

## **Recommended Books**

### **• 1<sup>st</sup> 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. Aruldas '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 'Engineering Physics' [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. Srivastha, 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.

## • **2<sup>nd</sup> 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, 1st edition, 2009.  
 [R2]. H.K. Malik & A. K. Singh 'Engineering Physics' [McGraw-Hill], 1st Edition, 2009.  
 [R3]. C. Kittel, 'Mechanics', Berkeley Physics Course, Vol.-I. Latest Edition.  
 [R4]. Irving Kaplan 'Nuclear Physics' Latest Edition.  
 [R5]. John R. Taylor, Chris D. Zafiratos 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 Publishers 4/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.

## **• 3<sup>rd</sup> Semester**

### **1. Numerical Analysis and Statistical Techniques**

#### **Text Books:**

[T1] R.K. Jain and S.R.K. Iyengar, "Numerical methods for Scientific and Engineering Computation", NewAge.

[T2] N.M. Kapoor, "Fundamentals of Mathematical Statistics", Pitambar Publications

#### **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, TMH

[R6] B.S. Grewal, "Numerical Methods in Engg. And Science", Khanna Publications.

[R7] Miller and Freund, "Probability and statistics for Engineers", PHI

[R8] Gupta and Kapoor, "Fundamentals of Mathematical Statistics" Sultan Chand and Sons.

### **2. Electrical Machines**

#### **Text Books:**

[T1] Electric Machinery, A Fitzgerald, Charles Kingsley, Stephen Umans, Tata McGraw Hill Education, 6th edition, 2002

[T2] Electrical Machines, D P Kothari, I.J. Nagrath by Tata McGraw Hill Education, 2014

Reference Books:

[R1] Electrical and Electronic Technology, Hughes Edward, Ian Mckenzie Smith, JohnHiley, Pearson Education, 10th edition, 2010

[R2] Electrical Engineering Fundamentals, Vincent Del Toro, Prentice-Hall, 2nd edition, 1989

[R3] Introduction to Electrical Engineering, Mulukutla S. Sarma, Oxford University Press Inc., 2001

[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] Basic Electrical Engineering, C.L.Wadhwa, New Age International, 2007.

### **3. Thermal Science**

Text Books:

[T1] P.K. Nag, "Engineering Thermodynamics", 5th edition McGraw Hill

[T2] Y. A. Cengel & M. A Boles "Thermodynamics- An Engineering Approach ", 7th edition TMH

[T3] Gordon Rosers, &Yon Mahew; Engineering Thermodynamics", Pearson.

Reference books:

[R1] M.J. Moran & H.N. Shapiro "Fundamentals of Thermal Engineering" John Wiley & sons.

[R2] C. P. Arora " Thermodynamics", McGraw Hill

[R3] S L Somasundaram "Engineering Thermodynamics", New Age International Publishers.

[R4] R. K. Rajput, "Engineering Thermodynamics", Lakshmi Publications

[R5] Shiv Kumar, "Fundamentals of Thermal Engineering" Ane Books Pvt. Ltd.

### **4. Production Technology**

Text Books:

[T1] Manufacturing processes Vol. 1, by H.S. Shan, Pearson Education

[T2] Manufacturing Engineering & Technology by Kalpakjian, Pearson Publication

Reference Books:

[R1] Mikell P. Groover" Principles of Modern Manufacturing, 5th Edition SI Version , Wiley

[R2] Jain P.L., "Principles of Foundry Technology", Tata McGraw Hill, New Delhi, 1998.

[R3] Sharma P.C., "A Text Book of Production Engineering", Vol.1, S. Chand Publication, New Delhi, 2001.

[R4] Heine & Rosenthal, "Principle of Metal Casting", Tata McGraw Hills, New Delhi, 2003.

[R5] Little Richard L, "Welding & Welding Technology", Tata McGraw Hill, New Delhi, 2003.

[R6] Jain, R.K., "Production Technology", Khanna Publishers, 2001.

[R7] HMT Bangalore, "Production Technology", Tata McGraw Hill, 1980.

[R8] A.K. Chakrabarti "Casting Technology and cast alloys" 2011, PHI learning

### **5. Material Science and Metallurgy**

Text Books:

[T1] Callister "Materials Science and Engineering": An Introduction, 6th Edition

[T2] Parashivamurthy K.I "Material Science and Metallurgy", Pearson,

[T3] Sidney H Avner," Introduction to Physical Metallurgy", Tata McGraw-Hill,New Delhi-1997.

Reference Books:

[R1] Degarmo E. Paul et.al, "Materials & Processes in Manufacture", Prentice Hall India, New Delhi, 2001.

[R2] L. Krishna Reddi, "Principles of Engineering Metallurgy", New Age Publication, New Delhi, 2001.

[R3] Buduisky et al, "Engineering Materials & Properties", Prentice Hall India, New Delhi, 2004.

[R4] Peter Haasten, "Physical Metallurgy", Cambridge Univ. Press, 1996.

[R5] Raymond A Higgin., "Engineering Metallurgy Part 1", Prentice Hall India, New Delhi, 1998.

