



**VEL TECH MULTI TECH  
Dr.RANGARAJAN Dr.SAKUNTHALA  
ENGINEERING COLLEGE**

(An ISO 9001: 2008 Certified Institution)

(Owned by Vel Trust)

(Approved Govt. of Tamil Nadu and affiliated to Anna University)



**SYLLABUS**

**WEEKLY SCHEDULE**

**III SEMESTER**

**2015 - 2016**

**DEPARTMENT OF MECHANICAL  
ENGINEERING**

**IV YEAR DEGREE COURSE**

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## WEEK DETAILS

<b>SL.NO.</b>	<b>WEEK</b>	<b>FROM</b>	<b>TO</b>
1	<b>WEEK1</b>	<b>24.06.2015</b>	<b>26.06.2015</b>
2	<b>WEEK2</b>	<b>29.06.2015</b>	<b>03.07.2015</b>
3	<b>WEEK3</b>	<b>06.07.2015</b>	<b>10.07.2015</b>
4	<b>WEEK4</b>	<b>13.07.2015</b>	<b>17.07.2015</b>
5	<b>WEEK5</b>	<b>20.07.2015</b>	<b>24.07.2015</b>
6	<b>WEEK6</b>	<b>27.07.2015</b>	<b>28.07.2015</b>
7	<b>WEEK7</b>	<b>03.08.2015</b>	<b>07.08.2015</b>
8	<b>WEEK8</b>	<b>10.08.2015</b>	<b>14.08.2015</b>
9	<b>WEEK9</b>	<b>17.08.2015</b>	<b>21.08.2015</b>
10	<b>WEEK10</b>	<b>24.08.2015</b>	<b>28.08.2015</b>
11	<b>WEEK11</b>	<b>31.08.2015</b>	<b>04.09.2015</b>
12	<b>WEEK12</b>	<b>07.09.2015</b>	<b>11.09.2015</b>
13	<b>WEEK13</b>	<b>14.09.2015</b>	<b>18.09.2015</b>
14	<b>WEEK14</b>	<b>21.09.2015</b>	<b>25.09.2015</b>
15	<b>WEEK15</b>	<b>28.09.2015</b>	<b>30.09.2015</b>
16	<b>WEEK16</b>	<b>05.10.2015</b>	<b>09.10.2015</b>
17	<b>WEEK17</b>	<b>12.10.2015</b>	<b>16.10.2015</b>
18	<b>WEEK18</b>	<b>19.10.2015</b>	<b>20.10.2015</b>
19	<b>WEEK19</b>	<b>27.10.2015</b>	<b>30.10.2015</b>

## SUBJECT CONTENTS

SL.NO	SUBJECT CODE	SUBJECT NAME
<b>THEORY</b>		
1	MA6351	Transforms and Partial Differential Equations
2	CE6402	Strength of Materials
3	ME6301	Engineering Thermodynamics
4	CE6451	Fluid Mechanics and Machinery
5	ME6302	Manufacturing Technology - I
6	EE6351	Electrical Drives and Controls
<b>PRACTICAL</b>		
7	ME6311	Manufacturing Technology Laboratory - I
8	CE6461	Fluid Mechanics and Machinery Laboratory
9	EE6365	Electrical Engineering Laboratory

**TEST / EXAM SCHEDULE**

<b>SL.NO</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>UNIT TEST I</b>	<b>UNIT TEST II</b>	<b>Pre Model Exam</b>	<b>UNIT TEST IV</b>
1	MA6351	Transforms and Partial Differential Equations	13.07.2015	03.08.2015	21.08.2015	14.09.2015
2	CE6402	Strength of Materials	14.07.2015	04.08.2015	22.08.2015	15.09.2015
3	ME6301	Engineering Thermodynamics	15.07.2015	05.08.2015	24.08.2015	16.09.2015
4	CE6451	Fluid Mechanics and Machinery	16.07.2015	06.08.2015	25.08.2015	18.09.2015
5	ME6302	Manufacturing Technology - I	17.07.2015	07.08.2015	26.08.2015	21.09.2015
6	EE6351	Electrical Drives and Controls	20.07.2015	10.08.2015	27.08.2015	22.09.2015

