] S. L. Uppal, "Electrical Power", Khanna Publishers, 13th edition 2003
[R2] W. H. Stevension, "Elements of Power System Analysis", McGraw Hill, 1982
[R3] Ashfaq Hussain, "Electrical Power System" CBS Publishers and Distributors.

4. **Electrical Measuring Instruments & Transducers**

Text Book:

[T1] E. W. Gloding and F. C. Widdis - Electrical Measurements and measuring Instruments, Wheeler Publishing, fifth Edition.
[T2] A. K. Shawney - Electrical & Electronic Measurement & Instruments, Dhanpat Rai & Sons Publications, 2000
Reference Books:
[R1] Buckingham and Price - Electrical Measurements, Prentice – Hall Harris - Electrical Measurements
[R2] Reissland, M. U. - Electrical Measurements: Fundamentals, Concepts, Applications New age International (P) Limited, Publishers.
[R3] W. D. Cooper, "Modern Electronics Instrumentation & Measurement Technique" PHI, 1998.

5. **Electromagnetic Field Theory**
Text Books:-
[T1] Matthew N. O. Sadiku , "Elements of Electromagnetics", Oxford University Press
[T2] E. C. Jordon, K. G. Balman, "Electromagnetic Waves & Radiation System" PHI – 2nd Edition
Reference Books:
[R1] William H. Hayt, "Engineering Electromagnetics", TMH
[R2] J.D. Kraus, "Electromagnetics", TMH
[R3] David K. Cheng," Field and Wave Electromagnetic", 2nd Edition, Pearson Education Asia,2001
[R4] John R. Reitz, "Foundations of Electromagnetic Theory". Pearson

6. **Thermodynamics**
Textbook
[T1] Nag, P.K., "Engineering Thermodynamics", Tata McGraw Hill, 2nd edition, 1998.
[T2] Spalding, D.B. and Cole, E.H., "Engineering Thermodynamics", Edward Arnold, 1959. Hawkins, G.A., "Engineering Thermodynamics", John Wiley and Sons, 1955.
References
[R1] Van Wylen, G.J. and Sonntag, R.E., "Fundamentals of Classical Thermodynamics", John Wiley and Sons, 4th edition, 1997.
[R2]. Jones Dugan Engineering Thermodynamics Prentice Hall

- **5th Semester**

1. **Communication Skills for Professional**
Text Books:
[T1] Anna Dept. Of English. Mindscapes: English for Technologists & Engineers PB. New Delhi: Orient Blackswan.
[T2] Farhathullah, T. M. Communication Skills for Technical Students. Orient Blackswan, 2002.
References Books:
[R1] Masters, Ann and Harold R. Wallace. Personal Development for Life and Work, 10th Edition.Cengage Learning India, 2012.
[R2] Institute of Electrical and Electronics Engineers. IEEE Editorial Style Manual. IEEE, n.d. Web. 9 Sept. 2009.
[R3] Sethi and Dhamija. A Course in Phonetics and Spoken English. PHI Learning, 1999.
[R4] Khera, Shiv. You Can Win. New York: Macmillan, 2003.

2. **Power Electronics**
Text Books:
[T1] M.H. Rashid, "Power Electronics: Circuits, Devices and Applications" Pearson Publications.
[T2] Daniel W. Hart, "Power Electronics "Tata McGraw-Hill
[T3] H.C. Rai, "Power Electronics Devices, Circuits, Systems and Application", Galgotia Publications, 3rd Edition

References Books:
[R1] Singh, Kanchandani, “Power Electronics”, Tata McGraw-Hill.
[R2] Ned Mohan, Tore M. Undeland and Robbins, “Power Electronics: Converters, Applications and Design” Wiley India Publication
[R3] V R Moorthi, “Power Electronics: Devices, Circuits and Industrial Applications”, Oxford Publication.
[R4] Kassakian, Schlecht, Verghese, “Principles of Power Electronics” , Pearson Publications
[R5] M.S. Jamil Asghar, “Power Electronics” PHI Publication
[R6] P. S. Bimbhra “Power Electronics”, Khanna Publishing.

