K.L.N. COLLEGE OF ENGINEERING

POTTAPALAYAM - 630 612 (11KM from Madurai City)

SIVAGANGAI DISTRICT, TAMILNADU, INDIA

An ISO 9001:2015 Certified Institution

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Approved by AICTE, New Delhi

Permanently Affiliated to Anna University, Chennai

Accredited by NBA up to 30.06.2019

Recognized Research Centre of Anna University, Chennai

STUDENTS HAND BOOK

FOR SECOND SEMESTER

ELECTRICAL AND ELECTRONICS ENGINEERING

Anna University, Chennai

Regulation - 2017

(EVEN Semester 2017-2018)

K.L.N. COLLEGE OF ENGINEERING

Department of Electrical and Electronics Engineering

STUDENTS HAND BOOK

B.E. – EEE – Second – Semester – even Semester of 2017 – 2018

This book contains the following:

VISION AND MISSION OF THE COLLEGE

VISION

To become a Premier Institute of National Repute by Providing Quality Education, Successful Graduation, Potential Employability and Advanced Research & Development through Academic Excellence.

MISSION

To Develop and Make Students Competent Professional in the Dynamic Environment in the field of Engineering, Technology and Management by emphasizing Research, Social Concern and Ethical Values through Quality Education System.

VISION AND MISSION OF THE DEPARTMENT

VISION

To become a high standard of excellence in Education, Training and Research in the field of Electrical & Electronics Engineering and allied applications.

MISSION

To produce excellent, innovative and Nationalistic Engineers with Ethical Values and to advance in the field of Electrical & Electronics Engineering and allied areas.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

The Educational Objectives of the Electrical and Electronics Engineering (EEE) Program represent major accomplishments that we expect our graduates to achieve after three to five years of graduation. More specifically our graduates are expected:

PEO1: to excel in industrial or graduate work in Electrical and Electronics Engineering and allied fields

PEO2: to practice their Professions conforming to Ethical Values and Environmentally friendly policies

PEO3: to work in international and multi-disciplinary Environments

PEO4: to successfully adapt to evolving Technologies and stay current with their Professions

PROGRAM SPECIFIC OUTCOMES (PSOs)

Electrical and Electronics Engineering Graduates will be able to:

PSO1: Apply the fundamentals of mathematics, science and engineering knowledge to identify, formulate, design and investigate complex engineering problems of electric circuits, analog and digital electronic circuits, electrical machines and power systems.

PSO2: Apply appropriate techniques and modern Engineering hardware and software tools in power systems to engage in life- long learning and to successfully adapt in multi disciplinary environments.

PSO3: Understand the impact of Professional Engineering solutions in societal and environmental context, commit to professional ethics and communicate effectively.

PROGRAM OUTCOMES (POs)

Electrical and Electronics Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the `consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

OUTCOME BASED EDUCATION (OBE)

In a traditional education system, students are given grades and rankings compared to each other. Content and performance expectations are based primarily on what was taught in the past to students of a given age. The goal of traditional education was to present the knowledge and skills of an older generation to the new generation of students, and to provide students with an environment in which to learn. The process paid little attention (beyond the classroom teacher) to whether or not students learn any of the material.

An outcome is a culminating demonstration of learning; it is what the student should be able to do, at the end of a course/program, in-terms of the knowledge, skill and behavior.

Outcome-based education is an approach to education in which decisions about the curriculum are driven by the exit learning outcomes that the students should display at the end of the course. In outcome-based education, product defines process. Outcome-based education can be summed up as results-oriented thinking and is the opposite of input-based education where the emphasis is on the educational process. Outcome-based education promotes fitness for practice and education for capability.

BENEFITS AND SIGNIFICANCE OF ACCREDITATION

The process of accreditation helps in realizing a number of benefits, such as:

- Helps the Institution to know its strengths, weaknesses and opportunities
- Initiates Institutions into innovative and modern methods of pedagogy
- Gives Institutions a new sense of direction and identity
- Provides society with reliable information on quality of education offered
- Promotes intra and inter-Institutional interactions

Accreditation signifies different things to different stakeholders. These are:

Benefits to Institutions

Accreditation is market-driven and has an international focus. It assesses the characteristics of an Institution and its programme against a set of criteria established by National Board of Accreditation. NBA's key objective is to contribute to the significant improvement of the Institutions involved in the accreditation process. Accreditation process quantifies the strengths, weaknesses in the processes adopted by the Institution and provides directions and opportunities for future growth. NBA provides a quality seal or label that differentiates the Institutions from its peers at the national level. This leads to a widespread recognition and greater appreciation of the brand name of Institutions and motivates the Institutions to strive for more.

Benefits to Students

Students studying in NBA accredited Institutions can be assured that they will receive education which is a balance between high academic quality and professional relevance and that the needs of the corporate world are well integrated into programs, activities and processes. It signifies that he has entered the portals of an Institution, which has the essential and desirable features of quality professional education.

Benefits to Employers

Accreditation assures prospective employers that students come from a programme where the content and quality have been evaluated, satisfying established standards. It also signifies that the students passing out have acquired competence based on well established technical inputs.

Benefits to the Public

Accredited status represents the commitment of the programme and the Institution to quality and continuous improvement.

Catalyst for International Accreditations

Due to accreditation from NBA, the Institution's systems and procedures get aligned with the Institution's Mission and Vision. All essential prerequisites for international accreditation are included in the accreditation process of NBA. Therefore, NBA acts as a catalyst for the Institutions planning to acquire International Accreditation.

Benefits to Industry and Infrastructure Providers

It signifies identification of quality of Institutional capabilities, skills and knowledge.

Benefits to Parents

It signifies that their ward goes through a teaching-learning environment as per accepted good practices.

Benefits to Alumni

It reassures alumni that alumni are products of an institute with a higher standing in terms of learning.

Benefits to Country

Accreditation helps in gaining confidence of stakeholders and in giving a strong message that as a country, our technical manpower is of international standards and can be very useful in enhancing the global mobility for our technical manpower.

ENGINEERING ETHICS

Engineering Ethics is the set of rules and guidelines that engineers adhere to as a moral obligation to their profession and to the world. Engineering is a professional career that impact lives. When ethics is not followed, disaster often occurs; these disasters not only include huge monetary costs and environmental impacts, but also often result in the loss of human life. Engineering Ethics applies to every engineer and is very important.

The National Society of Professional Engineers (NSPE) decides the overall standards and codes of ethics for all the engineering professions. The Preamble of the NSPE *Code of Conduct for Engineers* (2007) states: "*Engineers shall at all times recognize that their primary obligation is to protect the safety, health, property, and welfare of the public. If their professional judgment is overruled under circumstances where the safety, health, property, or welfare of the public are endangered, they shall notify their employer or client and such other authority as may be appropriate.*"

Electrical Engineering Ethics

Electrical Engineering is a type of engineering profession that deals with the creation of better electronics. Since our society is heading towards an era of technology, where all members of society will be affected, it is especially important for electrical engineers to follow a code of engineering ethics. For electrical engineers, an important set of guidelines is the *Electrical Engineering Code of Ethics*, published by IEEE.

IEEE code of Ethics

We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

1. to accept responsibility in making decisions consistent with the safety, health, and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;
2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
3. to be honest and realistic in stating claims or estimates based on available data;
4. to reject bribery in all its forms;
5. to improve the understanding of technology; its appropriate application, and potential consequences;
6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;

7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
8. to treat fairly all persons and to not engage in acts of discrimination based on race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression;
9. to avoid injuring others, their property, reputation, or employment by false or malicious action;
10. to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.

Engineering Ethics in College/Education

The main engineering ethics problem that college students are face with is academic integrity. Academic integrity can show itself in the form of cheating by copying someone's work, intentional cheating, plagiarism, and/or self-plagiarism.

However, professional ethics is something that can be learned even when it conflicts with personal ethics, as for example, a situation where you are personally okay with building a product that can harm the environment, yet save lives. You can learn professional ethics and realize that something that is harmful to the environment is not okay. Ethics codes can even help you see the bigger picture. For example, in the previous scenario, these codes can help you re-evaluate your ethics and realize that something that is harmful to the environment will eventually be harmful to the people around you and yourself.

Engineering Ethics in the Professional World

In the professional world, ethical engineering problems come up in many cases. One of these includes the case of a professional using someone else's work that is published in the widespread market of publication. Another is the case of a professional using someone else's work that is not published yet and stealing their idea. Engineers who have good engineering ethics often have a good sense of the value of life. They don't hesitate to admit that they made a mistake because they know that the cost of not owning up to your mistakes can have disastrous consequences. It might even cost a human life.

Engineering Ethics in Companies

Not only do individual engineers have to be conscious of engineering ethics, but also companies. Companies have to be aware of their Corporate Social Responsibility and Environmental Responsibility. Corporate Social Responsibility is a company's responsibility to give back to the community that they profit from and to behave ethically so that both they and their community can benefit. Environmental Responsibility is a business's initiative to leave the environment (where it is taking its resources from) the same, if not better, that it is found it.

BLOOM'S TAXONOMY

Definitions of the different levels of thinking skills in Bloom's taxonomy

1. **Remember** – recalling relevant terminology, specific facts, or different procedures related to information and/or course topics. At this level, a student can remember something, but may not really understand it.
2. **Understand** – the ability to grasp the meaning of information (facts, definitions, concepts, etc.) that has been presented.
3. **Apply** – being able to use previously learned information in different situations or in problem solving.
4. **Analyze** – the ability to break information down into its component parts. Analysis also refers to the process of examining information in order to make conclusions regarding cause and effect, interpreting motives, making inferences, or finding evidence to support statements/arguments.
5. **Evaluate** – being able to judge the value of information and/or sources of information based on personal values or opinions.
6. **Create** – the ability to creatively or uniquely apply prior knowledge and/or skills to produce new and original thoughts, ideas, processes, etc. At this level, students are involved in creating their own thoughts an ideas.

List of Action Words Related to Critical Thinking Skills

REMEMBER	UNDERSTAND	APPLY	ANALYZE	EVALUATE	CREATE
Count	Associate	Add	Analyze	Appraise	Categorize
Define	Compute	Apply	Arrange	Assess	Combine
Describe	Convert	Calculate	Breakdown	Compare	Compile
Draw	Defend	Change	Combine	Conclude	Compose
Identify	Discuss	Classify	Design	Contrast	Create
Label	Distinguish	Complete	Detect	Criticize	Drive
List	Estimate	Compute	Develop	Critique	Design
Match	Explain	Demonstrate	Diagram	Determine	Devise
Name	Extend	Discover	Differentiate	Grade	Explain
Outline	Extrapolate	Divide	Discriminate	Interpret	Generate
Point	Generalize	Examine	Illustrate	Judge	Group
Quote	Give	Graph	Infer	Justify	Integrate
Read	examples	Interpolate	Outline	Measure	Modify
Recall	Infer	Manipulate	Point out	Rank	Order
Recite	Paraphrase	Modify	Relate	Rate	Organize
Recognize	Predict	Operate	Select	Support	Plan
Record	Rewrite	Prepare	Separate	Test	Prescribe
Repeat	Summarize	Produce	Subdivide		Propose
Reproduce		Show	Utilize		Rearrange
Select		Solve			Reconstruct
State Write		Subtract			Related
		Translate			Reorganize
		Use			Revise
					Rewrite
					Summarize
					Transform
					Specify

K.L.N. COLLEGE OF ENGINEERING, POTTAPALAYAM - 630 612

ACADEMIC CALENDAR - EVEN Semester of 2017 - 2018
Second Semester - B.E./B.Tech Courses

K.L.N. COLLEGE OF ENGINEERING, POTTAPALAYAM, SIVAGANGAI DISTRICT - 630 612

Ref: KLNCE/Academic Calendar/ II SEM 2017 - 2018/ **Date: 22.01.2018**

The Academic calendar for II semester (2017 – 18 AY) of I year B.E /B.Tech degrees courses is circulated herewith. Suggestions if any, may be brought to the notice of I year B.E, B. Tech coordinator (HOD / Chem.)