<b>SL.NO</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>MODEL EXAM</b>
1	MA6351	Transforms and Partial Differential Equations	05.10.2015
2	CE6402	Strength of Materials	06.10.2015
3	ME6301	Engineering Thermodynamics	07.10.2015
4	CE6451	Fluid Mechanics and Machinery	08.10.2015
5	ME6302	Manufacturing Technology - I	09.10.2015
6	EE6351	Electrical Drives and Controls	12.10.2015

# **MA6351 TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS**

## **WEEK 1**

### **Unit I: PARTIAL DIFFERENTIAL EQUATIONS**

Formation of partial differential equations – Singular integrals --

**WEEK2** Solutions of standard types of first order partial differential equations - Lagrange's linear equation

## **WEEK 3**

Linear partial differential equations of second and higher order with constant coefficients of both homogeneous and non-homogeneous types

## **WEEK 4 UNIT TEST-I**

### **UNIT II FOURIER SERIES**

Dirichlet's conditions – General Fourier series – Odd and even functions – Half range sine series –

## **WEEK 5**

Half range cosine series – Complex form of Fourier series – Parseval's identity – Harmonic analysis.

## **WEEK 6 UNIT TEST-II**

### **WEEK 7 UNIT III APPLICATIONS OF PARTIAL DIFFERENTIAL EQUATIONS**

Classification of PDE

## **WEEK 8**

– Method of separation of variables - Solutions of one dimensional wave equation –

## **WEEK 9**

One dimensional equation of heat conduction – Steady state solution of two dimensional equation of heat conduction (excluding insulated edges).

## **WEEK 10 UNIT TEST-III**

### **UNIT IV FOURIER TRANSFORMS**

Statement of Fourier integral theorem – Fourier transform pair –  
Fourier sine and cosine transforms – Properties

## **WEEK 11**

Transforms of simple functions

## **WEEK 12**

Convolution theorem – Parseval's identity.

## **WEEK 13 - UNIT TEST-IV**

## **WEEK -14 REVISION 1-4 UNITS**

## **WEEK -15**

### **UNIT V Z - TRANSFORMS AND DIFFERENCE EQUATIONS**

Z- transforms - Elementary properties – Inverse Z - transform (using  
partial fraction and residues)

## **WEEK -16**

Convolution theorem - Formation of difference equations – Solution of  
difference equations using Z - transform

## **WEEK-17- UNIT TEST V**

## **WEEK-18- MODEL EXAM**

## **TEXT BOOKS**

1. Veerarajan. T., "Transforms and Partial Differential Equations", Tata McGraw Hill Education Pvt. Ltd., Second reprint, New Delhi, 2012.
2. Grewal. B.S., "Higher Engineering Mathematics", 42nd Edition, Khanna Publishers, Delhi, 2012.
3. Narayanan.S., Manicavachagom Pillay.T.K and Ramanaiah.G "Advanced Mathematics for Engineering Students" Vol. II & III, S.Viswanathan Publishers Pvt Ltd. 1998.

## **REFERENCES**

1. Bali.N.P and Manish Goyal, "A Textbook of Engineering Mathematics", 7th Edition, Laxmi Publications Pvt Ltd, 2007.

# **CE6402 STRENGTH OF MATERIALS**

## **WEEK 1**

### **UNIT I ENERGY PRINCIPLES**

Strain energy and strain energy density – strain energy due to axial load, shear, flexure and torsion –

## **WEEK 2**

Castigliano's theorems – Maxwell's reciprocal theorems - Principle of virtual work –

## **WEEK 3 UNIT TEST-I**

application of energy theorems for computing deflections in beams and trusses - Williot Mohr's Diagram.

## **WEEK 4**

### **UNIT II INDETERMINATE BEAMS**

Concept of Analysis - Propped cantilever and fixed beams-fixed end moments and reactions –

## **WEEK 5**

Theorem of three moments – analysis of continuous beams – shear force and bending moment diagrams.

## **WEEK 6 UNIT TEST-II**

### **WEEK 7 UNIT III COLUMNS AND CYLINDER**

Euler's theory of long columns – critical loads for prismatic columns with different end conditions

## **WEEK 8**

Rankine-Gordon formula for eccentrically loaded columns

## **WEEK -9**

Eccentrically loaded short columns – middle third rule – core section – Thick cylinders – Compound cylinders.

## **WEEK 10 UNIT TEST-III**

### **UNIT IV STATE OF STRESS IN THREE DIMENSIONS**

Determination of principal stresses and principal planes – Volumetric strain

## **WEEK 11**

Theories of failure –

## **WEEK 12**

Principal stress - Principal strain – shear stress – Strain energy and distortion energy theories – application in analysis of stress, load carrying capacity.