3. **Signals and Systems**
Text Books:
[T1] AlanV.Oppenheim, Alan S.Willsky, S.Hamid Nawab, “Signals & Systems”, 2nd edition, Pearson Education, 1997.
[T2] Simon Haykin and Barry Van Veen, “Signals and Systems”, John Wiley, 1999.
Reference Books:
[R1] M.J.Roberts, “Signals and Systems Analysis using Transform Method and MATLAB”, TMH 2003.
[R2] Tarun kumar rawat “signals and systems “, Oxford University Press, Incorporated, 2010
[R3] A. Anand kumar, “signals and systems” 3rd edition , PHI
[R4] Ramesh Babu and R.Anandanatrajan ,”Signals and system”, 4th edition Sci Tech ,2013
[R5] Moman .H. Hays, “Digital Signal Processing”, Schaum’s outlines, Tata McGraw-Hill2004.
[R6] John G.Proakis and Dimitris G.Manolakis, “Digital Signal Processing, Principles, Algorithms and Applications”, 3rd edition. PHI, 2000.

4. **Switching Theory and Logic Design**
Text Book:
[T1] Zyi Kohavi, “Switching & Finite Automata Theory”, TMH, 2nd Edition
[T2] Morris Mano, Digital Logic and Computer Design”, Pearson
[T3] R.P. Jain, “Modern Digital Electronics”, TMH, 2nd Ed,
Reference Books:
[R1] A Anand Kumar, “Fundamentals of Digital Logic Circuits”, PHI
[R2] Taub ,Helbert and Schilling, “Digital Integrated Electronics”, TMH

5. **Communication Systems**
Text Books:
[T1] George Kennedy, “Electronics Communication System”, TMH 1993
[T2] B.P. Lathi, “Analog& Digital Communication”, Oxford University Press 1999.
Reference Books:
[R1] Simon Haykin, “Introduction to Analog & Digital Communication”, Wiley, 2000
[R2] Tannenbaum, “Computer networks”, PHI, 2003
[R3] K. Sam Shanmugam, “Digital & Analog Communication system”, John Wiley & Sons 1998.

6. **Industrial Management**
Text Books:
[T1] Sinha, P.R.N., Sinha I.B. and Shekhar S.M.(2013), Industrial Relations, Trade Unions and Labour Legislation. Pearson Education
[T2] Chary, S.N. (2012), Production and Operations Management. Tata McGraw Hill Education.
Reference Books:
[R1] Srivastava, S.C. (2012), Industrial Relations and Labour Laws, Vikas Publishing
[R2] Shankar R (2012), Industrial Engineering and Management. Galgotia Publications
[R3] Telsang, M. (2006), Industrial Engineering and Production Management. S.Chand

[R4] Thukaram, Rao (2004), M.E. Industrial Management. Himalaya Publishing House

- **6th Semester**

1. **Power System-2**

Text Books:
[T1] Paithanker, Bhide ,"Fundamentals of Power System Protection " PHI 2014
[T2] Badri Ram"Power System Protection and Switchgear" TMH Publications 2nd Edition
Reference Books:
[R1] J. J. Grainger & W.D. Stevenson, "Power System Analysis" TMH Publication, 2003
[R2] Paul M. Anderson "Power System Protection" IEEE Press.
[R3] C L Wadhva, "Electrical Power System" Wiley Eastern Ltd., 3rd edition 2000
[R4] D.P. Kothari and I.J. Nagrath "Modern Power System Analysis " TMH 4th Edition.

2. **Utilization of Electrical Energy and Electric Traction**

Textbooks:
[T1] Pratab. H. "Art and Science of Utilization of Electrical Energy": Dhanpat Rai & Sons.
[T2] N.V. Suryanarayana , "Utilization of Electrical Power including Electric Drives and Electric Traction", New Age International (P) Limited.
Reference Books:
[R1] C.L. Wadhwa , "Generation, Distribution and Utilization of Electrical Energy", New Age International (P) Limited.
[R2] E. Openshaw Taylor, "Utilization of Electric Energy", Orient Longman, Universities Press

3. **EHV AC & HVDC Transmissions**

Text Books:
[T1] S.Rao, "EHV AC & HVDC Transmission Engineering & Practice", Khanna Publishers.
[T2] Padiyar, K.R, "HVDC power Transmission System", New Age Publication.
References Books:
[R1] R.D.Begamudre,"Extra high Voltage AC transmission Engineering",Wiley Eastern.
[R2] Naidu, Kamaraju "High Voltage Engineering", ,5 ed., TMH Publishing
[R3] Kamakshaiah, Kamaraju,"HVDC Transmission", McGraw-Hill Publication.
[R4] Nagsarkar, Sukhija, "Power System Analysis" , Oxford Publication