ACADEMIC CALENDAR: 2017-2018 **SECOND SEMESTER - B.E./B.Tech Courses**

January - 2018				February – 2018				March – 2018			
Day	Date	Informations / Activities	WD	Date	Informations / Activities	WD	Date	Informations / Activities	WD
Mon	1	NEW YEAR						Holiday	
Tue	2	Commencement of AU I Semester exam							
Wed	3								
Thu	4			1		7	1		29
Fri	5			2		8	2		30
Sat	6			3	Holiday		3	Holiday	
Sun	7			4	Holiday		4	Holiday	
Mon	8			5	Faculty Meeting II (5 to 8)	9	5	Faculty Meeting III (5 to 10)	31
Tue	9			6		10	6		33
Wed	10			7		11	7		33
Thu	11			8		12	8		34
Fri	12			9	End of Unit - I	13	9	24th Annual Sports meet	35
Sat	13			10	Working Day - Friday Order - CT - I (10 to 16)	14	10	Working Day - Friday Order	36
Sun	14	Pongal - Holiday		11	Holiday		11	Holiday	
Mon	15	Thiruvalluvar Thinam - Holiday		12		15	12		37
Tue	16	Uhavar Thirunaal - Holiday		13		16	13		38
Wed	17			14		17	14		39
Thu	18	Faculty Meeting I (18 to 20)		15		18	15		40
Fri	19			16		19	16		41
Sat	20			17	Holiday		17	Holiday	
Sun	21			18	Holiday		18	Telugu New Year - Holiday	
Mon	22	Faculty Meeting I (22 to 25)		19		20	19	End of Unit - III	42
Tue	23			20		21	20	CT - II (20 to 26)	43
Wed	24	Commencement of II sem. classes	1	21		22	21		44
Thu	25		2	22		23	22		45
Fri	26	Republic Day - Holiday		23		24	23		46
Sat	27	Working Day - Tuesday Order	3	24	Working Day - Thursday Order	25	24	Working Day - Tuesday Order	47
Sun	28	Holiday		25	Holiday		25	Holiday	
Mon	29	Class Committee Meeting I (29 Jan - Feb 2)	4	26	Class Committee Meeting II (26 to 28)	26	26		48
Tue	30		5	27	End of Unit - II	27	27		49
Wed	31		6	28	CIT - I (28.2.18 to 7.3.18)	28	28		50
Thu							29	Mahavir Jeyanthi Holiday	
Fri							30	Good Friday Holiday	
Sat							31	Holiday	

K.L.N. College of Engineering, Pottapalayam – 630 612.
Department of Electrical and Electronics Engineering

CLASS WISE TIME TABLE -2017-2018 (EVEN)

With effect from: 18.12.2017

K.L.N.COLLEGE OF ENGINEERING, POTTAPALAYAM-630612.
Department of Electrical and Electronics Engineering
CLASS WISE TIME TABLE -2017-2018 (EVEN SEMESTER)

Year/Sem/Sec : I / II / A Faculty In-charge : S.RAJALINGAM

TIME→ DAY↓	09.00 – 09.50	09.50 – 10.40		10.55-11.45	11.45-12.35		01.15-02.05	02.05-02.55	02.55-03.45	04.00-05.00
PERIOD→	I	II		III	IV		V	VI	VII	VIII
MON	CT	ESE	BREAK	BCME	MATHS	LUNCH	TEST	ENG	CT	-
TUE	EP LAB			EP LAB			PHY	ESE	MATHS	BCME
WED	ENG	MATHS		CT	BCME		ESE	PHY	CT	MATHS
THU	EC LAB			EC LAB			TEST	BCME	ENG	PHY
FRI	ESE	ENG		MATHS	PHY		TEST	CT	BCME	-

Year/Sem/Sec : I / II / B Faculty In-charge : M. MAHALAKSHMI

TIME→ DAY↓	09.00 – 09.50	09.50 – 10.40		10.55-11.45	11.45-12.35		01.15-02.05	02.05-02.55	02.55-03.45	04.00-05.00
PERIOD→	I	II		III	IV		V	VI	VII	VIII
MON	MATHS	ESE	BREAK	ENG	CT	LUNCH	TEST	PHY	BCME	-
TUE	PHY	CT		MATHS	ESE		EC LAB			
WED	ENG	BCME		PHY	CT		EP LAB			
THU	BCME	MATHS		BCME	PHY		TEST	CT	ESE	ENG
FRI	ESE	BCME		ENG	MATHS		TEST	MATHS	CT	-

SUB CODE	SUBJECT NAME		STAFF NAME	
			Section - A	Section - B
HS8251	Technical English – II	ENG	R.P.Mahalakshmi	L1
MA8251	Engineering Mathematics – II	MATHS	A.E.Suganya	G.Pushparajan
PH8253	Physics for Electronics Engineering	PHY	Dr.R.Geetha	N.R.Ramamurthy
GE8252	Basic Civil and Mechanical Engineering	BCME	S.Nallathambi	S.Nallathambi
EE8251	Circuit Theory	CT	S.Rajalingam	Dr.M.Mahalakshmi
GE8291	Environmental Science and Engineering	ESE	Dr.R.Gandhidasan	O.D.Shakila
GE8261	Engineering Practices Laboratory	EP LAB	R.Sridevi/ S.Nallathambi	M.Ganesh Kumari/ S.Nallathambi
EE8261	Electric Circuits Laboratory	EC LAB	S.Rajalingam	Dr.M.Mahalakshmi

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
REGULATIONS – 2017

CHOICE BASED CREDIT SYSTEM

B.E. ELECTRICAL AND ELECTRONICS ENGINEERING

CURRICULUM AND SYLLABUS - SECOND SEMESTER

SEMESTER II

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
4.	BE8252	Basic Civil and Mechanical Engineering	ES	4	4	0	0	4
5.	EE8251	Circuit Theory	PC	4	2	2	0	3
6.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
PRACTICALS								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	EE8261	Electric Circuits Laboratory	PC	4	0	0	4	2
			TOTAL	**30**	**20**	**2**	**8**	**25**

HS8251	TECHNICAL ENGLISH	L	T	P	C
		4	0	0	4

OBJECTIVES: The Course prepares second semester engieering and Tecgnology students to:

- Develop strategies and skills to enhance their ability to read and comprehend engineering and technology texts.
- Foster their ability to write convincing job applications and effective reports.
- Develop their speaking skills to make technical presentations , participate in group discussions.
- Strengthen their listening skill which will help them comprehend lectures and talks in their areas of specialisation.

UNIT I INTRODUCTION TECHNICAL ENGLISH 12

Listening- Listening to talks mostly of a scientific/technical nature and completing information-gap exercises- **Speaking** –Asking for and giving directions- **Reading** – reading short technical texts from journals- newsapapers- **Writing**- purpose statements – extended definitions – issue- writing instructions – checklists-recommendations-**Vocabulary Development**- technical vocabulary **Language Development** –subject verb agreement - compound words.

UNIT II READING AND STUDY SKILLS 12

Listening- Listening to longer technical talks and completing exercises based on them-**Speaking** – describing a process-**Reading** – reading longer technical texts- identifying the various transitions in a text- paragraphing- **Writing**- interpreting cgarts, graphs- **Vocabulary Development-**vocabularyused in formal letters/emails and reports **Language Development-** impersonal passive voice, numerical adjectives.

UNIT III TECHNICAL WRITING AND GRAMMAR 12

Listening- Listening to classroom lectures/ talkls on engineering/technology -**Speaking** – introduction to technical presentations- **Reading** – longer texts both general and technical, practice in speed reading; **Writing**-Describing a process, use of sequence words- **Vocabulary Development-** sequence words- Misspelled words. **Language Development-** embedded sentences

UNIT IV REPORT WRITING 12

Listening- Listening to documentaries and making notes. **Speaking** – mechanics of presentations- **Reading** – reading for detailed comprehension- **Writing**- email etiquette- job application – cover letter –Résumé preparation(via email and hard copy)- analytical essays and issue based essays-- **Vocabulary Development**- finding suitable synonyms-paraphrasing-. **Language Development-** clauses- if conditionals.

UNIT V GROUP DISCUSSION AND JOB APPLICATIONS 12

Listening- TED/Ink talks; **Speaking** –participating in a group discussion -**Reading**– reading and understanding technical articles **Writing**– Writing reports- minutes of a meeting- accident and survey- **Vocabulary Development- verbal analogies Language Development-** reported speech

TOTAL : 60 PERIODS

OUTCOMES: At the end of the course learners will be able to:

- Read technical texts and write area- specific texts effortlessly.
- Listen and comprehend lectures and talks in their area of specialisation successfully.
- Speak appropriately and effectively in varied formal and informal contexts.
- Write reports and winning job applications.

TEXT BOOKS:

1. Board of editors. **Fluency in English A Course book for Engineering and Technology.** Orient Blackswan, Hyderabad: 2016
2. Sudharshana.N.P and Saveetha. C. **English for Technical Communication**. Cambridge University Press: New Delhi, 2016.

REFERENCES

1. Booth-L. Diana**, Project Work,** Oxford University Press**,** Oxford: 2014.
2. Grussendorf, Marion, **English for Presentations,** Oxford University Press, Oxford: 2007
3. Kumar, Suresh. E. **Engineering English**. Orient Blackswan: Hyderabad,2015
4. Means, L. Thomas and Elaine Langlois, **English & Communication For Colleges.** Cengage Learning, USA: 2007
5. Raman, Meenakshi and Sharma, Sangeetha- **Technical Communication Principles and Practice.**Oxford University Press: New Delhi,2014.

Students can be asked to read Tagore, Chetan Bhagat and for suplementary reading.

MA8251 ENGINEERING MATHEMATICS – II

L	T	P	C
4	0	0	4

OBJECTIVES :

- This course is designed to cover topics such as Matrix Algebra, Vector Calculus, Complex Analysis and Laplace Transform. Matrix Algebra is one of the powerful tools to handle practical problems arising in the field of engineering. Vector calculus can be widely used for modelling the various laws of physics. The various methods of complex analysis and Laplace transforms can be used for efficiently solving the problems that occur in various branches of engineering disciplines.

UNIT I MATRICES **12**

Eigenvalues and Eigenvectors of a real matrix – Characteristic equation – Properties of Eigenvalues and Eigenvectors – Cayley-Hamilton theorem – Diagonalization of matrices – Reduction of a quadratic form to canonical form by orthogonal transformation – Nature of quadratic forms.

UNIT II VECTOR CALCULUS **12**

Gradient and directional derivative – Divergence and curl - Vector identities – Irrotational and Solenoidal vector fields – Line integral over a plane curve – Surface integral - Area of a curved

surface - Volume integral - Green's, Gauss divergence and Stoke's theorems – Verification and application in evaluating line, surface and volume integrals.

UNIT III ANALYTIC FUNCTIONS 12

Analytic functions – Necessary and sufficient conditions for analyticity in Cartesian and polar coordinates - Properties – Harmonic conjugates – Construction of analytic function - Conformal mapping – Mapping by functions $w = z + c, cz, \frac{1}{z}, z^2$ - Bilinear transformation.

UNIT IV COMPLEX INTEGRATION 12

Line integral - Cauchy's integral theorem – Cauchy's integral formula – Taylor's and Laurent's series – Singularities – Residues – Residue theorem – Application of residue theorem for evaluation of real integrals – Use of circular contour and semicircular contour.

UNIT V LAPLACE TRANSFORMS 12

Existence conditions – Transforms of elementary functions – Transform of unit step function and unit impulse function – Basic properties – Shifting theorems -Transforms of derivatives and integrals – Initial and final value theorems – Inverse transforms – Convolution theorem – Transform of periodic functions – Application to solution of linear second order ordinary differential equations with constant coefficients.

TOTAL: 60 PERIODS

OUTCOMES :

After successfully completing the course, the student will have a good understanding of the following topics and their applications:

- Eigenvalues and eigenvectors, diagonalization of a matrix, Symmetric matrices, Positive definite matrices and similar matrices.
- Gradient, divergence and curl of a vector point function and related identities.
- Evaluation of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification.
- Analytic functions, conformal mapping and complex integration.
- Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.

TEXT BOOKS :

1. Grewal B.S., "Higher Engineering Mathematics", Khanna Publishers, New Delhi, 43rd Edition, 2014.
2. Kreyszig Erwin, "Advanced Engineering Mathematics ", John Wiley and Sons, 10th Edition, New Delhi, 2016.

REFERENCES :

1. Bali N., Goyal M. and Watkins C., "Advanced Engineering Mathematics", Firewall Media (An imprint of Lakshmi Publications Pvt., Ltd.,), New Delhi, 7th Edition, 2009.
2. Jain R.K. and Iyengar S.R.K., " Advanced Engineering Mathematics ", Narosa Publications, New Delhi , 3rd Edition, 2007.
3. O'Neil, P.V. "Advanced Engineering Mathematics", Cengage Learning India Pvt., Ltd, New Delhi, 2007.