**WEEK 13 - UNIT TEST-IV**

**WEEK 14 REVISION 1-4 UNITS**

**WEEK 15**

**UNIT V ADVANCED TOPICS IN BENDING OF BEAMS**

Unsymmetrical bending of beams of symmetrical and unsymmetrical sections –

**WEEK 16**

Shear Centre - curved beams – Winkler Bach formula.

**WEEK-17- UNIT TEST V**

**WEEK-18- MODEL EXAM**

**TEXT BOOKS:**

1. Rajput R.K. "Strength of Materials (Mechanics of Solids)", S.Chand & company Ltd., New Delhi, 2010.
2. Egor P Popov, "Engineering Mechanics of Solids", 2nd edition, PHI Learning Pvt. Ltd., New Delhi, 2012

**REFERENCES:**

1. Kazimi S.M.A, "Solid Mechanics", Tata McGraw-Hill Publishing Co., New Delhi, 2003
2. William A .Nash, "Theory and Problems of Strength of Materials", Schaum"s Outline Series, Tata McGraw Hill Publishing company ,2007.
3. Punmia B.C."Theory of Structures" (SMTS) Vol 1&II, Laxmi Publishing Pvt Ltd, New Delhi 2004.
4. Rattan.S.S., "Strength of Materials", Tata McGraw Hill Education Pvt.Ltd., New Delhi, 2011.

## **ME6301 ENGINEERING THERMODYNAMICS**

**WEEK 1 UNIT I**

**BASIC CONCEPTS AND FIRST LAW** Basic concepts - concept of continuum, comparison of microscopic and macroscopic approach Path



and point functions. Intensive and extensive, total and specific quantities.

**WEEK 2** System and their types. Thermodynamic Equilibrium State, path and process. Quasi-static, reversible and irreversible processes. Heat and work transfer, definition and comparison, sign convention.

**WEEK 3**

Displacement work and other modes of work .P-V diagram. Zeroth law of thermodynamics – concept of temperature and thermal equilibrium– relationship between temperature scales –new temperature scales. First law of thermodynamics –application to closed and open systems – steady and unsteady flow processes.

**WEEK 4 UNIT TEST-I**

**UNIT II SECOND LAW AND AVAILABILITY ANALYSIS 9**

Heat Reservoir, source and sink. Heat Engine, Refrigerator, Heat pump. Statements of second law and its corollaries. Carnot cycle Reversed Carnot cycle, Performance. Clausius inequality. Concept of entropy, T-s diagram, Tds Equations, entropy change for - pure substance, ideal gases - different processes, principle of increase in entropy.

**WEEK 2** Applications of II Law. High and low grade energy. Available and non-available energy of a source and finite body. Energy and irreversibility. Expressions for the energy of a closed system and open systems. Energy balance and entropy generation. Irreversibility. I and II law Efficiency.

**WEEK 6 UNIT TEST-II**

**WEEK 7 UNIT III PROPERTIES OF PURE SUBSTANCE AND STEAM POWER CYCLE**

Formation of steam and its thermodynamic properties, p-v, p-T, T-v, T-s, h-s diagrams. p-v-T surface

**WEEK 8**

. Use of Steam Table and Mollier Chart. Determination of dryness fraction. Application of I and II law for pure substances.

**WEEK 9**

Ideal and actual Rankine cycles, Cycle Improvement Methods - Reheat and Regenerative cycles, Economiser, preheater, Binary and Combined cycles.

### **WEEK 10 UNIT TEST-III**

**UNIT IV IDEAL AND REAL GASES, THERMODYNAMIC RELATIONS** Properties of Ideal gas- Ideal and real gas comparison- Equations of state for ideal and real gases-Reduced properties- .Compressibility factor-.Principle of Corresponding states. –

### **WEEK 11**

Generalised Compressibility Chart and its use-. Maxwell relations, Tds Equations, Difference and ratio of heat capacities, Energy equation, Joule-Thomson Coefficient,

### **WEEK 12**

Clausius Clapeyron equation, Phase Change Processes. Simple Calculations.