4. **Electrical Machines-3**

Text Books:
[T1] Electric Machinery, A Fitzgerald, Charles Kingsley, Stephen Umans, Tata McGraw Hill Education, 6th edition, 2002
[T2] Special Electrical Machines by K Venkatratnam, Universities Press 2014
Reference Books:
[R1] Electric Machines Steady State, Transients, and Design with MATLAB, IonBoldea, Lucian Tutelea, CRC Press, Taylor & Francis, First edition, 2010.
[R2] Dynamic Simulations of Electric Machinery: Using MATLAB/SIMULINK, Chee-Mun Ong, Prentice Hall, 1st edition, 1997
[R3] Principles of Electrical Machines and Power Electronics, P.C. Sen, John Wiley, 2002.
[R4] Special Electrical Machines, E.G. Janardanan, PHI, 2014.
[R5] Generalized Theory of Electrical Machines, P.S. Bimbhra, Khanna Publishers.
[R6] Special Electrical Machines by K Venkatratnam, Universities Press 2014

5**. Microprocessors and Microcontrollers**

Text Books:

[T1] Muhammad Ali Mazidi, “Microprocessors and Microcontrollers”, Pearson, 2006
[T2] Douglas V Hall, “Microprocessors and Interfacing, Programming and Hardware” Tata McGraw Hill, 2006.
[T3] Ramesh Gaonkar, “MicroProcessor Architecture, Programming and Applications with the 8085”, PHI
References Books:
[R1] Muhammad Ali Mazidi, Janice Gillispie Mazidi, Rolin D. MCKinlay “The 8051 Microcontroller and Embedded Systems”,2nd Edition, Pearson Education 2008.
[R2] Kenneth J. Ayala, “The 8086 Microprocessor: Programming & Interfacing The PC”, Delmar Publishers, 2007.
[R3] A K Ray, K M Bhurchandi, “Advanced Microprocessors and Peripherals”, Tata McGraw Hill, 2007.
[R4] Vaneet Singh, Gurmeet Singh, “Microprocessor and Interfacing”, Satya Prakashan, 2007.

6. **Power Station Practice**
Text Books:
[T1] M. V. Deshpande, “Elements of Electric Power Station Design”, Wheeler Publishing Co.
[T2] B. G. A. Skrotzki & W. A. Vopat, “Power Station Engineering and Economy”, Tata McGraw Hill. 5th edition 2013
[T3] Harish. C. Rai, “Power Plant Engineering”, I.K. International Publishers.
Reference Books:
[R1] S. L. Uppal, “Electrical Power”, Khanna Publishers. 13th edition 2003
[R2] M. L. Soni, P. V. Gupta and U. S. Bhatnagar, “A Course in Electrical Power”, Dhanpat Rai & Sons, 1st edition 2005 [R3] B. R. Gupta, “Generation of Electrical Energy”, Eurasa Publishing House
[R4] C.L. Wadhva, “Generation distribution and utilization Electrical Engg.”

- **7th Semester**

1. **Electrical Drives**
Text Books:
[T1] G K Dubey, “Principle of Electrical Drives”, Narosa Publishing House
[T2] Vedam Subrahmanyam, “Electrical Drives”, Tata McGraw-Hill
References Books:
[R1] R Krishnan, “Electrical Motor Drives” PHI Publications.
[R2] Ned Mohan, “Electrical Machines And Drives” Wiley India Publication
[R3] Bimal K Bose, “Modern Power Electronics and AC Drives”, PHI Publications.
[R4] De, Sen , “ Electric Drives” , PHI Publications.
[R5] Bimal K Bose, “Power Electronics and Variable Frequency Drives” Wiley India Publication

2. **Advanced Control Systems**
Text Books:
[T1] Dorf-State Space Analysis, Modern Control System, Pearson 4th edition, 2002
[T2] M. Gopal-Digital Control and State Variable Methods, TMH 4th Edition.
Reference Books:
[R1] J. J. Stoline, Nonlinear Control System.
[R2] Brian D.O.Adnerson & John B. Moore, Optimal Control
[R3] R.C. Sukla – Control Stystems, Dhanpat Rai & Co. (P) Ltd.
[R4] Shastri & Badson, Adaptive Control, PHI
[R5] S. Das Gupta, Control System Theory, Khanna Publications.

3. **Electrical Machines Design**

Text Books:

[T1] Electrical Machine Design the Design and Specification of Direct and Alternating Current Machinery, Alexander Gray, Nabu Press, First reprint edition, 2014

[T2] Electric Machines Steady State, Transients, and Design with MATLAB, IonBoldea, Lucian Tutelea, CRC Press, Taylor & Francis, First edition, 2010.