4. Sastry, S.S, “Engineering Mathematics", Vol. I & II, PHI Learning Pvt. Ltd, 4th Edition, New Delhi, 2014.
5. Wylie, R.C. and Barrett, L.C., “Advanced Engineering Mathematics “Tata McGraw Hill Education Pvt. Ltd, 6th Edition, New Delhi, 2012.

PH8253	PHYSICS FOR ELECTRONICS ENGINEERING (Common to BME, ME, CC, ECE, EEE, E&I, ICE)	L	T	P	C
		3	0	0	3

OBJECTIVES:

- To understand the essential principles of Physics of semiconductor device and Electron transport properties. Become proficient in magnetic, dielectric and optical properties of materials and nano devices.

UNIT I ELECTRICAL PROPERTIES OF MATERIALS 9

Classical free electron theory - Expression for electrical conductivity – Thermal conductivity, expression - Wiedemann-Franz law – Success and failures - electrons in metals – Particle in a three dimensional box – degenerate states – Fermi- Dirac statistics – Density of energy states – Electron in periodic potential: Bloch thorem – metals and insulators - Energy bands in solids– tight binding approximation - Electron effective mass – concept of hole.

UNIT II SEMICONDUCTOR PHYSICS 9

Intrinsic Semiconductors – Energy band diagram – direct and indirect semiconductors – Carrier concentration in intrinsic semiconductors – extrinsic semiconductors - Carrier concentration in N-type & P-type semiconductors – Carrier transport: Velocity-electric field relations – drift and diffusion transport - Einstein’s relation – Hall effect and devices – Zener and avalanche breakdown in p-n junctions - Ohmic contacts – tunnel diode - Schottky diode – MOS capacitor - power transistor.

UNIT III MAGNETIC AND DIELECTRIC PROPERTIES OF MATERIALS 9

Magnetism in materials – magnetic field and induction – magnetization - magnetic permeability and susceptibility–types of magnetic materials – microscopic classification of magnetic materials - Ferromagnetism: origin and exchange interaction- saturation magnetization and Curie temperature – Domain Theory. Dielectric materials: Polarization processes – dielectric loss – internal field – Clausius-Mosotti relation- dielectric breakdown – high-k dielectrics.

UNIT IV OPTICAL PROPERTIES OF MATERIALS 9

Classification of optical materials – carrier generation and recombination processes - Absorption emission and scattering of light in metals, insulators and Semiconductors (concepts only) - photo current in a P- N diode – solar cell –photo detectors - LED – Organic LED – Laser diodes – excitons - quantum confined Stark effect – quantum dot laser.

UNIT V NANOELECTRONIC DEVICES 9

Introduction - electron density in bulk material – Size dependence of Fermi energy– quantum confinement – quantum structures - Density of states in quantum well, quantum wire and quantum dot structures –Zener-Bloch oscillations – resonant tunneling – quantum interference effects – mesoscopic structures: conductance fluctuations and coherent transport – Coulomb blockade effects - Single electron phenomena and Single electron Transistor – magnetic semiconductors– spintronics - Carbon nanotubes: Properties and applications.

TOTAL : 45 PERIODS

OUTCOMES:

At the end of the course, the students will able to

- gain knowledge on classical and quantum electron theories, and energy band structuues,
- acquire knowledge on basics of semiconductor physics and its applications in various devices,
- get knowledge on magnetic and dielectric properties of materials,
- have the necessary understanding on the functioning of optical materials for optoelectronics,
- understand the basics of quantum structures and their applications in spintronics and carbon electronics.

TEXT BOOKS:

1. Kasap, S.O. “Principles of Electronic Materials and Devices”, McGraw-Hill Education, 2007.
2. Umesh K Mishra & Jasprit Singh, “Semiconductor Device Physics and Design”, Springer, 2008.
3. Wahab, M.A. “Solid State Physics: Structure and Properties of Materials”. Narosa Publishing House, 2009.

REFERENCES

1. Garcia, N. & Damask, A. “Physics for Computer Science Students”. Springer-Verlag, 2012.
2. Hanson, G.W. “Fundamentals of Nanoelectronics”. Pearson Education, 2009
3. Rogers, B., Adams, J. & Pennathur, S. “Nanotechnology: Understanding Small Systems”. CRC Press, 2014

BE8252 BASIC CIVIL AND MECHANICAL ENGINEERING L T P C
4 0 0 4

OBJECTIVES:

- To impart basic knowledge on Civil and Mechanical Engineering.
- To familiarize the materials and measurements used in Civil Engineering.
- To provide the exposure on the fundamental elements of civil engineering structures.
- To enable the students to distinguish the components and working principle of power plant units, IC engines, and R & AC system.

A – OVER VIEW

UNIT I SCOPE OF CIVIL AND MECHANICAL ENGINEERING 10

Overview of Civil Engineering - Civil Engineering contributions to the welfare of Society – Specialized sub disciplines in Civil Engineering – Structural, Construction, Geotechnical, Environmental, Transportation and Water Resources Engineering

Overview of Mechanical Engineering - Mechanical Engineering contributions to the welfare of Society –Specialized sub disciplines in Mechanical Engineering - Production, Automobile, Energy Engineering - Interdisciplinary concepts in Civil and Mechanical Engineering.

B – CIVIL ENGINEERING

UNIT II SURVEYING AND CIVIL ENGINEERING MATERIALS 10

Surveying: Objects – classification – principles – measurements of distances – angles – leveling – determination of areas– contours - examples.

Civil Engineering Materials: Bricks – stones – sand – cement – concrete – steel - timber - modern materials

UNIT III BUILDING COMPONENTS AND STRUCTURES 15

Foundations: Types of foundations - Bearing capacity and settlement – Requirement of good foundations.

Civil Engineering Structures: Brickmasonry – stonemasonry – beams – columns – lintels – roofing – flooring – plastering – floor area, carpet area and floor space index - Types of Bridges and Dams – water supply - sources and quality of water - Rain water harvesting - introduction to high way and rail way.

C – MECHANICAL ENGINEERING

UNIT IV INTERNAL COMBUSTION ENGINES AND POWER PLANTS 15

Classification of Power Plants - Internal combustion engines as automobile power plant – Working principle of Petrol and Diesel Engines – Four stroke and two stroke cycles – Comparison of four stroke and two stroke engines – Working principle of steam, Gas, Diesel, Hydro - electric and Nuclear Power plants –- working principle of Boilers, Turbines, Reciprocating Pumps (single acting and double acting) and Centrifugal Pumps

UNIT V REFRIGERATION AND AIR CONDITIONING SYSTEM 10

Terminology of Refrigeration and Air Conditioning. Principle of vapour compression and absorption system–Layout of typical domestic refrigerator–Window and Split type room Air conditioner.

OUTCOMES:

On successful completion of this course, the student will be able to

- appreciate the Civil and Mechanical Engineering components of Projects.
- explain the usage of construction material and proper selection of construction materials.
- measure distances and area by surveying
- identify the components used in power plant cycle.
- demonstrate working principles of petrol and diesel engine.
- elaborate the components of refrigeration and Air conditioning cycle.

TOTAL: 60PERIODS

TEXTBOOKS:

1. Shanmugam Gand Palanichamy MS,“Basic Civil and Mechanical Engineering”,Tata McGraw Hill PublishingCo.,NewDelhi,1996.

REFERENCES:

1. Palanikumar, K. Basic Mechanical Engineering, ARS Publications, 2010.
2. Ramamrutham S.,“Basic Civil Engineering”, Dhanpat Rai Publishing Co.(P) Ltd.1999.
3. Seetharaman S.,“BasicCivil Engineering”,AnuradhaAgencies,2005.
4. ShanthaKumar SRJ.,“Basic Mechanical Engineering”, Hi-tech Publications, Mayiladuthurai, 2000.

5. Venugopal K. and Prahu Raja V., “Basic Mechanical Engineering”, Anuradha Publishers, Kumbakonam,2000.

EE8251 CIRCUIT THEORY

L	T	P	C
2	2	0	3

OBJECTIVES:

- To introduce electric circuits and its analysis
- To impart knowledge on solving circuit equations using network theorems
- To introduce the phenomenon of resonance in coupled circuits.
- To educate on obtaining the transient response of circuits.
- To introduce Phasor diagrams and analysis of three phase circuits

UNIT I BASIC CIRCUITS ANALYSIS 6+6

Resistive elements - Ohm’s Law Resistors in series and parallel circuits – Kirchoffs laws – Mesh current and node voltage - methods of analysis.

UNIT II NETWORK REDUCTION AND THEOREMS FOR DC AND AC IRCUITS 6+6

Network reduction: voltage and current division, source transformation – star delta conversion. Thevenins and Norton Theorems – Superposition Theorem – Maximum power transfer theorem – Reciprocity Theorem – Millman’s theorem.

UNIT III TRANSIENT RESPONSE ANALYSIS 6+6

L and C elements -Transient response of RL, RC and RLC Circuits using Laplace transform for DC input and A.C. sinusoidal input.

UNIT IV THREE PHASE CIRCUITS 6+6

A.C. circuits – Average and RMS value - Phasor Diagram – Power, Power Factor and Energy.- Analysis of three phase 3-wire and 4-wire circuits with star and delta connected loads, balanced & un balanced – phasor diagram of voltages and currents – power measurement in three phase circuits.

UNIT V RESONANCE AND COUPLED CIRCUITS 6+6

Series and parallel resonance – their frequency response – Quality factor and Bandwidth - Self and mutual inductance – Coefficient of coupling – Tuned circuits – Single tuned circuits.

TOTAL : 60 PERIODS

OUTCOMES:

- Ability to analyse electrical circuits
- Ability to apply circuit theorems
- Ability to analyse transients

TEXT BOOKS:

1. William H. Hayt Jr, Jack E. Kemmerly and Steven M. Durbin, “Engineering Circuits Analysis”, McGraw Hill publishers, edition, New Delhi, 2013.
2. Charles K. Alexander, Mathew N.O. Sadiku, “Fundamentals of Electric Circuits”, Second Edition, McGraw Hill, 2013.

3. Allan H. Robbins, Wilhelm C. Miller, “Circuit Analysis Theory and Practice”, Cengage Learning India, 2013.

REFERENCES

1. Chakrabarti A, “Circuits Theory (Analysis and synthesis), Dhanpath Rai & Sons, New Delhi, 1999.
2. Jegatheesan, R., “Analysis of Electric Circuits,” McGraw Hill, 2015.
3. Joseph A. Edminister, Mahmood Nahri, “Electric circuits”, Schaum’s series, McGraw-Hill, New Delhi, 2010.
4. M E Van Valkenburg, “Network Analysis”,Prentice-Hall of India Pvt Ltd, New Delhi, 2015.
5. Mahadevan, K., Chitra, C., “Electric Circuits Analysis,” Prentice-Hall of India Pvt Ltd., New Delhi, 2015.
6. Richard C. Dorf and James A. Svoboda, “Introduction to Electric Circuits”, 7th Edition, John Wiley & Sons, Inc. 2015.
7. Sudhakar A and Shyam Mohan SP, “Circuits and Network Analysis and Synthesis”, McGraw Hill, 2015.

GE8291 ENVIRONMENTAL SCIENCE AND ENGINEERING L T P C
3 0 0 3

OBJECTIVES:

- To study the nature and facts about environment.
- To finding and implementing scientific, technological, economic and political solutions to environmental problems.
- To study the interrelationship between living organism and environment.
- To appreciate the importance of environment by assessing its impact on the human world; envision the surrounding environment, its functions and its value.
- To study the dynamic processes and understand the features of the earth‟s interior and surface.
- To study the integrated themes and biodiversity, natural resources, pollution control and waste management.

UNIT I ENVIRONMENT, ECOSYSTEMS AND BIODIVERSITY 14

Definition, scope and importance of environment – need for public awareness - concept of an ecosystem – structure and function of an ecosystem – producers, consumers and decomposers – energy flow in the ecosystem – ecological succession – food chains, food webs and ecological pyramids – Introduction, types, characteristic features, structure and function of the (a) forest ecosystem (b) grassland ecosystem (c) desert ecosystem (d) aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) – Introduction to biodiversity definition: genetic, species and ecosystem diversity – biogeographical classification of India – value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values – Biodiversity at global, national and local

levels – India as a mega-diversity nation – hot-spots of biodiversity – threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts – endangered and endemic species of India – conservation of biodiversity: In-situ and ex-situ conservation of biodiversity. Field study of common plants, insects, birds; Field study of simple ecosystems – pond, river, hill slopes, etc.