### **WEEK 13 UNIT TEST-IV**

### **WEEK 14 REVISION 1-4 UNITS**

### **WEEK 15**

**UNIT V GAS MIXTURES AND PSYCHROMETRY 9** Mole and Mass fraction, Dalton"s and Amagat"s Law. Properties of gas mixture – Molar mass, gas constant, density, change in internal energy, enthalpy, entropy and Gibbs function. Psychrometric properties, Psychrometric charts.

### **WEEK 16**

Property calculations of air vapour mixtures by using chart and expressions. Psychrometric process – adiabatic saturation, sensible heating and cooling, humidification, dehumidification, evaporative cooling and adiabatic mixing. Simple Applications

### **WEEK-17- UNIT TEST V**

### **WEEK-18- MODEL EXAM**

### **TEXT BOOKS :**

1. Nag.P.K., "Engineering Thermodynamics", 4thEdition, Tata McGraw-Hill, New Delhi, 2008.

2. Natarajan E., "Engineering Thermodynamics: Fundamentals and Applications", Anuragam Publications, 2012.

## **REFERENCES :**

1. Cengel. Y and M.Boles, "Thermodynamics - An Engineering Approach", 7th Edition, Tata McGraw Hill, 2010.
2. Holman.J.P., "Thermodynamics", 3rd Edition, McGraw-Hill, 1995.
3. Rathakrishnan. E., "Fundamentals of Engineering Thermodynamics", 2nd Edition, Prentice- Hall of India Pvt. Ltd, 2006
4. Chattopadhyay, P, "Engineering Thermodynamics", Oxford University Press, 2010.
5. Arora C.P, "Thermodynamics", Tata McGraw-Hill, New Delhi, 2003.
6. Van Wylen and Sonntag, "Classical Thermodynamics", Wiley Eastern, 1987
7. Venkatesh. A, "Basic Engineering Thermodynamics", Universities Press (India) Limited, 2007.
8. Kau-Fui Vincent Wong, "Thermodynamics for Engineers", CRC Press, 2010 Indian Reprint.
9. Prasanna Kumar: Thermodynamics "Engineering Thermodynamics" Pearson Education, 2013

## **CE6451 FLUID MECHANICS AND MACHINERY**

### **WEEK 1**

#### **UNIT I**

#### **FLUID PROPERTIES AND FLOW CHARACTERISTICS**

Units and dimensions- Properties of fluids- mass density, specific weight, specific volume, specific gravity,

#### **WEEK 2**

viscosity, compressibility, vapor pressure, surface tension and capillarity. Flow characteristics – concept of control volume –

#### **WEEK 3**

application of continuity equation, energy equation and momentum equation.

#### **WEEK 4 UNIT TEST-I**

#### **UNIT II FLOW THROUGH CIRCULAR CONDUITS**

Hydraulic and energy gradient - Laminar flow through circular conduits and circular annuli-Boundary layer concepts – types of boundary layer thickness –

#### **WEEK 5**

Darcy Weisbach equation –friction factor- Moody diagram-commercial pipes- minor losses – Flow through pipes in series and parallel.

#### **WEEK 6 UNIT TEST-II**

#### **WEEK 7 UNIT III DIMENSIONAL ANALYSIS**

Need for dimensional analysis

#### **WEEK 8**

Methods of dimensional analysis – Similitude –types of similitude

#### **WEEK 9**

Dimensionless parameters- application of dimensionless parameters – Model analysis.

#### **WEEK 10 UNIT TEST-III**

#### **UNIT IV PUMPS**

Impact of jets - Euler's equation - Theory of roto-dynamic machines – various efficiencies–

#### **WEEK 11**

velocity components at entry and exit of the rotor- velocity triangles - Centrifugal pumps–

#### **WEEK 12**

working principle - work done by the impeller - performance curves - Reciprocating pump- working principle – Rotary pumps – classification.

#### **WEEK 13 - UNIT TEST-IV**

#### **WEEK 14 REVISION 1-4 UNITS**

#### **WEEK 15**

#### **UNIT V TURBINES**

Classification of turbines – heads and efficiencies – velocity triangles. Axial, radial and mixed flow turbines. Pelton wheel, Francis turbine and Kaplan turbines- working principles –

**WEEK 16**

work done by water on the runner – draft tube. Specific speed - unit quantities – performance curves for turbines –governing of turbines.