Reference

[R1] Principles of Electrical Machine Designs with Computer Programmes, Sen, S.K., Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi, 1987.

[R2] Electrical Machine Design Data Book, A. Shanmugasundaram, G. Gangadharan, R. Palani, New Age International Pvt. Ltd., Reprint 2007.

[R3] Design and Testing of Electrical Machines, M.V. Deshpande, PHI, 2013.

[R4] Sawhney, A.K., 'A Course in Electrical Machine Design', Dhanpat Rai & Co., New Delhi, 6th Edition, 2013.

4. **Renewable Energy Resources**

Text Books:

[T1] Tiwari and Ghosal, "Renewable Energy Resources: Basic Principle & Application", Narosa Pub.

[T2] S N Bhadra ,D, Kastha,'Wind Electrical Systems" Oxford Publication 2014

References Books:

[R2] John Twidell, "Renewable Energy Sources", Taylor and Francis

[R3] Godfrey Boyle, "Renewable Energy: Power for a Sustainable Future", Oxford University Press

[R4] Ewald F. Fuchs, "Power Conversion of Renewable Energy Systems", Springer

[R5] B. H. Khan, "Non Conventional Energy", Tata McGraw Hill

[R6] D P kothari ,"Wind energy System and applications" Narosa Pub 2014

5. **Power Distribution System**

Text:

[T1]Turan Gonen, "Electric Power Distribution System Engineering", McGraw Hill

[T2] Dale R. Patrick," Electrical Distribution System", 2nd Edition, CRC Press

References:

[R1] James A. Momoh, "Electric Power Distribution Automation, Protection and Control", CRC Press

[R2] A. S. Pabla, "Electric Power Distribution", Tata McGraw Hill

6. **Telemetry & Data Acquisition System**

Text Books:

[T1] Patranabis, "Telemetry Principles", TMH.

[T2] H. Rosemary Taylor, "Data Acquisition for Sensor Systems", Chapman & Hall

Reference Books:

[R1] William Schweber, "Data Communication," TMH Edition-1999

[R2] Frank Cardon, Russell Jedlicka and Robert Henry, "Telemetry Systems Engineering" Artech House, Boston, London

7. **PLC & SCADA Systems**

Text Books:

[T1] Frank D. Petruzella "Programmable Logic Controllers", McGraw-Hill Book Company.

[T2] John w. Webb and Ronald A. Reis, "Programmable Logic Controllers", PHI

Reference Books:

[R1] Stuart A.Boyer "Supervisors Control and Data Acquisition", ISA

[R2] William I. Fletcher "An Engineering Approach to Digital Design", PHI.

[R3] Simpson, Colin "Programmable Logic Controllers", Englewood Cliffs NJ PHI.

[R4] Gray Dunning, "Introduction to Programmable Logic Controllers", Delmar Thompson Learning
[R5] Stenerson, John "Fundamentals Logic Controllers Sensors, & Communications", Englewood Cliffs, NJ, 1993. Prentice Hall.
[R6] Programmable Logic Controllers, W.Bolton, Elsevier

8. **Mechatronics**

Text Book:
[T1] W. Bolton, "Mechatronics – Electronic control systems in Mechanical & Electrical Engineering", Pearson Education Ltd., 2003.
[T2] K. P. Ramachandran, G.K. Vijayaraghavan, M.S. Balasundaram, Mechatronics - Integrated Mechanical Electronic Systems, Wiley;
Reference Books:
[R1] Joji P, Pneumatic Controls, Wiley.
[R2] Dan Necsulescu, Mechatronics, Pearson
[R3] David g Alciatore, Michael B Histand, "Introduction to Mechatronics and measurement systems", Mc Graw Hill Education.
[R4] A Smaili, F Mrad, "Mechatronics – Integrated Technologies for Intelligent Machines, Oxford Higher Education.
[R5] Nitaigour Premchand Mahalik, "Mechatronics Principles, Concepts & Application", Tata McGraw Hill Publishing Co.Ltd., 2003.

9. **High Voltage Engineering**

Text Books:-
[T1] M. S. Naidu & V. Kamaraju , "High Voltage Engineering", Tata McGraw Hill Publications, 3rd Edition.
[T2] E. Kuffel, W.S. Zaengl & J. Kuffel , "High Voltage Engineering – Fundamentals", Elsevier, 2nd Edition.
Reference Books:
[R1] C. L. Wadhwa, "High Voltage Engineering", New Age International (P) Ltd, 1997.
[R2] Ravindra Arora & Wolfgang Mosh, "High Voltage Insulation Engineering", New Age International (P) Ltd, 1995.