### **6. Strength of Materials-1**

Text Books:

[T1] Dr. Sadhu Singh “Strength of Materials”, Khanna Pub.

[T2] Hibbler R.C., “Mechanics of Materials”, Prentice Hall, New Delhi, 1994.

Reference Books:

[R1] Timoshenko S.P., Gere J “Elements of Strength of Materials”, East-West affiliated, New Delhi, [R2] Bhavikatti S. S. Strength of Materials”, Vikas Publishers 2000

[R2] Sri Nath L.S. et.al., “Strength of Materials”, McMillan, New Delhi, 2001

[R3] Popov Eger P., “Engg. Mechanics of solids”, Prentice Hall, New Delhi, 1998

[R4] Fenner, Roger.T, “Mechanics of Solids”, U.K. B.C. Publication, New Delhi, 1990.

## • **4<sup>th</sup> Semester**

### **1. Kinematics of Machines**

Text Books

[T1] Theory and Machines: S.S. Rattan, Tata McGraw Hill.

[T2] Theory of Machines and Mechanisms: Joseph Edward Shigley and John Joseph Uicker, Jr. Second Edition, MGH, New York

Reference Books

[R1] Thomas Beven, “The Theory of Machines”, CBS Publishers,

[R2] V.P. Singh, “Theory of Machines”, Dhanpat Rai & Co.(P)Ltd

[R3] Malhotra & Gupta, “The Theory of Machine”, Satya Prakashan,.

[R4] Ghosh A & Malik A K “ Theory of Mechanisms and Machines” Affiliated East West Press

### **2. Strength of Materials-2**

Text Books:

[T1] Dr. Sadhu Singh, “Strength of Materials” , Khanna Publishers

[T2] Hibbler R.C., “Mechanics of Materials”, Prentice Hall, New Delhi, 1994.

Reference Books:

[R1] U. C. Jindal”Strength of Materials” Pearson Education India

[R2] Beer, Johnston “Mechanics of Materials” fifth edition McGraw-Hill,

[R3] Debabrata Nag & Abhijit Chanda “Strength of Materials”, 2nd edition, John Wiley & Sons publisher

[R4] Sri Nath L.S. et.al., “Strength of Materials”, McMillan, New Delhi, 2001

[R5] Timoshenko S.P., Gere J “Elements of Strength of Materials”, East-West affiliated, New Delhi, 2000

[R6] Popov Eger P., “Engg. Mechanics of solids”, Prentice Hall, New Delhi, 1998

[R7] Fenner, Roger.T, “Mechanics of Solids”, U.K. B.C. Publication, New Delhi, 1990.

### **3. Manufacturing Machines**

Text Books:

[T1] B.S. Raghuwanshi, “Workshop Technology”, Vol.2, Dhanpat Rai & Sons, 2003.

[T2] S.F. Krar Stevan F. and Check A.F., “Technology of M/C Tools”, McGraw Hill Book Co., 1986

[T3] Hazra Chandhari S.K., “Elements of Workshop Technology”, Vol.2, Media Promoters, 2003.

Reference Books:

[R1] P.C. Sharma, “A Text Book of Production Engineering”, S. Chand, New Delhi, 2004.

[R2] Bawa H.S., “Workshop Technology”, Vol.2, Tata McGraw Hill, 2004.

[R3] Juneja & Shekhon, “Fundamental of Metal Cutting”, New Age Publications

[R4] Kibbe Richard et al, “M/c Tool practices”, Prentice Hall India, 2003.

[R5] Gerling Heinrich, “All about Machine Tools”, New Age Publication, 2003.

### **4. Measurement and Instrumentation**

Text Books:

[T1] D. V. S. Murty, “Transducers and Instrumentation”, PHI Learning Pvt. Ltd

[T2] A. K. Shawney, “Electrical & Electronic Measurement & Instruments”, Dhanpat Rai & Sons Publications, 2000

Reference Book:

[R1] E.O.Doebelin,Dhanesh N Manik, “Measurement Systems”, 6th Edition, McGraw Hill Education.

[R2] John P. Bentely, “Principles of Measurement System”, 4th Edition, Pearson Prentice Hall

[R3] D. Patranabis, “Sensors and Transducers”, PHI Learning Pvt. Ltd., 2nd edition .

## **5. IC Engines and Gas Turbines**

Text Books:

[T1] Ganesan V., “Internal Combustion Engines”, Tata McGraw-Hill

[T2] H.H. Saravanamutto, H. Cohen, GFC Rogers “Gas Turbine Theory”, Pearson.

Reference Books:

[R1] John B Heywood, “Internal Combustion Engine Fundamentals”, Tata McGraw-Hill.

[R2] K.K. Ramalingam, “ Internal Combustion Engines” 2nd ed, SCITECH Publications.

[R3] E.T. Vincent “Theory & Design of Gas Turbine and Jet Engine” Tata McGraw Hill.

[R4] Gas Turbine Principles and Practice, Cox Newnes.