**WEEK-17- UNIT TEST V**

**WEEK-18- MODEL EXAM**

**TEXT BOOK:**

1. Modi P.N. and Seth, S.M. "Hydraulics and Fluid Mechanics", Standard Book House, New Delhi 2004.

**REFERENCES:**

1. Streeter, V. L. and Wylie E. B., "Fluid Mechanics", McGraw Hill Publishing Co. 2010
2. Kumar K. L., "Engineering Fluid Mechanics", Eurasia Publishing House(p) Ltd., New Delhi 2004
3. Robert W.Fox, Alan T. McDonald, Philip J.Pritchard, "Fluid Mechanics and Machinery", 2011.
4. Graebel. W.P, "Engineering Fluid Mechanics", Taylor & Francis, Indian Reprint, 2011

**ME6302 MANUFACTURING TECHNOLOGY – I**

**WEEK 1**

**UNIT I METAL CASTING PROCESSES 9 Sand Casting :** Sand Mould – Type of patterns - Pattern Materials – Pattern allowances –

**WEEK 2**

Moulding sand Properties and testing – Cores –Types and applications – Moulding machines– Types and applications; **Melting furnaces :** Blast and Cupola Furnaces;

**WEEK 3**

Principle of special casting processes : Shell - investment – Ceramic mould – Pressure die casting - Centrifugal Casting - CO<sub>2</sub> process – Stir casting; Defects in Sand casting 36

**WEEK 4 UNIT TEST-I**

**UNIT II JOINING PROCESSES**

**Operating principle, basic equipment, merits and applications of :**  
Fusion welding processes : Gas welding - Types – Flame characteristics; Manual metal arc welding –

**WEEK 5**

Gas Tungsten arc welding - Gas metal arc welding – Submerged arc welding – Electro slag welding; **Operating principle and applications of :** Resistance welding - Plasma arc welding – Thermit welding – Electron beam welding – Friction welding and Friction Stir Welding; Brazing and soldering; **Weld defects:** types, causes and cure.

**WEEK 6 UNIT TEST-II**

**WEEK 7 UNIT III METAL FORMING PROCESSES** Hot working and cold working of metals –

**WEEK 8**

Forging processes – Open, impression and closed die forging – forging operations.

**WEEK 9**

Rolling of metals– Types of Rolling – Flat strip rolling – shape rolling operations – Defects in rolled parts. Principle of rod and wire drawing – Tube drawing – Principles of Extrusion – Types – Hot and Cold extrusion.

**WEEK 10 UNIT TEST-III**

**UNIT IV SHEET METAL PROCESSES**

Sheet metal characteristics – shearing, bending and drawing operations – Stretch forming operations

**WEEK 11**

Formability of sheet metal – Test methods –special forming processes- Working principle and applications –

**WEEK 12**

Hydro forming – Rubber pad forming – Metal spinning– Introduction of Explosive forming, magnetic pulse forming, peen forming, Super plastic forming – Micro forming

**WEEK 13 - UNIT TEST-IV**

## **WEEK 14 REVISION 1-4 UNITS**

### **WEEK 15**

#### **UNIT V MANUFACTURE OF PLASTIC COMPONENTS**

Types and characteristics of plastics – Moulding of thermoplastics – working principles and typical applications – injection moulding – Plunger and screw machines – Compression moulding, Transfer Moulding –

### **WEEK 16**

Typical industrial applications – introduction to blow moulding – Rotational moulding – Film blowing – Extrusion – Thermoforming – Bonding of Thermoplastics.

### **WEEK-17- UNIT TEST V**

### **WEEK-18- MODEL EXAM**

#### **TEXT BOOKS:**

1. Hajra Chouldhary S.K and Hajra Choudhury. AK., "Elements of workshop Technology", volume I and II, Media promoters and Publishers Private Limited, Mumbai, 1997
2. Kalpakjian. S, "Manufacturing Engineering and Technology", Pearson Education India Edition, 2006

#### **REFERENCES:**

1. Gowri P. Hariharan, A.Suresh Babu, "Manufacturing Technology I", Pearson Education, 2008
2. Roy. A. Lindberg, "Processes and Materials of Manufacture", PHI / Pearson education, 2006
3. Paul Degarma E, Black J.T and Ronald A. Kosher, "Materials and Processes, in Manufacturing" Eight Edition, Prentice – Hall of India, 1997.
4. Sharma, P.C., "A Text book of production Technology", S.Chand and Co. Ltd., 2004.
5. Rao, P.N. "Manufacturing Technology Foundry, Forming and Welding", 2ndEdition, TMH-2003; 2003