10. **Selected Topics in EE**

Text Books:
[T1] Chapman – "Electrical Machine Fundamentals", McGraw Hill.
[T2] D.P. Kothari – "Renewable Energy Sources and Emerging Technologies", PHI, Second Edition.
References:
[R1] Tiwari and Ghosal, "Renewable Energy Resources: Basic Principle & Application", Narosa Publication
[R2] John Twidell, "Renewable Energy Sources", Taylor and Francis
[R3] A Fitzgerald, Charles Kingsley, Stephen Umans, Electric Machinery, Tata McGraw Hill Education, 6th Edition, 2002
[R4] K. Venkataratnam, "Special Electrical Machines", Oxford University Press, Hydearbad, 2008
[R5] W.C. Turner, Energy Management Handbook, 2e, Fairmont press, 1993.
[R6] UNESCAP – Guide Book on Promotion of Sustainable Energy Consumption.

11. **Optoelectronics and Optical Communication**

Text Books:
[T1] J. Gowar, "Optical Communication System", IEEE Press – 2nd Edition.
[T2] R.P.Khare "Fiber Optics and Opto Electronics" Oxford Publication
Reference Books:

[R1] Optical Information Processing – F. T. S. Yu – Wiley, Newyork, 1983
[R2] G. P. Agrawal, Fiber optic Communication Systems, John Wiley & sons, New York, 1992
[R3] A. Ghatak, K. Thyagarajan, "An Introduction to Fiber Optics", Cambridge University Press
[R4] J. H. Franz & V. K. Jain, "Optical Communication Components & Systems", Narosa Publish, 2013
[R5] John M. Senior, "Optical Fiber Communications", PEARSON, 3rd Edition, 2010.

12. **Database Management Systems**

Text Books:

[T1] Abraham Silberschatz, Henry F. Korth, S. Sudharshan, "Database System Concepts", 5th Edition, Tata McGraw Hill, 2006

[T2] Elmsari and Navathe, "Fundamentals of Database Systems", 4th Ed., A. Wesley, 2004

References Books:

[R1] C.J.Date, A.Kannan, S.Swamynathan, "An Introduction to Database Systems", 8th Edition, Pearson Education, 2006.

[R2] J. D. Ullman, "Principles of Database Systems", 2nd Ed., Galgotia Publications, 1999.

13. **Biomedical Instrumentation**

Text Books:

[T1] Joseph J. Carr & John M. Brown, "Introduction to Biomedical Equipment Technology", Pearson.

[T2] Shakti Chatterjee, "Textbook of Biomedical Instrumentation System", Cengage Learning

Reference Books:

[R1] R.S.Khandpur, "Hand book of Biomedical Instrumentation", TMH

[R2] Walter Welko- Witiz and Sid Doutsch, "Biomedical Instruments: Theory and Design" Wiley

[R3] Lesile Cromwell, Fred J. Weibell & Erich A. Pfeiffer, "Biomedical Instrumentation & Measurements", PHI .

14. **Digital System Design**

Text Books:

[T1] Douglas Perry ,"VHDL" 4th Edition, TMH

[T2] Stephen Brown, Zvonko Vranesic, "Fundamentals of Digital Logic with VHDL design", TMH.

Reference Books:

[R1] Charles. H.Roth ,"Digital System Design using VHDL", PWS (1998)

[R2] John F. Wakerley ,"Digital Design Principles And Practices" ,Pearson Education

[R3] Navabi Z , "VHDL-Analysis & Modelling of Digital Systems",McGraw Hill.

[R4] William I. Fletcher, "An Engineering Approach To Digital Design", Prentice Hall

[R5] Bhasker, "A VHDL Primmer", Prentice Hall 1995.

15. **Powerline Carrier Communication**

Text:

[T1] Hendrik C. Ferreira,Lutz Lampe John Newbury,Theo G.Swart,"PLC: theory and Applications for narrow band and broad band communication over power lines".Wiley and Sons.

[T2] Halid Hrasnica, Abdelfatteh Haidine, Ralf Lehnert" Broad Band Power line Communications: Network Design" Wiley and sons.

References:

[R1] Gilbert Held,"Understanding Broadband over Power line",Auerbach Publications.

16. **Sociology and Elements of Indian History for Engineers**

Text Books:

[T1] Desai, A.R. (2005), Social Background of Indian Nationalism, Popular Prakashan.