UNIT II ENVIRONMENTAL POLLUTION 8

Definition – causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards – solid waste management: causes, effects and control measures of municipal solid wastes – role of an individual in prevention of pollution – pollution case studies – disaster management: floods, earthquake, cyclone and landslides. Field study of local polluted site – Urban / Rural / Industrial / Agricultural.

UNIT III NATURAL RESOURCES 10

Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people – Water resources: Use and over- utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems – Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies – Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies – Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. case studies – Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification – role of an individual in conservation of natural resources – Equitable use of resources for sustainable lifestyles. Field study of local area to document environmental assets – river / forest / grassland / hill / mountain.

UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT 7

From unsustainable to sustainable development – urban problems related to energy – water conservation, rain water harvesting, watershed management – resettlement and rehabilitation of people; its problems and concerns, case studies – role of non-governmental organization- environmental ethics: Issues and possible solutions – climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. – wasteland reclamation – consumerism and waste products – environment production act – Air (Prevention and Control of Pollution) act – Water (Prevention and control of Pollution) act – Wildlife protection act – Forest conservation act – enforcement machinery involved in environmental legislation- central and state pollution control boards- Public awareness.

UNIT V HUMAN POPULATION AND THE ENVIRONMENT 6

Population growth, variation among nations – population explosion – family welfare programme – environment and human health – human rights – value education – HIV / AIDS – women and child welfare – role of information technology in environment and human health – Case studies.

TOTAL: 45 PERIODS

OUTCOMES:

- Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.
- Public awareness of environmental is at infant stage.
- Ignorance and incomplete knowledge has lead to misconceptions
- Development and improvement in std. of living has lead to serious environmental disasters

TEXTBOOKS:

1. Benny Joseph, ‘Environmental Science and Engineering’, Tata McGraw-Hill, New Delhi, 2006.

2. Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education, 2004.

REFERENCES :

1. Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT LTD,New Delhi, 2007.
2. Erach Bharucha, "Textbook of Environmental Studies", Universities Press(I) PVT, LTD, Hydrabad, 2015.
3. G. Tyler Miller and Scott E. Spoolman, "Environmental Science", Cengage Learning India PVT, LTD, Delhi, 2014.
4. Rajagopalan, R, 'Environmental Studies-From Crisis to Cure', Oxford University Press, 2005.

GE8261 ENGINEERING PRACTICES LABORATORY L T P C
0 0 4 2

OBJECTIVES:

- To provide exposure to the students with hands on experience on various basic engineering practices in Civil, Mechanical, Electrical and Electronics Engineering.

GROUP A (CIVIL & MECHANICAL)

I CIVIL ENGINEERING PRACTICE 13

Buildings:

(a) Study of plumbing and carpentry components of residential and industrial buildings. Safety aspects.

Plumbing Works:

(a) Study of pipeline joints, its location and functions: valves, taps, couplings, unions, reducers, elbows in household fittings.
(b) Study of pipe connections requirements for pumps and turbines.
(c) Preparation of plumbing line sketches for water supply and sewage works.
(d) Hands-on-exercise:

Basic pipe connections – Mixed pipe material connection – Pipe connections with different joining components.

(e) Demonstration of plumbing requirements of high-rise buildings.

Carpentry using Power Tools only:

(a) Study of the joints in roofs, doors, windows and furniture.
(b) Hands-on-exercise:
Wood work, joints by sawing, planing and cutting.

II MECHANICAL ENGINEERING PRACTICE 18

Welding:

(a) Preparation of butt joints, lap joints and T- joints by Shielded metal arc welding.
(b) Gas welding practice

Basic Machining:

(a) Simple Turning and Taper turning
(b) Drilling Practice

Sheet Metal Work:

(a) Forming & Bending:
(b) Model making – Trays and funnels.
(c) Different type of joints.

Machine assembly practice:

(a) Study of centrifugal pump
(b) Study of air conditioner

Demonstration on:

(a) Smithy operations, upsetting, swaging, setting down and bending. Example – Exercise – Production of hexagonal headed bolt.
(b) Foundry operations like mould preparation for gear and step cone pulley.
(c) Fitting – Exercises – Preparation of square fitting and V – fitting models.

GROUP B (ELECTRICAL & ELECTRONICS)

III ELECTRICAL ENGINEERING PRACTICE 13

1. Residential house wiring using switches, fuse, indicator, lamp and energy meter.
2. Fluorescent lamp wiring.
3. Stair case wiring
4. Measurement of electrical quantities – voltage, current, power & power factor in RLC circuit.
5. Measurement of energy using single phase energy meter.
6. Measurement of resistance to earth of an electrical equipment.

IV ELECTRONICS ENGINEERING PRACTICE 16

1. Study of Electronic components and equipments – Resistor, colour coding measurement of AC signal parameter (peak-peak, rms period, frequency) using CR.
2. Study of logic gates AND, OR, EX-OR and NOT.
3. Generation of Clock Signal.
4. Soldering practice – Components Devices and Circuits – Using general purpose PCB.
5. Measurement of ripple factor of HWR and FWR.

TOTAL: 60 PERIODS

OUTCOMES:

On successful completion of this course, the student will be able to

- fabricate carpentry components and pipe connections including plumbing works.
- use welding equipments to join the structures.
- Carry out the basic machining operations
- Make the models using sheet metal works
- Illustrate on centrifugal pump, Air conditioner, operations of smithy, foundary and fittings
- Carry out basic home electrical works and appliances
- Measure the electrical quantities
- Elaborate on the components, gates, soldering practices.

LIST OF EQUIPMENT FOR A BATCH OF 30 STUDENTS:

CIVIL

1. Assorted components for plumbing consisting of metallic pipes, plastic pipes, flexible pipes, couplings, unions, elbows, plugs and other fittings.	15 Sets.
2. Carpentry vice (fitted to work bench)	15 Nos.
3. Standard woodworking tools	15 Sets.
4. Models of industrial trusses, door joints, furniture joints	5 each
5. Power Tools: (a) Rotary Hammer	2 Nos
(b) Demolition Hammer	2 Nos
(c) Circular Saw	2 Nos
(d) Planer	2 Nos
(e) Hand Drilling Machine	2 Nos
(f) Jigsaw	2 Nos

MECHANICAL

1. Arc welding transformer with cables and holders	5 Nos.
2. Welding booth with exhaust facility	5 Nos.
3. Welding accessories like welding shield, chipping hammer, wire brush, etc.	5 Sets.
4. Oxygen and acetylene gas cylinders, blow pipe and other welding outfit.	2 Nos.
5. Centre lathe	2 Nos.
6. Hearth furnace, anvil and smithy tools	2 Sets.
7. Moulding table, foundry tools	2 Sets.
8. Power Tool: Angle Grinder	2 Nos
9. Study-purpose items: centrifugal pump, air-conditioner	One each.

ELECTRICAL

1. Assorted electrical components for house wiring	15 Sets
2. Electrical measuring instruments	10 Sets
3. Study purpose items: Iron box, fan and regulator, emergency lamp	1 each
4. Megger (250V/500V)	1 No.
5. Power Tools: (a) Range Finder	2 Nos
(b) Digital Live-wire detector	2 Nos

ELECTRONICS

1. Soldering guns	10 Nos.
2. Assorted electronic components for making circuits	50 Nos.
3. Small PCBs	10 Nos.
4. Multimeters	10 Nos.
5. Study purpose items: Telephone, FM radio, low-voltage power supply	

EE8261	ELECTRIC CIRCUITS LABORATORY	L	T	P	C
		0	0	4	2

OBJECTIVES:

- To simulate various electric circuits using Pspice/ Matlab/e-Sim / Scilab
- To gain practical experience on electric circuits and verification of theorems.

LIST OF EXPERIMENTS

1. Simulation and experimental verification of electrical circuit problems using Kirchhoff's voltage and current laws.
2. Simulation and experimental verification of electrical circuit problems using Thevenin's theorem.
3. Simulation and experimental verification of electrical circuit problems using Norton's theorem.
4. Simulation and experimental verification of electrical circuit problems using Superposition theorem.
5. Simulation and experimental verification of Maximum Power transfer Theorem.
6. Study of Analog and digital oscilloscopes and measurement of sinusoidal voltage, frequency and power factor.
7. Simulation and Experimental validation of R-C electric circuit transients.
8. Simulation and Experimental validation of frequency response of RLC electric circuit.
9. Design and Simulation of series resonance circuit.
10. Design and Simulation of parallel resonant circuits.
11. Simulation of three phase balanced and unbalanced star, delta networks circuits.

TOTAL: 60 PERIODS

OUTCOMES:

- Understand and apply circuit theorems and concepts in engineering applications.
- Simulate electric circuits.

LIST OF EQUIPMENT FOR A BATCH OF 30 STUDENTS:

1	Regulated Power Supply: 0 – 15 V D.C - 10 Nos / Distributed Power Source.
2	Function Generator (1 MHz) - 10 Nos.
3	Single Phase Energy Meter - 1 No.
4	Oscilloscope (20 MHz) - 10 Nos.
5	Digital Storage Oscilloscope (20 MHz) – 1 No.
6	10 Nos. of PC with Circuit Simulation Software (min 10 Users) (e-Sim / Scilab/ Pspice / MATLAB /other Equivalent software Package) and Printer (1 No.)
7	AC/DC - Voltmeters (10 Nos.), Ammeters (10 Nos.) and Multi-meters (10 Nos.)
8	Single Phase Wattmeter – 3 Nos.
9	Decade Resistance Box, Decade Inductance Box, Decade Capacitance Box - 6 Nos each.
10	Circuit Connection Boards - 10 Nos.

Necessary Resistors, Inductors, Capacitors of various quantities (Quarter Watt to 10 Watt).

ANNA UNIVERTISY, CHENNAI -25.
OFFICE OF THE CONTROLLER OF EXAMINATIONS

RULES OF THE EXAMINATIONS

A candidate is permitted to use geometric tools, non-programmable calculators and approved tables and data books only during the theory and the practical examinations. No other material/gadget (including cell phone) should be brought inside the examination hall.

A candidate should neither possess/refer any forbidden material in any form nor should seek/obtain assistance in any form from any person/source towards answering the questions during the examinations. He/she should not assist other candidates in any form towards answering the questions during the examinations. The candidate should not reveal his/her identity in any form in the answer scripts. The candidate should not indulge in canvassing either directly or indirectly to award more than deserving marks in the exanimations. The candidate should maintain discipline and decorum during the examinations.

Violation of the above rules in any form during the examinations will attract punishment ranging from levying fine to permanently debarring the candidate from continuing his/her studies as given below.