# **ME6351 ELECTRICAL DRIVES AND CONTROLS**

## **WEEK 1**

**UNIT I INTRODUCTION** Basic Elements – Types of Electric Drives – factors influencing the choice of electrical drives –

## **WEEK 2**

heating and cooling curves – Loading conditions and classes of duty –

## **WEEK 3**

Selection of power rating for drive motors with regard to thermal overloading and Load variation factors

## **WEEK 4 UNIT TEST-I**

**UNIT II DRIVE MOTOR CHARACTERISTICS** Mechanical characteristics – Speed-Torque characteristics of various types of load and drive motors –

## **WEEK 5**

Braking of Electrical motors – DC motors: Shunt, series and compound - single phase and three phase induction motors.

## **WEEK 6 UNIT TEST-II**

## **WEEK 7 UNIT III STARTING METHODS**

Types of D.C Motor starters –

## **WEEK 8**

Typical control circuits for shunt and series motors –

## **WEEK 9**

Three phase squirrel cage and slip ring induction motors.

## **WEEK 10 UNIT TEST-III**

**UNIT IV CONVENTIONAL AND SOLID STATE SPEED CONTROL OF D.C. DRIVES** Speed control of DC series and shunt motors –

## **WEEK 11**

Armature and field control, Ward-Leonard control system –

## **WEEK 12**

Using controlled rectifiers and DC choppers –applications.

## **WEEK 13 - UNIT TEST-IV**

## **WEEK 14 REVISION 1-4 UNITS**



## **WEEK 15**

### **UNIT V CONVENTIONAL AND SOLID STATE SPEED CONTROL OF A.C. DRIVES**

10 Speed control of three phase induction motor – Voltage control, voltage / frequency control, slip power recovery scheme – Using inverters and AC voltage regulators – applications.

### **WEEK-17- UNIT TEST V**

### **WEEK-18- MODEL EXAM**

### **TEXT BOOKS**

1. Vedam Subrahmaniam, “Electric Drives (concepts and applications)”, Tata McGraw-Hill, 2001
2. Nagrath .I.J. & Kothari .D.P, “Electrical Machines”, Tata McGraw-Hill, 1998

### **REFERENCES**

1. Pillai.S.K “A first course on Electric drives”, Wiley Eastern Limited, 1998
2. Singh. M.D., K.B.Khanchandani, “Power Electronics”, Tata McGraw-Hill, 1998
3. Partab. H., “Art and Science and Utilisation of Electrical Energy”, Dhanpat Rai and Sons, 1994

## **ME6311 MANUFACTURING TECHNOLOGY LABORATORY – I**

### **LIST OF EXPERIMENTS**

Machining and Machining time estimations for :

1. Taper Turning
2. External Thread cutting
3. Internal Thread Cutting
4. Eccentric Turning
5. Knurling
6. Square Head Shaping
7. Hexagonal Head Shaping

# **CE6461 FLUID MECHANICS AND MACHINERY LABORATORY**

## **LIST OF EXPERIMENTS**

1. Determination of the Coefficient of discharge of given Orifice meter.
2. Determination of the Coefficient of discharge of given Venturi meter.
3. Calculation of the rate of flow using Rota meter.
4. Determination of friction factor for a given set of pipes.
5. Conducting experiments and drawing the characteristic curves of centrifugal pump/ submergible pump
6. Conducting experiments and drawing the characteristic curves of reciprocating pump.
7. Conducting experiments and drawing the characteristic curves of Gear pump.
8. Conducting experiments and drawing the characteristic curves of Pelton wheel.
9. Conducting experiments and drawing the characteristics curves of Francis turbine.
10. Conducting experiments and drawing the characteristic curves of Kaplan turbine.

# **EE6365 ELECTRICAL ENGINEERING LABORATORY**

## **LIST OF EXPERIMENTS**

1. Load test on DC Shunt & DC Series motor
2. O.C.C & Load characteristics of DC Shunt and DC Series generator
3. Speed control of DC shunt motor (Armature, Field control)
4. Load test on single phase transformer
5. O.C & S.C Test on a single phase transformer
6. Regulation of an alternator by EMF & MMF methods.
7. V curves and inverted V curves of synchronous Motor
8. Load test on three phase squirrel cage Induction motor
9. Speed control of three phase slip ring Induction Motor
10. Load test on single phase Induction Motor.
11. Study of DC & AC Starters

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