[T2] Giddens, A (2009), Sociology, Polity, 6th Edition

Reference Books:

[R1] Guha, Ramachandra (2007), India After Gandhi, Pan Macmillan
[R2] Haralambos M, RM Heald, M Holborn, (2000), Sociology, Collins

- **8th Semester**

1. **Power System Analysis and Stability**

Text Books:
[T1] J. J. Grainger & W.D. Stevenson ,Power System Analysis, TMH Publication,2006.
[T2] D.P. Kothari& I.J. Nagrath, Power System Engineering, TMH Publication, 2007.
[T3] P.Kundur, Power system stability and control, TMH Publication.
Reference Books:
[R1] Computer- Aided Power System Analysis, George L. Kusic, PHI Publication.
[R2] Hadi Saadat,Power System Analysis , PSA Publishing, 2010.
[R3] D.P. Kothari, I Nagrath, Modern Power System Analysis, TMH Publication.
[R4] L.P Singh, Advanced power system analysis and dynamics, New age International Ltd.
[R5] C. L. Wadhwa, Electrical Power Systems, New age International Ltd.

2. **Digital Signal Processing**

Text Books:
[T1] Oppenheim & Schafer, Digital Signal Processing, PHI-latest edition.
[T2] Proakis and Manolakis, Digital Signal Processing, PHI Publication
Reference Books:
[R1] S. K. Mitra, Digital Signal Processing, TMH edition 2006
[R2] Johny. R. Johnson, Introduction to Digital Signal Processing, PHI-latest edition
[R3] R.Babu ,Digital Signal Processing , Scitech Publication.

3. **Human Values and Professional Ethics**

Text Books:
[T1] Professional Ethics, R. Subramanian, Oxford University Press.
[T2] Professional Ethics & Human Values: Prof. D.R. Kiran, TATA Mc Graw Hill Education.
References Books:
[R1] Human Values and Professional Ethics: R. R. Gaur, R. Sangal and G. P. Bagaria, Eecel Books (2010, New Delhi). Also, the Teachers‟ Manual by the same author
[R2] Fundamentals of Ethics, Edmond G. Seebauer & Robert L. Barry, Oxford University Press
[R3] Values Education: The paradigm shift, by Sri Satya Sai International Center for Human Values, New Delhi.
[R4] Professional Ethics and Human Values – M.Govindrajan, S.Natarajan and V.S. Senthil Kumar, PHI Learning Pvt. Ltd. Delhi
[R5] A Textbook on Professional Ethics and Human Values – R.S. Naagarazan – New Age International (P) Limited, Publishers New Delhi.
[R6] Human Values & Professional Ethics- S B Gogate- Vikas publishing house PVT LTD New Delhi.
[R7] Mike Martin and Roland Schinzinger, “Ethics in Engineering” McGraw Hill
[R8] Charles E Harris, Micheal J Rabins, “Engineering Ethics, Cengage Learning
[R9] PSR Murthy, “Indian Culture Values and Professional Ethics”, BS Publications
[R10] Caroline Whitback< Ethics in Engineering Practice and Research, Cambridgs University Press
[R11] Charles D Fleddermann, “Engineering Ethics”, Prentice Hall.
[R12] George Reynolds, “Ethics in Information Technology”, Cengage Learning
[R13] C, Sheshadri; The Source book of Value Education, NCERT
[R14] M. Shery; Bhartiya Sanskriti, Agra (Dayalbagh)

4. **Applications of Power Electronics to Power Systems**

Text:

[T1] Padiyar, K.R, "HVDC power Transmission System", New Age Publication.
[T2] Arindam Ghosh, Gerard Ledwich, "Power Quality Enhancement using custom Power Devices" Penguin Books Limited
[T3] Mathur, Verma, "Thyristor-Based FACTS Controllers For Electrical Transmission System", Wiley India Publication
References:
[R1] E. Acha, "Power Electronic control in Electrical Power System", Penguin Books Limited
[R2] P. Kundur, "Power System Stability and Control", TMH Publication
[R3] Lecture Series on Power Quality- NPTEL

5. **Digital Image Processing**
Text Books:
[T1] Rafael C. Gonzalez & Richard E. Woods, "Digital Image Processing", 3Rd edition, Pearson Education, 2002.
[T2] A.K. Jain, "Fundamental of Digital Image Processing", PHI, 1989.
Reference Books:
[R1] Bernd Jahne, "Digital Image Processing", 5th Ed., Springer, 2002.
[R2] William K Pratt, "Digital Image Processing: Piks Inside", John Wiley & Sons, 2001.