## **6. Fluid Mechanics**

Text Books:

[T1] R.K. Basal, “Fluid Mechanics & Hydraulic Machines”, Laxmi Publications(P) Ltd.,2002.

[T2] D.S. Kumar, “Fluid Mechanics and Fluid Power Engineering”, S.K. Kataria & Sons,2000.

Reference Books:

[R1] I.H. Shames, “Mechanics of Fluids”, Tata McGraw Hill

[R2] V.L. Streeter and E.B. Wylie, “Fluid Mechanics”, Tata McGraw Hill

[R3] Modi, P.N., and Seth, S.H., “Hydraulics and Fluid Machines”, Standard Book House,

[R4] Vijay Gupta and S.K.Gupta, “Fluid Mechanics and its Applications”, Wiley Eastern Ltd,

[R5] Som, S.K. & Biswas G. : Introduction of fluid mechanics & Fluid Machines, TMH, 2000.

# **• 5<sup>th</sup> Semester**

## **1. Management of Manufacturing Systems**

Text Books:

[T1] Ravi Shankar, “Industrial Engg. & Management”, Galgotia Publications

[T2] S.K. Sharma, “Industrial Engg. & Operation Management”, S.K. Kataria & Sons.

Reference Book:

[R1] Joseph S. Martinich, “Production & Operation Management”, John Wiley & Sons.

[R2] S. N. Chary,” Production and operations management, TMH 4th edition

[R3] Harold T. Amrine, John A. Ritchey, Colin L. Moodie, Joseph F. Kmec “Manufacturing organization and Management” Pearson publication 6th edition

[R4] S. Anil Kumar, N. Suresh “Production and operations management”, New age International, 2nd Ed.

[R5] M. Mahajan, “Industrial Engg. & Production Management”, Dhanpat Rai & Co.

## **2. Heat Transfer**

Text Books:

[T1] R. C. Sachdeva “Heat Transfers” McGraw Hill.

[T2] Incropera, Dewitt, “Fundamentals of Heat and Mass Transfer”.

[T3] P. K. Nag “Heat and Mass Transfer” McGraw Hill.

Reference:

[R1] Holman, J.P., "Heat Transfer", Tata McGraw Hill Book Company.

- [R2] Kothandaraman C.P., “Fundamentals of Heat and Mass Transfer”, New Age International Publisher.  
 [R3] Domkundwar S., Arora S.C., Domkundwar AnandV., “A course in Heat and Mass Transfer”, Dhanpat Rai & Company.  
 [R4] Rathore Mahesh M., “Engineering Heat and Mass Transfer”, University Science Press.  
 [R5] Ozisik M.N, “Heat Transfer”, McGraw-Hill Book Co.

### **3. Dynamics Of Machines**

Text Books:

- [T1] Theory and Machines: S.S. Rattan, Tata McGraw Hill.  
 [T2] Theory of Machines and Mechanisms: Joseph Edward Shigley and John Joseph Uicker, Jr. Second Edition, MGH, New York

Reference Books:

- [R1] Thomas Beven, “The Theory of Machines”, CBS Publishers,  
 [R2] V.P. Singh, “Theory of Machines”, Dhanpat Rai & Co.(P)Ltd  
 [R3] Malhotra & Gupta, “The Theory of Machine”, Satya Prakashan  
 [R4] Ghosh A & Malik A K “Theory of Mechanisms and Machines” Affiliated East West Press.  
 [R5] J.S Rao, “Mechanical Vibration”, New age publication.

### **4. Machine Design -1**

Text Books:

- [T1] Maleeve Hartman and O.P.Grover, “Machine Design”, CBS Publication & Publishers  
 [T2] V.B. Bhandari, “Machine Design”, Tata McGraw Hill

Reference Book:

- [R1] Mahadevan, “Design Data Book”, CBS Publishers & Distributors  
 [R2] J.E. Shigley & C.R. Mischke, "Mechanical Engineering Design", Tata McGraw Hill Co. Inc.  
 [R3] P.C. Sharma and D.K Aggarwal., “Machine Design”, S.K. Kataria & Sons  
 [R4] Juvinal R C, Marshek K M, “Fundamentals of Machine component Design”, Wiley India  
 [R5] Norton R. I. “Machine Design” Pearson

### **5. 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.

### **6. Communication Skills for Professionals**

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.

## • 6<sup>th</sup> Semester

### 1. Machine Design-2

Text Books:

[T1] Maleeve Hartman and O.P. Grover, “Machine Design”, CBS Publication & Publishers.

[T2] V.B Bhandari, “Machine Design”, Tata McGraw Hill.

Reference Book:

[R1] Mahadevan, “Design Data Book”, CBS Publishers & Distributors

[R2] J.E. Shigley & C.R. Mischke, "Mechanical Engineering Design", Tata McGraw Hill Co.Inc.

[R3] P.C. Sharma and D.K Aggarwal., “Machine Design”, S.K. Kataria & Sons

[R4] Juvinal R C, Marshek K M, “Fundamentals of Machine component Design”, Wiley India

[R5] Norton R. I. “Machine Design” Pearson.