Sl.No.	Nature of Malpractice	Maximum Punishment
1	Appeal by the candidate in the answer script to show mercy by way of awarding more than deserving marks.	Fine of Rs. 1000/- per subject.
2	The candidate writing his/her name in the answer script.	
3	The candidate writing his/her registration number/college name in places other than specified in the answer script	
4	Any special marking in the answer script by the candidate.	
5	The candidate communicating with neighbouring candidate orally or non-verbally; the candidate causing suspicious movement of his/her body.	
6	Irrelevant writing by the candidate in the answer script.	
7	The candidate marking on the question paper or writing answer on his/her question paper or making use of his/her question paper for rough work	
8	The candidate possessing cell phones/programmable calculator(s)/any other electronic storage device(s) **gadgets**	Invalidating the examination of the particular subject written by the candidate

9	The Candidate facilitating the other candidate(s) to copy from his /her answer script	
10	The candidate possessing any incriminating material(s) (whether used or not). For example:- Written or printed materials, bits of papers containing written information, writings on scale, calculator, handkerchief, dress, part of the body, Hall Ticket, etc.	Invalidating the examinations of the subject concerned and all the theory and the practical subjects of the current semester registered by the candidate. Further the candidate is not considered for revaluation of answer scripts of the arrears-subjects. If the candidate has registered for arrears – subjects only, invalidating the examinations of all the arrears – subjects registered by the candidate.
11	The candidate possessing cell phone(s)/programmable calculator(s)/any other electronic storage device(s) **gadgets** and containing incriminating materials (whether used or not).	
12	The Candidate possessing the question paper of another candidate with additional writing on it.	
13	The candidate passing his/her question paper to another candidate with additional writing on it	
14	The candidate passing incriminating materials brought into the examination hall in any medium (hard/soft) to other candidate(s).	
15	The candidate copying from neighbouring candidate.	
16	The candidate taking out of the examination hall answer booklet(s), used or unused	
17	Appeal by the candidate in the answer script coupled with a promise of any form of consideration.	
18	Candidate destroying evidence relating to an alleged irregularity.	Invalidating the examinations of the subject concerned and all the theory and the practical subjects of the current semester registered by the candidate. Further the candidate is not considered for revaluation of answer scripts of the arrears-subjects. If the candidate has registered for arrears – subjects only, invalidating the examinations of all the arrears – subjects registered by the candidate. **Additional Punishment:** 1. if the candidate has not completed the programme, he/she is debarred from continuing his/her studies for one year i.e., for two subsequent semesters. However the student is permitted to appear for the examination in all the arrears-subjects up to the last semester during the debarred period. 2. if the candidate has completed the programme, he/she is prevented from writing the examinations of the arrears-subjects for two subsequent semesters.
19	Vulgar/offensive writings by the candidate in the answer script.	Invalidating the examinations of all the theory and practical subjects of the current semester and all the arrears –subjects registered by the candidate.
20	The candidate possessing the answering script of another candidate	

21	The candidate passing his /her answer script to another candidate	
22	Involved in any one or more of the malpractices of serial no. 8 to 21 for the second or subsequent times.	Invalidating the examinations of all the theory and practical subjects of the current semester and all the arrears –subjects registered by the candidate. **Additional Punishment:** (i) If the candidate has not completed the programme, he/she is debarred from continuing his/her studies for one year i.e., for two subsequent semesters. However the student is permitted to appear for the examination in all the arrears-subjects up to the last semester during the debarred period. (ii) If the candidate has completed the programme, he/she is prevented from writing the examinations of the arrears-subjects for two subsequent semesters.
23	The candidate substituting an answer book let prepared outside the examination hall for the one already distributed to the candidate	
24	The candidate indulge in any disruptive conduct including, but not limited to, shouting, assault of invigilator, officials or students using abusive and /or threatening language, destruction of property.	Invalidating the examinations of all the theory and practical subjects of the current semester and all the arrears –subjects registered by the candidate. **Additional Punishment:** (i) if the candidate has not completed the programme, he/she is debarred from continuing his/her studies for **two years** i.e., for four subsequent semesters. However the student is permitted to appear for the examination in all the arrears-subjects up to the last semester during the debarred period. (ii) if the candidate has completed the programme, he/she is prevented from writing the examinations of the arrears-subjects for four subsequent semesters.
25	The candidate harass or engage others to harass on his/her behalf an invigilator, official, witnesses or any other person in relation to an irregularity by making telephone calls, visits, mails or by any other means.	
26	Candidate possessing any firearm/weapon inside the examination hall.	
27	Cases of Impersonation	(i)Handing over the impersonator to the police with a complaint to take appropriate action against the person involved in the impersonation by the Chief Supt. (ii)If a student of this University is found to impersonate a 'bonafide student', the impersonating student is debarred from continuing his/her studies and writing the examinations **permanently.** He/she is not eligible for any further admission to any programme of the University. (iii)Debarring the 'bonafide student' for whom the impersonation was done from continuing his/her studies and writing the examinations **permanently.** He/she is not eligible for any further admission to any programme of the University.

CONTROLLER OF EXAMINATIONS

K.L.N. COLLEGE OF ENGINEERING, Pottapalayam 630612
(11 km from Madurai City)

STUDENTS LEAVE APPLICATION FORM

Department of Electrical and Electronics Engineering **Date:**

Name of the Student: **Roll No. :** **Sem / Sec. :**

Details of leave availing / applied: Date & Day: **No. of. Days (a):**

Reason for Leave :

No. of days, leave & OD, already availed (b): **Total. No. of. Days (a+b):**

% of Attendance as on : _____ is _____

Signature of the Student **Name, Mobile No. & Signature of Parent / Guardian**

Recommended / Not Recommended

Class Coordinator **HOD/EEE**

K.L.N. COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINERING

NORMS FOR ATTENDING WORKSHOP / SEMINAR/ TECHNICAL SYMPOSIUM/ CONFERENCE / TECHNICAL CONTEST etc.

Students are regularly encouraged to attend skill development programme such as workshop / seminar / Technical Symposium / Conference / Technical Contest etc., outside the college. This is to facilitate to improve their technical skills and competency. However, frequently attending such events will reduce their academic performance, as they are not consistent in attending regular Theory / Practical classes. Also, it was reported that, few students were absent for class tests /CIT's and regular practical classes, in order to attend such skill development programme. Hence, the following norms are framed, in order to balance the academic performance and facilitate the students to attend skill development programme.

1. A student will be permitted, to attend skill development programme, not **more than three events per semester (6 days – OD- maximum).**
2. Academic performance of the students will be considered, before permitting a student to attend skill development programme **(Upto 3 arrears, passed 4 subjects in Class test / CIT's – only will be permitted).**
3. Attendance of the student should **not be less than 90% as on date.**
4. No history of disciplinary action taken on the students**.**
5. Students will not be permitted during Class test / Centralized Internal Test to attend Skill development programme. However students with high academic performance will be permitted, considering the nature of the event during class tests.
6. Students will be permitted to attend such events, only in the higher learning Institutions. (IITs, IISC, NITs, Anna University, MIT, NAAC accredited (A grade), Deemed Universities, NBA accredited, Government & Government Aided Institutions and Self financing Engineering Colleges).
7. Students are instructed to refer the academic calendar of the College, regularly so as to know the Internal test schedule and other events.
8. Students registering any events, without following above norms and not obtaining prior permission, **will not be granted ON DUTY and no RETEST** will be conducted. Necessary action will be taken against defaulters.
9. ON DUTY form is revised, accordingly, in order to incorporate all the above details.
10. Class Co-ordinators / Academic Co-ordinators are instructed to recommend for OD, as per the above norms.

HOD/EEE

K.L.N.COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Format No.: F127

ON DUTY REQUISITION FORM
STUDENTS – TO ATTEND SKILL DEVELOPMENT PROGRAMMES
(Workshop / Seminar / Symposium etc.)

Date: _____

To,

The Principal,

KLNCE,

Pottapalayam.

Respected Sir,

Sub.: Request for OD to attend _____

(Workshop / Conference / Value added course / Symposium / Project Contest / Seminar / Certificate Course / In-plant training / Internship)

As, I am going to attend _____ conducted by _____ (Venue & Place) from_____ to_____. Please permit me to attend the programme and also grant me O.D. for these days.

S.No	Roll No.	Name & (Degree, Semester / Section)	No. of Programmes already attended & Days OD availed	No. of Arrears in AU Exam	No. of subjects failed in Class Test	No. of Subjects failed in CIT's	ATT % As on	Sign

Discipline / misbehavior, reported if any :

Clash with Internal test if any :

Recommended by		
Class Co-ordinator	HOD	
	OD Permitted	OD Approved

BONAFIDE CERTICATE

To

The Principal,

KLNCE,

Pottapalayam.

Sub: Requisition for Bonafide Certificate

****

Respected Sir,

Kindly issue Bonafide Certificate to me

Purpose :

Venue :

Name :

Father's Name :

Roll No. :

Department :

Year & Sem :

Thanking You,

Yours Sincerely,

Date :

Station :

Recommended by :

Received :

K.L.N. COLLEGE OF ENGINEERING, POTTAPALAYAM - 630 612

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

LECTURE SCHEDULE

Course/Branch : **B.E / EEE** Subject: **CIRCUIT THEORY** Duration: **Jan-Apr 2018**

Subject Code : **EE8251** Semester: **II** Section: **A** & B Regulation: **2017(AUC)**

Staff Handling : **Mr.S.Rajalingam & Dr. M.Mahalakshmi**

AIM

To develop the fundamental tools of linear circuit analysis which will be useful to all Engineers and to learn the "alphabet" of circuits, including wires, resistors, capacitors, inductors, voltage and current sources.

OBJECTIVES

- To introduce electric circuits and its analysis
- To impart knowledge on solving circuits using network theorems
- To introduce the phenomenon of resonance in coupled circuits
- To educate on obtaining the transient response of circuits
- To draw phasor diagrams and analysis of three phase circuits

COURSE OUTCOMES: After the course, the student should be able to:

Course	Course Outcome	POs	PSOs
C113.1	Apply Kirchhoff's current and voltage laws to simple circuits and Solve complex circuits using Mesh & Nodal Methods.	1, 2, 3, 4, 5, 12	1
C113.2	Apply Network theorems to linear circuits and to solve simple and complex problems.	1, 2, 3, 4, 5, 12	1
C113.3	Estimate the Transient response of RLC circuits under DC and AC excitation using Laplace Transform and show the characteristics of two port networks	1, 2, 3, 4, 5, 12	1
C113.4	Explain the three phase balanced and unbalanced star, delta network.	1, 2, 3, 4, 5, 12	1
C113.5	Compute the Frequency response of Series and Parallel resonance and analyze tuned circuits.	1, 2, 3, 4, 5, 12	1

Target Periods-60

S. No	Date	Period Number	Topics to be Covered	Book No [Page No]
UNIT I - BASIC CIRCUITS ANALYSIS				**Target Periods : 12**
1.			Resistive elements-Ohm's law	R7 (1-10)
2.			Kirchhoff's laws	R7 (11-22)
3.			Tutorial 1	-
4.			DC and AC Circuits	R7 (1-22,165)
5.			Resistors in series & parallel circuits	R7 (21-25)
6.			Tutorial 2	-
7.			Mesh current method- DC Circuit	R7 (68-72)
8.			Mesh current method- AC Circuit	R7 (244-247)
9.			Node voltage method – DC Circuit	R7 (78-84)
10.			Node voltage method – AC Circuit	R7 (249-254)
11.			Tutorial 3	-
12.			Tutorial 4	-
Assignment – 1 DOS (12.02.18)				
CT-1 (10.02.18-16.02.18)				
UNIT II – NETWORK REDUCTION & NETWORK THEOREMS FOR DC & AC CIRCUITS				**Target Periods : 12**

13.			Network reduction technique- Introduction, Voltage & Current division rule	R7 (88-106)
14.			Source transformation	
15.			Star –delta conversion	R7 (110-113)
16.			Tutorial 1	-
17.			Thevenin's theorem	R7 (120-125)
18.			Norton's theorem	
19.			Tutorial 2	-
20.			Superposition theorem	R7 (115-118)
21.			Maximum power transfer theorem	R7 (130-131)
22.			Reciprocity theorem	R7 (127-128)
23.			Millmans theorm	R7 (136-138)
24.			Tutorial 3	-
25.			Content Beyond Syllabus: Computer aided analysis of electric circuits	
Assignment – 2 DOS: 28.02.18				
Centralized Internal Test – I (28.02.18 – 07.03.18)				
UNIT III - TRANSIENT RESPONSE ANALYSIS				**Target Periods : 12**
26.			L and C elements	
27.			Transient response using Laplace Transform–Introduction	R7 (11-22)
28.			Transient response of RL circuit for DC input	R7 (466-470)
29.			Transient response of RC circuit for DC input	R7 (470-472)
30.			Transient response of RLC circuit for DC input	R7 (472-475)
31.			Tutorial 1	-
32.			Tutorial 2	-
33.			Transient response of RL circuit for AC input	R7 (481-483)
34.			Transient response of RC circuit for AC input	R7 (483-487)
35.			Transient response of RLC circuit for AC input	R7 (487-492)
36.			Tutorial 3	-
37.			Tutorial 4	-
Assignment – 3 DOS: 19.03.18				
CT 2 (20.03.18 – 26.03.18)				
UNIT IV - THREE PHASE CIRCUITS				**Target Periods : 12**
38.			A.C. circuits – Average and RMS value	R7 (174-176)
39.			Phasor Diagram – Power, Power Factor and Energy	R7 (221-228)
40.			Analysis of three phase balanced and unbalanced circuits	R7 (344-353)
41.			Three phase three wire circuit with star,delta load	R7 (331 – 349)
42.			Three phase four wire circuit with star load	R7 (331 – 349)
43.			Three phase four wire circuit with delta load	R7 (331 – 349)
44.			Balanced phasor diagram of voltage & current	R7 (354-357)
45.			Unbalanced phasor diagram of voltage & current	R7 (358-365)
46.			Power and power factor measurements in three phase circuits	R7 (369-379)
47.			Tutorial 1	-
48.			Tutorial 2	-
49.			Tutorial 3	-
50.			**Seminar I**	
51.			**Quiz I**	
Centralized Internal Test – II (10.04.18 – 17.04.18)				
UNIT V - RESONANCE AND COUPLED CIRCUITS				**Target Periods : 12**
52.			Series and Parallel resonance	R7 (284-295)
53.			Frequency response of series resonance	
54.			Frequency response of parallel resonance	
55.			Quality factor and Bandwidth	R7 (298-304)
56.			Tutorial 1	-
57.			Self-inductance	R7 (413-419)
58.			Mutual inductance	
59.			Coefficient of coupling	R7 (419-421)
60.			Tutorial 2	-
61.			Tuned circuits-Introduction	R7 (434-438)