6. **Power System Operation and Control**
Text Books:
[T1] I.J. Nagrath & D.P. Kothari, Power System Engineering, Mc Graw Hill, 2007.
[T2] S. Sivanagaraju, Power System Operation and Control, Pearson Education India, 2009.
[T3] Loi Lei Lai "Power System Restructuring and deregulation: Trading Performance & Information Technology, John Wiley & Sons.
[T4] Chakravarti & Halder, Power System Analysis: Operation & control Prentice Hall of India.
Reference Books:
[R1] P.Kundur, Power System Control and Stability, Mc Graw Hill.
[R2] Power System Stability Volume-I: E.W. Kimbark, John Wiley & Sons.
[R3] Dr. K. Uma Rao, Power System: Operation and Control, Wiley-India.

7. **Reliability Engineering & Application to Power Systems**
Text Books:
[T1] Reliability Evaluation of Engg. System – R. Billinton, R.N.Allan, Plenum Press, New York, reprinted in India by B.S.Publications, 2007.
[T2] Reliability Evaluation of Power systems – R. Billinton, R.N.Allan, Pitman Advance Publishing Program, New York, reprinted in India by B.S.Publications, 2007
Reference Books:
[R1] Sharles E. Ebeling An Introduction to Reliability and Maintainability Engineering, McGraw Hill,2006
[R2] E. Balagurusamy, "Reliability Engineering", Tata McGraw Hill PC, 2002.

8. **Electrical Energy Conservation**
Text Books:-
[T1] H. Partab, "Art and Science of Utilisation of Electrical Energy", Pritam.
[T2] S.C. Tripathy, " Electric Energy Utilization and Conservation", Tata McGraw Hill
Reference Books:
[R1] Bureau of Energy efficiency of India.
[R2] IEEE Bronze Book: IEEE Standard 739-1984 – Recommended Practice for Energy Conservation and Cost Effective Planning in Industrial Facilities, IEEE Publications, 1996.

[R3] A.P.W. Thumann: Plant Engineers and Managers Guide to Energy conservation, 7e, UNR, 1977. [R4] W.C. Turner, Energy Management Handbook, 2e, Fairmont press, 1993. [R5] UNESCAP – Guide Book on Promotion of Sustainable Energy Consumption.

9. **Neuro and Fuzzy Systems**

Text Books:-

[T1] H. Partab, "Art and Science of Utilisation of Electrical Energy", Pritam.

[T2] S.C. Tripathy, " Electric Energy Utilization and Conservation", Tata McGraw Hill

Reference Books:

[R1] Bureau of Energy efficiency of India.

[R2] IEEE Bronze Book: IEEE Standard 739-1984 – Recommended Practice for Energy Conservation and Cost Effective Planning in Industrial Facilities, IEEE Publications, 1996.

[R3] A.P.W. Thumann: Plant Engineers and Managers Guide to Energy conservation, 7e, UNR, 1977.

[R4] W.C. Turner, Energy Management Handbook, 2e, Fairmont press, 1993.

[R5] UNESCAP – Guide Book on Promotion of Sustainable Energy Consumption.

10. **Electrical System Design**

Text Books:

[T1] A.K Sawhney, "Electrical Machine Design", 4th Edition, Dhanpat Rai & Sons.

[T2] M.G Say, "Performance and Design of A.C Machines", CBS Publisher.

Reference Books:

[R1] Performance and Design of D.C Machine: Clayton

[R2] Design of Electrical Machines: V. N Mittal

11. **Embedded Systems**

Text book:

[T1] Design with PIC Microcontrollers, John B. Peatman, Pearson Education Asia, 2002

[T2] ARM System Developer's Guide: Designing and Optimizing System Software, Andrew N. Sloss, Dominic Symes, Chris Wright, , Morgan Kaufman Publication, 2004.

[T3] Computers as components: Principles of Embedded Computing System Design, Wayne Wolf, Morgan Kaufman Publication, 2000

References Books:

[R1] The Design of Small-Scale embedded systems, Tim Wilmshurst, Palgrave2003

[R2] Embedded System Design , Marwedel ,Peter , Kluwer Publishers , 2004.

12. **Data Communication and Networks**

Text Books:

[T1] A. S. Tannenbum, D. Wetherall, "Computer Networks", Prentice Hall, Pearson, 5 th Ed

[T2] Behrouz A. Forouzan, "Data Communications and Networking", Tata McGraw-Hill, 4th Ed

Reference Books:

[R1] Fred Halsall, "Computer Networks", Addison – Wesley Pub. Co. 1996.