### 2. Metal Cutting and Tool Design

Text Books:

[T1] B.L. Juneja, G. S. Sekhon, Nitin Seth” Fundamental of Metal Cutting and Machine Tools”, New Age International 2nd edition,

[T2] P. H. Joshi” Jigs and Fixtures”, 2nd Edition TMH

[T3] G.K. Lal “Introduction to Machining Science”, New age International.

Reference Books:

[R1] Geoffrey Boothroyd, “Fundamentals of Metal Machining & Machine Tools”, TMH

[R2] P.N. Rao, “Manufacturing Technology”, Tata McGraw Hill Publication Ltd.

[R3] B.J. Ranganath, “Metal Cutting & Tool Design” Vikas Publishing House Pvt. Ltd

[R4] A.B. Chattopadhyay “Machining and Machine Tools” Wiley India

### 3. Fluid Systems

Text Books:

[T1] Dr. R.K. Bansal, “Fluid Mechanics & Hydraulic Machines”, Laxmi Publications (P) Ltd., 2002.

[T2] Jagadish Lal, “Fluid machines Including Fluid mechanics”, Metropolitan Book Co., New Delhi, 1995.

Reference Books:

[R1] Dr. D.S. Kumar, “Fluid Mechanics & Fluid Power Engineering”, S.K. Kataria & Sons, 2001

[R2] Kumar, K.L, “Engineering Fluid Mechanics”, Eurasia Publishing House, New Delhi, 1995.

[R3] P.N Modi and S.M Seth, “Hydraulics and Fluid Mechanics”, Standard Book House

[R4] S.K Agrawal, “Fluid mechanics and machinery”, Tata McGraw hill

[R5] D.R. Malhotra & N.K. Malhotra, “The Fluid Mech. & Hydraulics”, Satya Prakashan, 2001

[R6] Streeter & Wylie, “Fluid Mechanics”, McGraw-Hill.

### 4. Refrigeration and Air Conditioning

Text Books:

[T1] C.P. Arora, “Refrigeration & Air Conditioning”, Tata McGraw Hill Publication.

[T2] R.C. Jordand & G.B. Prister, “Refrigeration & Air Conditioning”, Prentice Hall of India Publication.

References Books:

[R1] W.F. Stocker & J.W. Jones, “Refrigeration & Air Conditioning”, Tata McGraw Hill Publication. [R2]

Manohar Prasad, “Refrigeration & Air Conditioning”, Wiley Eastern.

[R3] S. Domkundwar, “A Course in Refrigeration & Air Conditioning”, Dhanpat Rai & Sons .

### 5. Organizational Behaviour

Text Books:

- [T1] Luthans Fred., “Organizational Behaviour”, McGraw Hill, 2010, 12th ed.  
 [T2] Robbins & Judge (15th ed.), “Essentials of Organizational Behaviour”, Pearson 2012.

References:

- [R1] Stoner, R. James A.F., Edward Freeman Daniel R Gilbert Jr., Management 6TH Ed, PHI  
 [R2] George, J. M. & Jones, G.R. (2009). Understanding and Managing Organizational Behaviour, 5th Edition, Pearson Education.  
 [R3] Green Berg, J. and Baron, R.A. (2008), Behaviour in Organization. Prentice Hall of India.  
 [R4] Mcshane, S.L., Von Glinow, M.A., Sharma, R.R. (2006) Organizational Behaviour. Tata McGrawHill.

## 6. **Metrology**

Text Books:

- [T1] Luthans Fred., “Organizational Behaviour”, McGraw Hill, 2010, 12th ed.  
 [T2] Robbins & Judge (15th ed.), “Essentials of Organizational Behaviour”, Pearson 2012.

References:

- [R1] Stoner, R. James A.F., Edward Freeman Daniel R Gilbert Jr., Management 6TH Ed, PHI  
 [R2] George, J. M. & Jones, G.R. (2009). Understanding and Managing Organizational Behaviour, 5th Edition, Pearson Education.  
 [R3] Green Berg, J. and Baron, R.A. (2008), Behaviour in Organization. Prentice Hall of India.  
 [R4] Mcshane, S.L., Von Glinow, M.A., Sharma, R.R. (2006) Organizational Behaviour. Tata McGrawHill.

## • **7<sup>th</sup> Semester**

### 1. **Automobile Engineering**

Text Books:

- [T1] N.K. Giri, “Automotive Mechanics”, Khanna Publishers  
 [T2] R K Rajput, “A text Book on Automobile Engineering”, Laxmi publication  
 [T3] Kirpal Singh, “Automobile Engg.”, Vol. I & II, Standard Publishers, 2004

Reference Books:

- [R1] Narang G.B.S., “Automobile Engg.”, Khanna Publishers  
 [R2] Srinivasan, “Automotive Engines”, Tata McGraw Hill  
 [R3] K.K. Jain & R.B. Asthana, “Automobile Engineering”, Tata McGraw Hill  
 [R4] Joseph Haitner, “Automotive Mechanics”, C.B.S. Publications

### 2. **Computer Integrated Mnaufacturing**

Text Books:

- [T1] T.K. Kundra, P. N.Rao & N.K.Tiwari, “Numerical Control and Computer Aided Manufacturing”, TMH  
 [T2] Mikell P. Groover, “Automation, Production Systems and Computer- Integrated Manufacturing”, 2nd Edition, Prentice Hall, 2001.  
 [T3] S.K. Sinha, “CNC Programming”, Galgotia Publications 2003.