62.			Single tuned circuit-analysis	
63.			Tutorial 3	-
64.			**Quiz II**	-
65.			**Seminar II**	-
Model Exam – 28.04.18 to 05.05.18				

Books: Text/Reference

S. No		Title of the Book	Author	Publisher	Year
1.	**T1**	Engineering Circuits Analysis	William H. Hayt Jr, Jack E. Kemmerly and Steven M. Durbin	Tata McGraw Hill publishers, 6th edition, New Delhi.	2013
2.	**T2**	Fundamentals of Electric Circuits	Charles K. Alexander, Mathew N.O. Sadiku	Second Edition, McGraw Hill	2013
3.	**T3**	Circuit Analysis Theory and Practice	Allan H. Robbins, Wilhelm C. Miller	Cengage Learning India	2013
3.	**R1**	Circuits Theory (Analysis and synthesis)	Chakrabati A	Dhanpath Rai & Sons, New Delhi.	1999
4.	**R2**	Analysis of Electric Circuits	Jegatheesan, R.	McGraw Hill,	**2015**
5.	**R3**	Electric circuits	Joseph A. Edminister, Mahmood Nahri	Schaum's series, Tata McGraw-Hill, New Delhi.	2010
6.	**R4**	Network Analysis	M E Van Valkenburg	Prentice-Hall of India Pvt Ltd, New Delhi	**2015**
7.	**R5**	Electric Circuits Analysis	Mahadevan, K., Chitra	Prentice-Hall of India Pvt Ltd, New Delhi	2015
8.	**R6**	Introduction to Electric Circuits	Richard C. Dorf and James A. Svoboda	7th Edition, John Wiley & Sons, Inc.	2015
9.	**R7**	Circuits and Networks Analysis and Synthesis	Sudhakar A and Shyam Mohan SP	Tata McGraw Hill	2015

NPTEL LECTURES

S. No	UNIT	Date[Period]	TOPIC	Ref / Link
1.	V		Resonance	https://www.youtube.com/watch?v=6mC0xkXsFdw

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C113.1	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.2	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.3	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.4	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.5	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-

Content Beyond Syllabus Added (CBS)	POs strengthened/vacant filled	CO/Unit
Computer aided analysis of electric circuits	PO2, PO3, PO4 (Strengthened) PO5	C113.2 / II

STAFF INCHARGE **HOD/EEE**

K.L.N. COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
EE8251 – CIRCUIT THEORY [C115]

Important Questions/Tutorials/Assignments/Seminar

1. Course Outcomes

Course	Course Outcome	POs	PSOs
C113.1	Apply Kirchhoff's current and voltage laws to simple circuits and Solve complex circuits using Mesh & Nodal Methods.	1, 2, 3, 4, 5, 12	1
C113.2	Apply Network theorems to linear circuits and to solve simple and complex problems.	1, 2, 3, 4, 5, 12	1
C113.3	Estimate the Transient response of RLC circuits under DC and AC excitation using Laplace Transform.	1, 2, 3, 4, 5, 12	1
C113.4	Explain the three phase balanced and unbalanced star, delta network.	1, 2, 3, 4, 5, 12	1
C113.5	Compute the Frequency response of Series and Parallel resonance and analyze tuned circuits.	1, 2, 3, 4, 5, 12	1

2. Mapping of Course Outcomes (COs), Course (C), Program Specific Outcomes (PSOs) with Program Outcomes (POs) – before CBS [Levels of correlation: 3(High), 2(Medium), 1(low)]

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C113.1	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.2	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.3	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.4	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113.5	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C113	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-

3. PROGRAM OUTCOMES (POs)

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

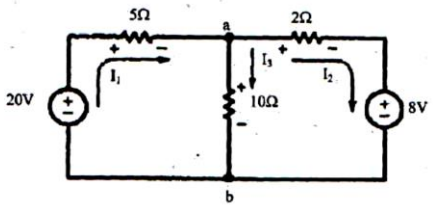
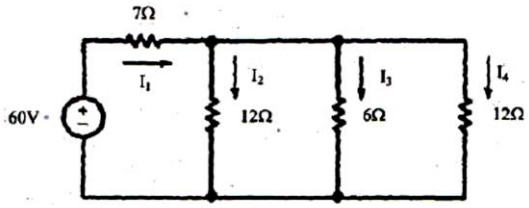
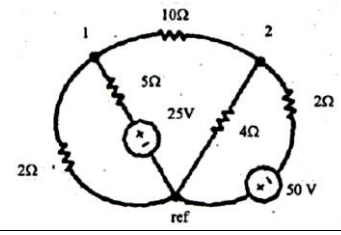
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

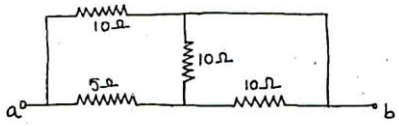
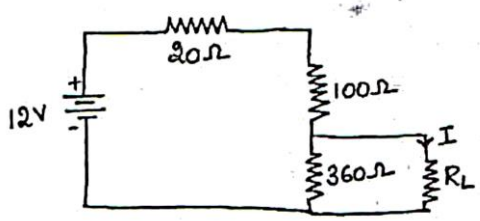
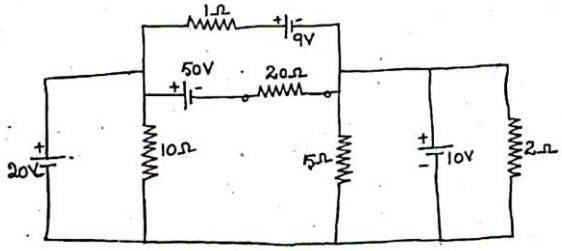
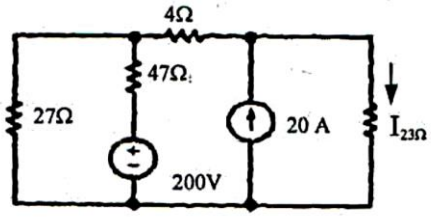
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

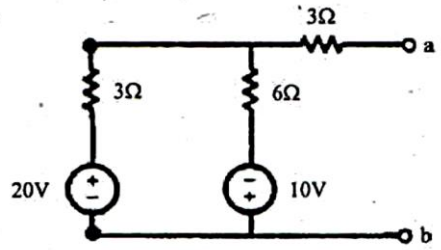
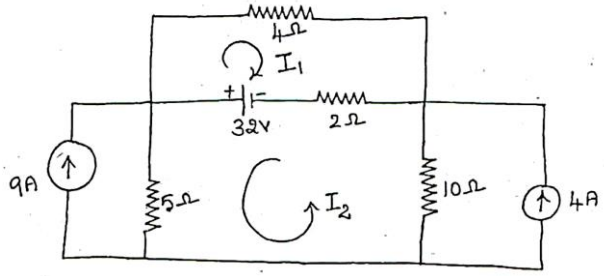
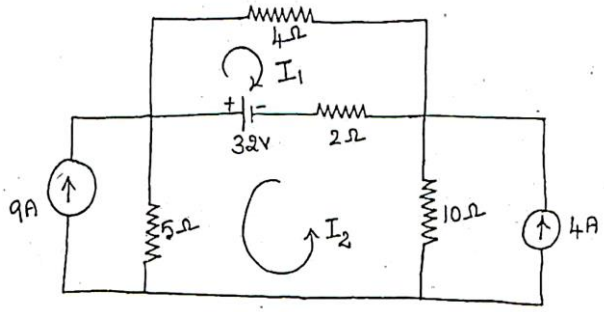
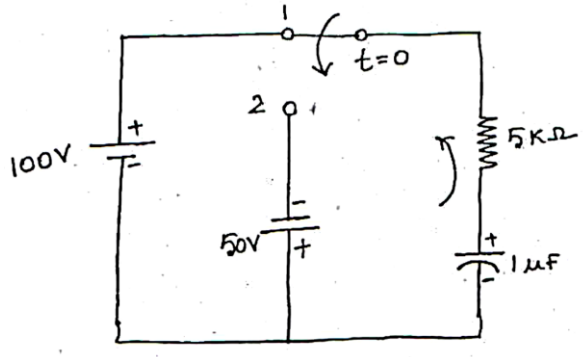
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

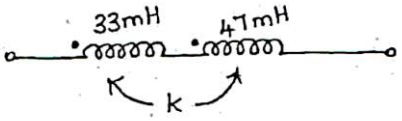
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

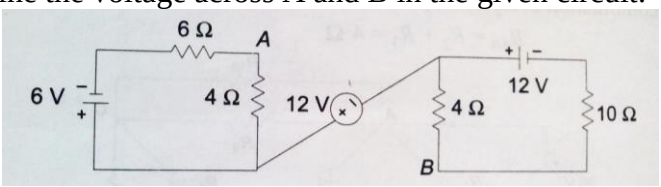
4. IMPORTANT QUESTIONS

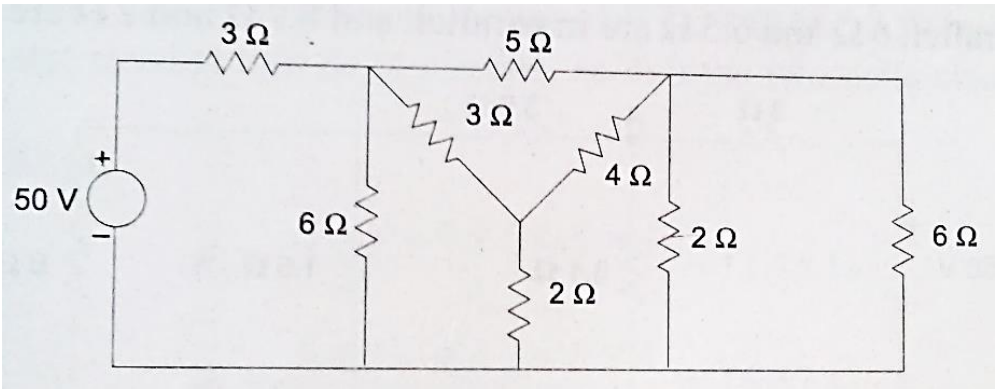
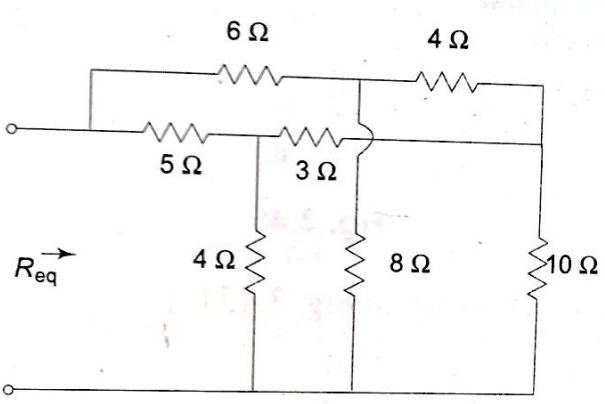
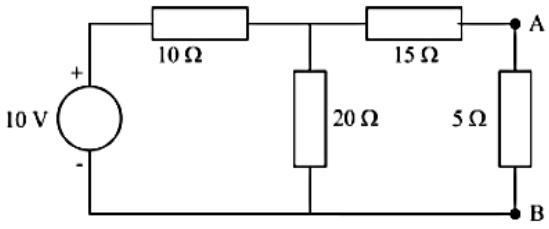
S. No.	Questions	COs	POs
1.1	Obtain the current in each branch of the network shown below using Kirchhoff's Current Law. 	C113.1	1,2
1.2	Use branch currents in the network shown below to find the current supplied by the 60-V Source. Solve the circuit by the mesh current method. (16) 	C113.1	1,2
1.3	Solve the network given below by the node voltage method. 	C113.1	1,2