[R2] Larry L, Peterson and Bruce S. Davie, "Computer Networks: A system Approach", Elsevier, 4 th Ed

[R3] Tomasi, "Introduction To Data Communications & Networking", Pearson 7th impression 2011

[R4] William Stallings, "Data and Computer Communications", Prentice Hall, Imprint of Pearson, 9 th Ed.

[R5] Zheng , "Network for Computer Scientists & Engineers", Oxford University Press [R6] Data Communications and Networking: White, Cengage Learning.

13. **Object Oriented Programming Using C++**

Text Books:

[T1] S. B. Lippman & J. Lajoie, " C ++ Primer" 3rd Edition, Addison Wesley, 2000. [T2] A.R.Venugopal, Rajkumar, T. Ravishanker "Mastering C++", TMH.
[T2]. R. Lafore, "Object Oriented Programming using C++", BPB Publications.
References:
[R1] A.K. Sharma," Object Oriented Programming," Pearson Publication, 2014
[R2] Schildt Herbert, "C++ Programming", 2nd Edition, Wiley DreamTech.
[R3] D . Parasons, "Object Oriented Programming with C++", BPB Publication.
[R4] Steven C. Lawlor, "The Art of Programming Computer Science with C++", Vikas Publication.
[R5] Yashwant Kanethkar, "Object Oriented Programming using C++", BPB Publications.
[R6] B. Stroustrup, "The C++ Programming language", Third edition, Pearson Education.

14. **Power Plant Instrumentation**
Text Books:
[T1]S. B. Lippman & J. Lajoie, " C ++ Primer" 3rd Edition, Addison Wesley, 2000.
[T2] A.R.Venugopal, Rajkumar, T. Ravishanker "Mastering C++", TMH.
[T2].R. Lafore, "Object Oriented Programming using C++", BPB Publications.
References:
[R1] A.K. Sharma," Object Oriented Programming," Pearson Publication, 2014
[R2] Schildt Herbert, "C++ Programming", 2nd Edition, Wiley DreamTech.
[R3] D . Parasons, "Object Oriented Programming with C++", BPB Publication.
[R4] Steven C. Lawlor, "The Art of Programming Computer Science with C++", Vikas Publication.
[R5] Yashwant Kanethkar, "Object Oriented Programming using C++", BPB Publications. [R6[B. Stroustrup, "The C++ Programming language", Third edition, Pearson Education.

15. **Intelligent and Smart Instrumentation**
Text Books:
[T1] Mathivanan, "PC Based Instrumentation",1st Ed., PHI
[T2] D.Patranabis, "sensors and Transducers" 2nd Edition, PHI
Reference Books:-
[R1] J.Jerome, "Virtual Instrumentation using LabVIEW", PHI
[R2] P.Rai Choudhury, MEMS and MOEMS Technology and Application,PHI
[R3] Barney, " Intelligent Instrumentation, Microprocessor Applications in measurement and Control", PHI
[R4] M.Bhuyan, "Intelligent Instrumentation: Principles and Applications", CRC Press

16. **Digital Communication**
Text Books:
[T1] Simon Haykin, "Communication Systems" John Wiley & Sons, Inc, 4th Edition.
[T2] Taub Schilling, "Principles of Communication Systems" TMH, 2nd Edition
Reference Books:
[R1] George Kennedy, "Communication System" TMH – 4th Edition
[R2] B. P. Lathi, "Modern Digital and Analog Communication System" Oxford University Press – 3rd Edition.
[R3] Digital Communications by John G.Proakis; McGraw Hill.

17. **Electrical Power Quality**
Text Books:
[T1] Math H.J. Bollen, Understanding Power Quality Problems, IEEE Press, 1999.
[T2] Roger C.Dugan, Mark F.McGranaghan, Surya Santoso, H.Wayne Beaty, Electrical Power Systems Quality, Second Edition, Tata McGraw-Hill Edition.
[T3] C.Sankaran, Power Quality, CRC Press, 2002.

References Books:

[R1] N. G. Hingonani, Gyugi, Understanding FACTS concepts, Technology of flexible AC Transmission systems, IEEE Press, 1999

[R2] T.J.E Milles – Reactive Power Control in electric systems, John Wiley & Sons 1982

[R3] J. Arrillaga, D.A Bradely and P.S. Bodger, Power System Harmonics. New York: Wiley,1985.