Reference Books:

- [R1] P. Radhakrishnan, “Computer Numerical Control Machine & Computer Aided Manufacturing”, New Academic Science Limited.  
 [R2] U.Rembold, “Computer Integrated Manufacturing and Engineering”, Addison Wesley Publishers, 1993 edition  
 [R3] S. Kant Vajpayee, “Principles of Computer Integrated Manufacturing”, PHI Learning Private Limited, New Delhi, 2012  
 [R4] M. Adithan, B.S. Pabla, “CNC Machines”, New Age  
 [R5] Binit Kumar Jha, “CNC programming made Easy”, Vikas Publications.

### **3. Power Plant Engineering**

Text Books:

[T1] Arora & Domkundwar, “A course in Power Plant Engineering”, Dhanpat Rai & Sons

[T2] P.L.Balaney “Thermal Engineering”, Khanna Publishers.

Reference Books:

[R1] R.K.Rajput “Thermal Engineering”, Laxmi Publications (P) Ltd.

[R2] A.S Sarao “Thermal Engineering”, Satya Prakshan.

[R3] Shamsheer Gautam “Power Plant Engineering” Vikas Publishing House .

### **4. Optimization Techniques**

Text Books:

[T1] Arora & Domkundwar, “A course in Power Plant Engineering”, Dhanpat Rai & Sons

[T2] P.L.Balaney “Thermal Engineering”, Khanna Publishers.

Reference Books:

[R1] R.K.Rajput “Thermal Engineering”, Laxmi Publications (P) Ltd.

[R2] A.S Sarao “Thermal Engineering”, Satya Prakshan.

[R3] Shamsheer Gautam “Power Plant Engineering” Vikas Publishing House

### **5. Preventive Maintenance and Condition Monitoring**

Text Books:

[T1] Srivastava, S.K., “Industrial Maintenance Management”, S. Chand and Co.

[T2] Bhattacharya, S.N., “Installation, Servicing and Maintenance”, S. Chand and Co.

Reference Books:

[R1] White, E.N., “Maintenance Planning”, Documentation, Gower Press

[R2] Garg, M.R., “Industrial Maintenance”, S. Chand and Co.

[R3] Higgins, L.R., “Maintenance Engineering Hand book”, 5th Edition, McGraw Hill

[R4] Armstrong, “Condition Monitoring”, BSIRSA

[R5] Davies, “Handbook of Condition Monitoring”, Chapman and Hall.

### **6. Introduction to Data Science**

Text Books:

[T1] Runkler, Thomas A. Data Analytics: Models and Algorithms for Intelligent Data Analysis, Springer, 2012.

[T2] Friedman, Jerome, Trevor Hastie, and Robert Tibshirani. The elements of statistical learning. Vol. 1. New York: Springer Series in Statistics, 2001.

References Books:

[R1] Zuur, Alain, Elena N. Ieno, and Erik Meesters. A Beginner's Guide to R. Springer, 2009.

[R2] Hansen, Jesper Schmidt. GNU Octave: Beginner's Guide: Become a Proficient Octave, User by Learning this High-level Scientific Numerical Tool from the Ground Up. Packt Publishing Ltd, 2011.

### **7. Non-Conventional Manufacturing Processes**

Text Books:

[T1] P.C. Pandey & H.S. Shan, “Modern Machining Process”, Tata McGraw Hills, 2001

[T2] Amitabh Gosh and A.K. Mallik, “Manufacturing Science”, Affiliated East-West Press Pvt. Ltd., 1985.

Reference Books:

[R1] J.T. Black, Ronald A. Kosher DeGarmo's Materials and Processes in Manufacturing, 11th Edition , Wiley

[R2] Mikell P. Groover" Principles of Modern Manufacturing, 5th Edition SI Version , Wiley.

### **8. Geometric Modelling and Product Design**

Text Books:

[T1] Ibrahim Zeid, "CAD/CAM Theory and Practice", Tata McGraw-Hill Publishing Company Limited, 6th Edition 1998.

[T2] A.K Chitale and R.C.Gupta, "Product Design and Manufacturing", Prentice-Hall of India (P).Ltd; 3rd edition

Reference Books:

[R1] P.N. Rao, "CAD/CAM Principles and Applications", Tata McGraw Hill, 2003

[R2] Ibrahim Zeid, "Mastering CAD/CAM", Tata McGraw-Hill Publishing Company Limited.