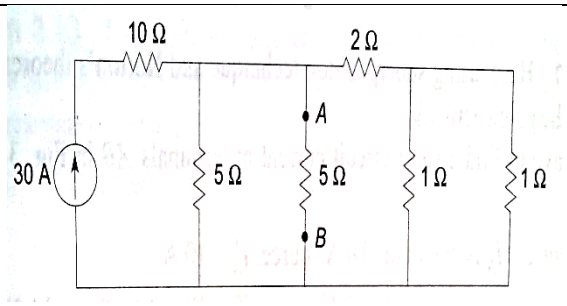
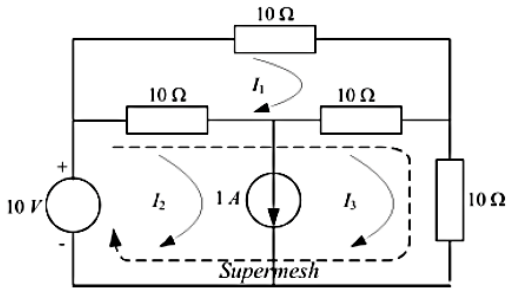
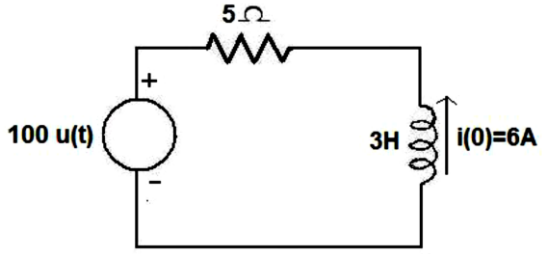
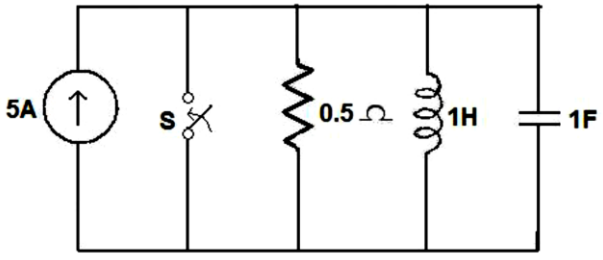
1.4	Calculate the equivalent resistance between the terminals "*a*" and "*b*", in Fig. 1.  Fig. 1	C113.1	1,2
1.5	Calculate the value of I_N for the circuit shown in Fig. 2.  Fig. 2	C113.1	1,2
2.1	Find the current *I*, through the 20 Ω resistor shown in Fig. 7 using Thevenin's theorem. (16)  Fig. 7	C113.2	1,2
2.2	**Compute the current in the 23Ω resistor of the following figure shown below by applying the superposition principle. (8)**  	C113.2	1,2

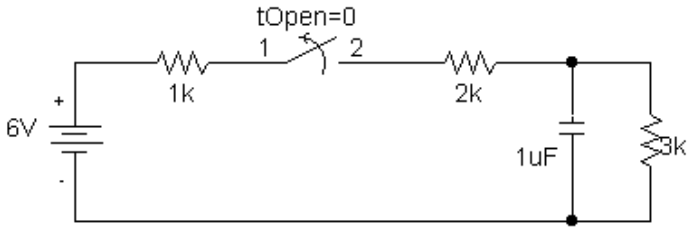
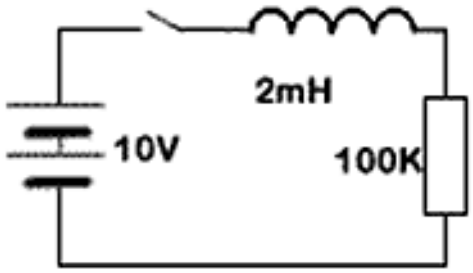
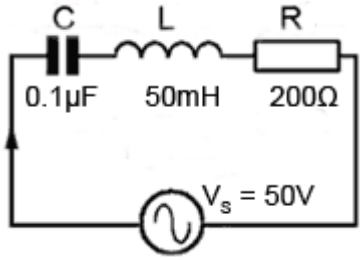
2.3	Obtain the Thevenin and Norton equivalent circuits for the active network shown below. (16) 	C113.2	1,2
2.4	**Find the current through 5 ohm resistor using superposition theorem** 	C113.2	1,2
2.5	**Find the current through 5 ohm resistor using Thevenins theorem and replace 5 ohm by 10 ohm and then find the current through 10 ohm resistor.** 	C113.2	1,2
3.1	The switch in the circuit shown in Fig. 9 is moved from position 1 to 2 at $t = 0$. Find the expression for voltage across resistance and capacitor, energy in the capacitor for $t > 0$. (16) 	C113.3	1,2
3.2	Derive the expression for time constant in DC response of RL series circuit and	C113.3	1,2

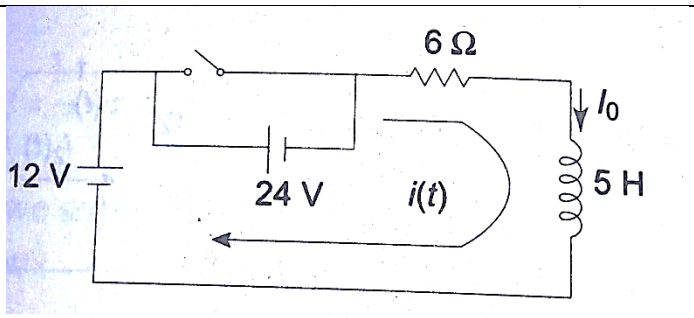
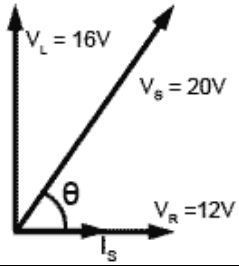
	analyze.		
3.3	Derive the expression for time constant in AC response of RL series circuit and analyze.	C113.3	1,2
3.4	Derive the expression for time constant in DC response of RLC series circuit and analyze.	C113.3	1,2
3.5	Derive the expression for time constant in AC response of RLC series circuit and analyze.	C113.3	1,2
4.1	Show that three phase power can be measured by two wattmeters. Draw the phasor diagrams. Derive an expression for power factor interms of wattmeter readings. (16)	C113.4	1,2
4.2	A 400 V (line to line) is applied to three star connected identical impedances each consisting of a 4 Ω resistance in series with 3 Ω inductive reactance. Find (1) line current and (2) total power supplied. (8)	C113.4	1,2
4.3	Analyze the three phase three wire circuits with star connected balanced loads	C113.4	1,2
4.4	Draw and analyze the phasor diagram of voltages and currents of a three phase balanced circuits	C113.4	1,2
4.5	Three star-connected impedances $Z_1 = (20 + j37.7)\ \Omega$ per phase are in parallel with three delta-connected impedance $Z_2 = (30 - j159.3)\ \Omega$ per phase. The line voltage is 398 volts. Find the line current, power factor, power and reactive volt-ampere taken by the combination.	C113.4	1,2
5.1	Calculate the total inductance of the circuit, if the coefficient of coupling (k) between the two coils is 0.6, as shown in Fig. 3.  Fig. 3	C113.5	1,2

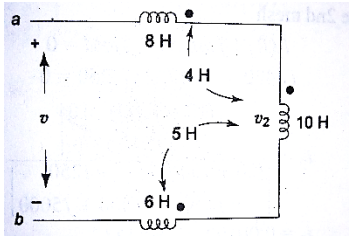
5.2	Impedance Z_1 and Z_2 are parallel and this combination is in series with an impedance Z_3, connected to a 100 V, 50 Hz ac supply. $Z_1 = (5 - jX_c)\Omega$, $Z_2 = (5 + j0)\Omega$, $Z_3 = (6.25 + j1.25)\Omega$. Determine the value of capacitance such that the total current of the circuit will be in phase with the total voltage. Find the circuit current and power. (16)	C113.5	1,2
5.3	Derive the expression for mutual inductance & coefficient of coupling of the transformer.	C113.5	1,2
5.4	Derive the expression for resonant frequency, Band width, and quality factor of series resonant circuit.	C113.5	1,2
5.5	Derive the expression for resonant frequency, Band width, and quality factor of parallel resonant circuit.	C113.5	1,2
	5.TUTORIAL QUESTIONS		
	UNIT I - BASIC CIRCUITS ANALYSIS		
T.1.1	A Resistor with a current of 3A through it converts 500J of electrical energy to heat energy in 12s. Determinethe voltage across the resistor. **ANS: 13.88V**	C113.1	1,2,3
T.1.2	Determine the power rating of a 5 ohm resistor which has a voltage rating of 100V. **ANS: 2KW**	C113.1	1,2,3
T.1.3	Determine the inductance of the coil through which flows a current of 0.2A with energy of 0.15J. **ANS:7.5H**	C113.1	1,2,3
T.1.4	Determine the inductance of a coil in which a current increases linearly from 0 to 0.2A in 0.3s, producing a voltage of 15V. **ANS: 22.73H**	C113.1	1,2,3
T.1.5	How will you calculate the value of resistance in 3, 4 and 5 band resistors? Illustrate with examples.	C113.1	1,4
T.1.6	An AC voltage of 220V is applied to a pure inductance at 50Hz. If the current is 5A, determine the instantaneous voltage. **ANS: V=311sin314t V**	C113.1	1,2,3
T.1.7	In an AC circuit, containing pure inductance, the voltage applied is 110V, 50Hz while the current is 10A. Determine the value of inductance. **ANS: L=35mH**	C113.1	1,2,3
T.1.8	An inductor of 20mH offers a reactance of 100 ohm. Determine the supply frequency. **ANS: f=796Hz**	C113.1	1,2,3
T.1.9	Determine the voltage across A and B in the given circuit.  **ANS: Voltage=13.04V**	C113.1	1,2,3
T.1.10	When a dc voltage is applied to a capacitor, the voltage across its terminals is found to build up in accordance with $V_C = 50(1-e^{-100t})$. After a lapse of 0.01s, the current flow is equal to 2mA. Determine the value of capacitance in microfarads.	C113.1	1,2,3

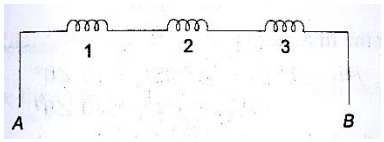
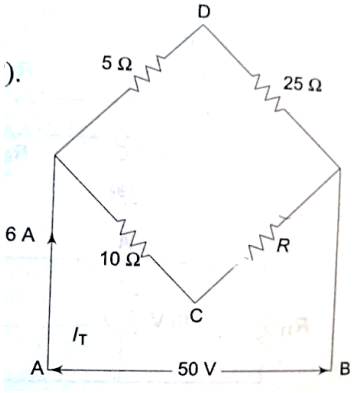
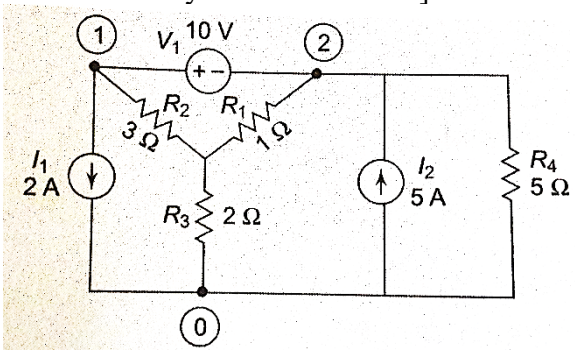
	ANS: 1.089 microfarad		
	UNIT II - NETWORK REDUCTION AND NETWORK THEOREMS FOR DCAND AC CIRCUITS		
T.2.1	Determine the current drawn by the given circuit.  **ANS: Current=10.2A**	C113.2	1,2,3
T.2.2	Determine the equivalent resistance by using star delta transformation.  **ANS: R_{eq}=4.93 ohm**	C113.2	1,2,3
T.2.3	Use Thevenin's theorem to determine the current through 5 ohm resistor.  **ANS: 0.25A**	C113.2	1,2,3
T.2.4	Determine the current through 5 ohm resistor by applying Norton's theorem.	C113.2	1,2,3