## **9. Advanced Material Science and Metallurgy**

Text Books:

[T1] Handbook of Cellular metals, Production, processing, Application, Edited by Hans Peter Degischer and Brigitte Kriszt, Wiley - VCH, 2002

[T2] Biomaterials Science, An Introduction to Materials in Medicine, Edited by B.D. Ratner, A.S. Hoffman, F.J. Sckoen, and J.E.L Emons, Academic Press, second edition, 2004

[T3] Materials Science and Engineering, An Introduction, 5th Edition, William D. Callister, Jr., John Wiley & Sons, Inc., New York, 1999, with CD-ROM.

Reference Books:

[R1] Mikell P. Grover, "Fundamentals of Modern Manufacturing, Materials, Processing, and Systems", 2nd Edition, John Wiley & Sons, inc.

[R2] L.J. Gibson, and M.F. Ashby, "Cellular Solids, Structure and Properties", 2nd Edition, Cambridge University Press, 1999.

[R3] Ashby, M. F., Evans, A., Fleck, N. A., Gibson, L. J., Hutchinson, J. W., & Wadley, H. N. G., Metal Foams: A Design Guide, Butterworth-Heinemann, Massachusetts; 2000

[R4] Milton Ohring, "Materials Science of Thin Films", 2 nd Edition, Academic Press, 2002.

[R5] C.T. Herakovich, "Mechanics of Fibrous Composites", John Wiley & Sons, Inc., New York, 1998.

## **10. Operations Research**

Text Books:

[T1] Hira and Gupta " Operation Research" S. Chand Publications

[T2] H.A. Taha, "Operations Research", Prentice-Hall India, 6th Edition, 2004.

Reference Books:

[R1] S.Kalavathy, "Operations Research", Vikas Publication, 4th Edition, 2013.

[R2] N.D. Vohra, "Operations Research", Tata McGraw Hill, 2004.

[R3] Richard Bronson, Govindasami Naadimuthu, "Operations Research", Tata McGraw Hill, 2004

[R4] A.P. Verma, "Operations Research", S.K. Kataria & Sons, 2004.

[R5] J.K. Sharma, "Operation Research", Macmillan India Ltd. 2005.

## **11. 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.

## **12. Renewable Energy Resources**

Text Books:

[T1] Tiwari and Ghosal, “Renewable Energy Resources: Basic Principle & Application”, Narosa Publication

[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.

### 13. **Management Information Systems and ERP**

Text Books:

[T1] Kenneth Laudon and Jane Laudon (2013). Management Information Systems, Twelfth Edition, Pearson, New Delhi.

[T2] James O'Brien, George Marakas and Ramesh Behl (2014). Management Information Systems, Tenth Edition, McGraw Hill Education, New Delhi.

References Books:

[R1] Sahil Raj, “Management Information Systems”, Pearson 2013

[R2] Girdhar Joshi (2013). Management Information Systems, Oxford University Press, New Delhi.

[R3] Effy Oz (2009). Management Information Systems, Sixth Edition, Cengage Learning, Delhi.

[R4] Nirmalya Bagchi (2014). Management Information Systems, Vikas Publishing House, New Delhi.

### 14. **Finite Element Methods**

Text Books:

[T1] J N Reddy “An Introduction to finite element method” Tata Mc Graw Hill 3rd edition

[T2] S.S. Rao, “Finite Element Method In Engineering”, Pergaman Press

Reference Books:

[R1] O.C. ZienKiewicz, “The Finite Element Method”, Tata McGraw Hill

[R2] Larry J. Segerlind, “Applied Finite-Element Analysis”, John Wiley and Sons

[R3] Kenneth H. Huebner, “Finite Element Method for Engineers”, John Wiley and Sons

[R4] Darell W. Pepper, J.C Heinrich “The Finite Element Method” CRC press

[R5] V.Ramamurti “Finite Element Method in Machine Design”Norosa Publishing House.

### 15. **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 Histan, “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.

### 16. **Rotor Dynamics**

Text Books:

[T1] J.S Rao, “Rotor Dynamics”, New Age International Publishers.

[T2] M.I. Friswell, “Rotor Dynamics”, Cambridge University Press

Reference Books:

[R1] John Vance, Fouad Zeidan, Brian Murphy “Machinery Vibration and Rotor Dynamics” John Wiley & Sons.

### **17. Artificial Intelligence**

Text Book:

[T1] Rich and Knight, “Artificial Intelligence”, Tata McGraw Hill, 1992

[T2] S. Russel and P. Norvig, “Artificial Intelligence – A Modern Approach”, Second Edition, Pearson Edu.

Reference Books:

[R1] KM Fu, "Neural Networks in Computer Intelligence", McGraw Hill

[R2] Russel and Norvig, "Artificial Intelligence: A modern approach", Pearson Education.

### **18. Computational Fluid Dynamics**

Text Books:

[T1] Muralidhar, K., and Sundararajan, T., “Computational Fluid flow and Heat Transfer”, Narosa Publishing House,

[T2] Ghoshdasdar, P.S., “Computer simulation of flow and heat transfer”, Tata McGraw – Hill, New Delhi

Reference Books:

[R1] Anderson, D. A., Tannehill, J. L, and Pletcher, R.H., “Computational fluid mechanics and Heat Transfer”, Hemisphere Publishing Corporation,

[R2] John David Anderson, "Computational Fluid Dynamics: The Basics with Applications", McGraw Hill, New York .

### **19. 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 .

## **• 8<sup>th</sup> Semester**

### **1. Engineering System Modelling and Simulation**

Text Book:

[T1] W. Bolton, “Mechatronics – Electronic control systems in Mechanical & Electrical Engineering”, Pearson Education Ltd.

[T2] Ibrahim Zeid, “CAD/CAM Theory and Practice”, Tata McGraw-Hill Publishing Company Limited.

[T3] Sankar Sengupta, System Simulation and modelling, Pearson.

Reference Books:

[R1] Deo, Narsingh, Millican Charles E.,”System Simulation With Digital Computer”, PHI.

[R2] Gordon, Geoffrey, System Simulation, PHI.

[R3] P. Radhakrishnan, S Subramanyan, V. Raju, CAD/CAM/CIM, New Age International Publishers.

### **2. Statistical Quality Control and Reliability**

Text Books:

[T1] M. Mahajan, “Statistical Quality Control”, Dhanpat Rai & Co.

[T2] Amitav Mitra, “Fundamentals of Quality Control”, Pearson Education

Reference Books:

[R1] EL Grant & RS Leavenworth, “Statistical Quality Control”, McGraw Hill & Co.

[R2] Feigenbaum, “Total Quality Control”, McGraw Hill & Co.

[R3] Montgomery DC, “Introduction to Statistical Quality Control”, John Wiley & Sons Inc.

[R4] Stephan B. Vardeman, J Marcus Jobe, “Statistical QA Methods for Engineers”, John Wiley & Sons Inc.

[R5] Taylor J.R., “Quality Control systems”, McGraw Hill Int. Education.

### **3. Human Values and Professional Ethics-2**

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. Nuclear Power Generation and Supply**

Text Books:

[T1] P.K. Nag. Nuclear Power Plant, Power Plant Engg. (Steam & Nuclear)

[T2] A.K. Raja, A.P. Srivastava & M. Dwivedi, An Introduction on Nuclear Engineering,

Reference Books:

[R1] Glasstone & Sesons- Nuclear Engineering

[R2] Arora & Domkundwar, A course in Power Plant Engg-

### **5. Robotics**

Text Books:

[T1] R.K. Mittal, I.J. Nagrath, “Robotics & Control”, Tata McGraw & Hills, 2005.

[T2] Mikell P Groover , Mitchell Weiss “Industrial Robotics :Technology, Programming and Application” Tata McGraw & Hills, 2009.

[T3] Saha, S.K., Introduction to Robotics, 2nd Edition, McGraw-Hill Education, New Delhi, 2014

Reference Books:

[R1] John J.Craig; “Introduction to Robotics Mechanics & Control”, Pearson Education, 2004.

- [R2] Robert J. Schilling, "Fundamentals of Robotics, analysis & Control", Prentice Hall (I) P. Ltd., 2002
- [R3] Mark W. Spong, Seth Hutchinson, M. Vidyasagar "Robot Modeling and Control" John Wiley 2nd Ed
- [R4] J Srinivasan, R.V.Dukkipati, K. Ramji, "Robotics control & programming", Narosa.
- [R5] Ghosal, Ashitava, "Robotics: Fundamental Concepts and Analysis," Oxford University Press, 2006
- [R6] M. Murray, M., Li, Zexiang, Sastry, S.S., "A Mathematical Introduction to Robotic Manipulation," CRC Press, 1994
- [R7] Tsai, L.W., "Robot Analysis: The Mechanics of Serial & Parallel Manipulators," Wiley 1999
- [R8] Niku, S. B., "Introduction to Robotics: Analysis, Systems, Applications", Prentice Hall, 2001.

## **6. Rapid Prototyping**

Text Books:

- [T1] R.K. Mittal, I.J. Nagrath, "Robotics & Control", Tata McGraw & Hills, 2005.
- [T2] Mikell P Groover , Mitchell Weiss "Industrial Robotics :Technology, Programming and Application" Tata McGraw & Hills, 2009.
- [T3] Saha, S.K., Introduction to Robotics, 2nd Edition, McGraw-Hill Education, New Delhi, 2014

Reference Books:

- [R1] John J.Craig; "Introduction to Robotics Mechanics & Control", Pearson Education, 2004.
- [R2] Robert J. Schilling, "Fundamentals of Robotics, analysis & Control", Prentice Hall (I) P. Ltd., 2002
- [R3] Mark W. Spong, Seth Hutchinson, M. Vidyasagar "Robot Modeling and Control" John Wiley 2nd Ed
- [R4] J Srinivasan, R.V.Dukkipati, K. Ramji, "Robotics control & programming", Narosa.
- [R5] Ghosal, Ashitava, "Robotics: Fundamental Concepts and Analysis," Oxford University Press, 2006
- [R6] M. Murray, M., Li, Zexiang, Sastry, S.S., "A Mathematical Introduction to Robotic Manipulation," CRC Press, 1994
- [R7] Tsai, L.W., "Robot Analysis: The Mechanics of Serial & Parallel Manipulators," Wiley 1999
- [R8] Niku, S. B., "Introduction to Robotics: Analysis, Systems, Applications", Prentice Hall, 2001.

## **7. Mechanical Vibrations**

Text Book:

- [T1] Singiresu S. Rao "Mechanical Vibrations" Pearson Education
- [T2] G.K. Grover, Mechanical Vibration, Nem Chand and Bross, Roorkee

Reference Book:

- [R1] W.T Thomson, "Theory of vibration" Prentice Hall of India Pvt. Ltd.
- [R2] N.S.V. Kameswara Rao, "Mechanical Vibrations of Elastic Systems", Asian Books Private Limited
- [R3] J.S. Rao and K. Gupta, "Vibration Engg", New Age Publications.

## **8. Soft Computing**

Text Books:

- [T1] Hertz J. Krogh, R.G. Palmer, "Introduction to the Theory of Neural Computation", Addison-Wesley, California, 1991.
- [T2] G.J. Klir & B. Yuan, "Fuzzy Sets & Fuzzy Logic", PHI, 1995.
- [T3] Melanie Mitchell, "An Introduction to Genetic Algorithm", PHI, 1998.
- [T4] F. O. Karray and C. de Silva, "Soft computing and Intelligent System Design", Pearson, 2009.

Reference Books:

- [R1] "Neural Networks-A Comprehensive Foundations", Prentice-Hall International, New Jersey, 1999.
- [R2] Freeman J.A. & D.M. Skapura, "Neural Networks: Algorithms, Applications and Programming Techniques", Addison Wesley, Reading, Mass, (1992).

## **9. 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.

#### 10. **Gas Dynamics**

Text Books:

- [T1] James John and Theo Keith, "Gas Dynamics", Pearson, New Delhi  
 [T2] B.L Singhal, "Gas Dynamics and Jet Propulsion", Macmillan Publishers India Ltd, New Delhi

Reference :

- [R1] Zucker R. D. and Biblarz Oscar, "Introduction to Gas Dynamics", John Wiley and Sons. Inc., Second Edition [2002]  
 [R2] A. H. Shapiro, "Dynamics and Thermodynamics of Compressible Fluid Flow", MIT Press.

#### 11. **Cryogenic Engineering**

Text Books:

- [T1] Randall Baron, Cryogenic System, Mc Graw Hill  
 [T2] K.D. Timmerhaus & T.M. Flynn, Cryogenic Process Engineering, Plenum Press

Reference Books:

- [R1] Russel B Scott, Cryogenic Engineering, Van Nostrand  
 [R2] R W Yance and WM Duke, Applied Cryogenic Engineering, John Willey.

#### 12. **Total Quality Management**

Text Books:

- [T1] Janakiraman, B and Gopal, R.K, "Total Quality Management – Text and Cases", Prentice Hall (India) Pvt. Ltd., 2006.  
 [T2] Dale H.Besterfield, et al., "Total Quality Management", Pearson Education Asia

Reference Books:

- [R1] James R. Evans and William M. Lindsay, "The Management and Control of Quality", 6th Edition, South-Western (Thomson Learning), 2005.  
 [R2] Oakland, J.S., "TQM – Text with Cases", Butterworth – Heinemann Ltd., Oxford, 3rd Edition,  
 [R3] Suganthi,L and Anand Samuel, "Total Quality Management", Prentice Hall (India) Pvt. Ltd.,2006.

#### 13. **Supply-Chain Management Planning**

Text Books

- [T1] Christopher Martin. (2005). Logistics & Supply Chain Management Creating Value-adding Networks, 3rd Edition, Pearson Education..  
 [T2] S.K. Bhattacharyya (2010) Logistics Management, Definition, Dimensions and Functional Applications, S. Chand and Company, Delhi.

Reference Books:

- [R1] Chopra Sunil and Peter Meindl (2009). Supply Chain Management, 4th Edition, Pearson Education.  
 [R2] Ballou, R. H. (2004). Business Logistic Management, 5th Edition, Prentice Hall, New Delhi.  
 [R3] Bowersox, D. J., David, J & Cooper (2002). Supply Chain Logistics Management, McGraw Hill.

#### 14. **Turbo Machinery**

Text Books:

[T1] Yahya, S.M., "Turbines compressors and fans": Tata McGraw-Hill.

[T2] Gorla, R.S.R, & Khan, A.A. "Turbo Machinery: Design and Theory": Marcel Dekker, Inc.

Reference Books:

[R1] Dixon, S.L., "Fluid mechanics and thermodynamics of turbo machinery": Butterworth-Heinemann.

[R2] Peng, W. W., "Fundamentals of Turbo Machinery": J. Wiley

[R3] Baskharone, E.A., "Principles of Turbo Machinery in air-breathing engines": Cambridge University Press.