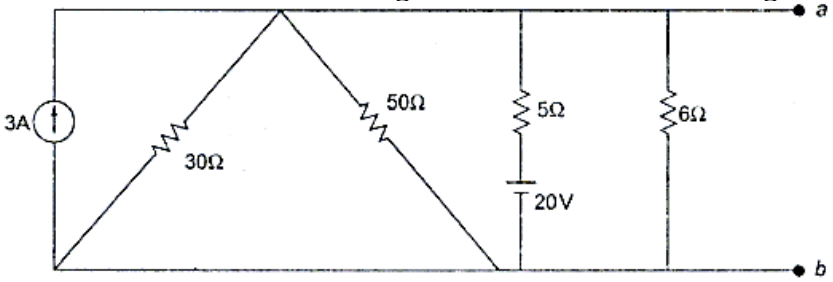
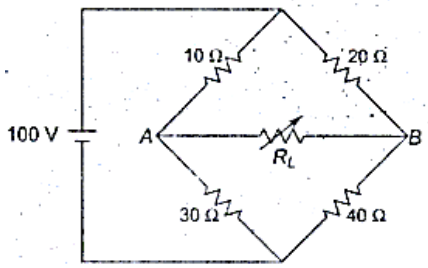
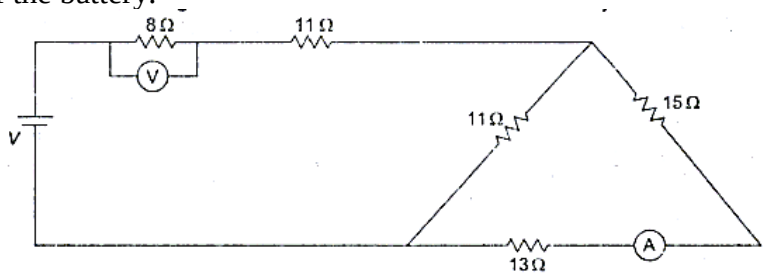
	 **ANS: 7.51A**		
T.2.5	Determine the current supplied by the 10V voltage source.  **ANS: I_2=1A**	C113.2	1,2,3
	UNIT III - TRANSIENT RESPONSE ANALYSIS		
T.3.1	A DC voltage of 100 volts is applied to a series RL circuit with R=25 ohm. Determine the current in the circuit at twice the time constant. **ANS: i(t) = 3.45A**	C113.3	1,2,3
T.3.2	In the circuit of the figure shown below, determine the expression for the transient current and the initial rate of growth of the transient current.  **ANS: $i(t) = 20 - 26e^{-\left(\frac{5}{3}\right)t}$, $\frac{di}{dt}|_{t=0} = 43.333$ A/sec**	C113.3	1,2,3
T.3.3	For the circuit shown in figure, determine the voltage across the resistor 0.5 ohm, when the switch, S is opened at t=0. Assume that there is no charge on the capacitor and no current in the inductor before switching. 	C113.3	1,2,3
T.3.4	A Series RLC circuit comprising R=10 ohm, L= 0.5H, and C = 1 microfarad is	C113.3	1,2,3

	excited by a constant voltage source of 100V. Obtain the expression for the transient current assuming initially relaxed conditions. **ANS:$i(t) = e^{-10t}(0.1414 \sin 1414.2t)$ A**		
T.3.5	For a source free RLC series circuit, the initial voltage across C is 10V and the initial current through L is zero. If L = 20mH, C=0.5 microfarad and R=100 ohm, evaluatei(t).	C113.3	1,2,3
T.3.6	Calculate the voltage over the capacitor for the time t>0. 	C113.3	1,2,3
T.3.7	Calculate the approximate voltage across the inductor 100ns after the switch is closed? 	C113.3	1,2,3
T.3.8	Determine the resonant frequency of the circuit. 	C113.3	1,2,3
T.3.9	If a simple RL circuit consisting of a 20Ω resistor in series with a 100mH inductor is connected to a 10V supply, from which it draws a current of 500mA after it has reached its steady state. Determine how long after switch on, will the current take to reach 316mA?	C113.3	1,2,3
T.3.10	Find the current in the circuit shown at an instant t, after opening the switch if a current of 1A had been passing through the circuit at the instant of opening.	C113.3	1,2,3

	 **ANS: i(t)=6-5$e^{-\frac{6}{5}t}$**		
UNIT IV - THREE PHASE CIRCUITS			
T.4.1	A balanced star connected load of (4+j3) ohm per phase is connected to a balanced 3 phase 400V supply. The phase current is 12A. Determine (a) Total active power **ANS: P=6651W** (b) Reactive power **ANS: Q=4988.36 VAR** (c) Total apparent power **ANS: S=8313.84VA**	C113.4	1,2,3
T.4.2	The voltage across the terminals R and Y is 400. Calculate the values of three line voltages. Assume RYB phase sequence. **ANS: V_{RY}=400∟0^0** **V_{BY}=400∟-120^0 V_{BR}=400∟ -240^0**	C113.4	1,2,3
T.4.3	The input power to a three phase load is 10kW at 0.8pf. Two wattmeters are connected to measure the power, calculate the individual readings of the wattmeters. **ANS: W_1=7.165 kW and W_2=2.835 kW**	C113.4	1,2,3
T.4.4	A two-phase generator is connected to two 90Ω load resistors. Each coil generates 120 V AC. A common neutral line exists. Determine how much current flow through the common neutral line.	C113.4	1,2,3
T.4.5	Compare the total copper cross sections in terms of current-carrying capacity for a single-phase and a three-phase 120 V system with effective load resistance of 15Ω.	C113.4	1,2,4
T.4.6	If in a Y-connected ac generator, each phase voltage has a magnitude of 90 V_{RMS}, calculate the magnitude of each line voltage.	C113.4	1,2,3
T.4.7	Calculate the phase difference θ between the supply voltage and the supply current. 	C113.4	1,2,3
T.4.8	Determine total average power and total reactive power for the circuit having line voltage 208V and the wattmeter readings of the balanced system is P_1=-560W and P_2=800W.	C113.4	1,2,3
T.4.9	Determine power factor for the circuit having line voltage 208V and the wattmeter readings of the balanced system as P1=-560W and P2=800W.	C113.4	1,2,3
T.4.10	Calculate the total power input and readings of the two wattmeter's connected to measure power in a three phase balanced load, if the reactive power input is 15KVAR, and the load pf is 0.8	C113.4	1,2,3

	ANS: P=34641; W1=12990 & W2=21650		
UNIT V - RESONANCE AND COUPLED CIRCUITS			
T.5.1	A series RLC circuit has R=20 ohm, L=0.005 H and C=0.2 μF. It is fed from a 100 V variable frequency source. Calculate (a) frequency at which current is maximum (b) impedance at this frequency and (c) voltage across inductor at this frequency. **ANS: (a)f_r=5033Hz, (b) Z=R=20Ω, (c) V_L=230.55V**	C113.5	1,2,3
T.5.2	A series RLC circuit with R=10 ohms, L=10 mH and C=1μF has an applied voltage of 200 V at resonant frequency. Calculate the resonant frequency, the current in the circuit and voltages across the elements at resonance. Find also the quality factor and bandwidth. **ANS: f_r=1591.5494Hz, V_R=200V, V_L=2000V, V_C=2000V, Q=10, BW=159.15Hz**	C113.5	1,2,3
T.5.3	A series RLC circuit with R=5 ohm L=40 mH and C=1μF. Calculate (a) the Q of the circuit, (b) the separation between the half power frequencies, (c) the resonant frequency and (d) the half power frequencies f_1 and f_2. **ANS: (a) Q=40, (b) BW=19.89Hz, (c) f_r=795.77Hz, (d) f_1=785.83Hz & f_2=805.72Hz**	C113.5	1,2,3
T.5.4	A series circuit with R=10 ohm, L=0.1 H and C=50 μF has an applied voltage V=50 V with a variable frequency. Find the resonant frequency, the value of frequency at which maximum voltage occurs across the inductor and the value of frequency at which maximum voltage occurs across the capacitor. Explain what do you infer from the results. **ANS: f_L=72.08Hz, f_C=71.08Hz and f_r=71.18Hz**	C113.5	1,2,3,4
T.5.5	A series RLC circuit with R=10 ohm, L=0.2 mH and a variable capacitor has to resonate at 200KHz. Determine the value of C at resonance. **ANS: C=0.0031 μF**	C113.5	1,2,3
T.5.6	Two inductively coupled coils have self-inductances L1=50mH and L2=200mH. If the coefficient of coupling is 0.5, (i) Calculate the mutual inductance between the coils, and (ii) what is the maximum possible mutual inductance? **ANS: (i) M=50mH (ii) M=100mH**	C113.5	1,2,3
T.5.7	An amplifier with an output impedance of 1936 ohm is to feed a loudspeaker with an impedance of 4 ohm. (a) Calculate the desired turns ratio for an ideal transformer to connect the two systems, (b) An rms current of 20mA at 500Hz is flowing in the primary. Calculate the rms value of current in the secondary at 500Hz, (c) What is the power delivered to the load? **ANS: (a) N_2/N_1=1/22, (b) I_{RMS}=0.44A, (c) P=0.774W**	C113.5	1,2,3
T.5.8	A coil of 100 turns is wound uniformly over an insulator ring with a mean circumference of 2m and a uniform sectional area of 0.025cm^2. if the coil is carrying a current of 2A. calculate (a) the mmf of the circuit (b) magnetic field intensity (c) flux density (d) the total flux **ANS: (a) 2000AT (b) 1000AT/m (c) 1.2565mWb/m^2 (d) 0.00314×10^{-6} Wb**	C113.5	1,2,3
T.5.9	Calculate the effective inductance across a and b 	C113.5	1,2,3

T.5.10	The inductance matrix for the circuits of three series connected coupled coils is given. Find the inductances and indicate the dots for the coils. All elements are in Henrys. 	C113.5	1,2,3
6.ASSIGNMENT QUESTIONS			
UNIT I - BASIC CIRCUITS ANALYSIS			
A.1.1	An electric circuit has three terminals A,B,C. Between A and B is connected to a 2Ω resistor, between B and C are connected a 7Ω resistor and a 5Ω resistor in parallel and between A and C is connected a 1Ω resistor. A battery of 10V is then connected between terminals A and C. Determine (a) total current drawn from the battery, (b) voltage across the 2Ω resistor and (c) current passing through the 5Ω resistor. **ANS: (a) I_T =12A, (b) $V_{2\Omega}$ =4volts, (c) $I_{5\Omega}$ =1.17A**	C113.1	1,2,3
A.1.2	Determine the value of resistance R and current in each branch when the total current taken by the circuit is 6A.).  **ANS: R=1.52 ohm**	C113.1	1,2,3
A.1.3	Determine the power delivered by the 5A current source in the circuit shown below using nodal method. [Refer Pg. No. 101 , 'Circuits and Networks Analysis and Synthesis' by A. Sudhakar and Shyammohan S Palli] 	C113.1	1,4
UNIT II - NETWORK REDUCTION AND NETWORK THEOREMS FOR DCAND AC CIRCUITS			

A.2.1	Apply Source Transformation technique and replace the circuit shown in figure between terminals 'ab' with the voltage source in series with a single resistor.  **ANS: V_{ab}=16.67V; R_{th} =2.38Ω**	C113.2	1,2,3
A.2.2	Determine the load resistance to receive maximum power from the source; also find the maximum power delivered to the load in the given circuit. [Refer Pg. No. 153 , 'Circuits and Networks Analysis and Synthesis' by A. Sudhakar and Shyammohan S Palli]  	C113.2	1,4,5
A.2.3	A battery of unknown emf is connected across resistance as shown in the figure. The voltage drop across the 8Ω resistor is 20V. Determine the current through ammeter and emf of the battery.  **ANS: Ammeter reading=0.71A; Emf of the battery =67.38V**	C113.2	1,2,3
UNIT III – TRANSIENT RESPONSE ANALYSIS			
A.3.1	A series RL circuit with R=30 ohm and L=15H has a constant voltage V=60v applied at t=0. Determine the current I, the voltage across resistor and the voltage across inductor.	C113.3	1,2,3
A.3.2	A series RC circuit consists of resistor of 10 ohm and a capacitor of 0.1F. A constant voltage of 20v is applied to the circuit at t=0. Obtain the current equation. Determine the voltages across the resistor and the capacitor.	C113.3	1,2,3
A.3.3	A series RLC circuit consist of resistor of 20 ohm, inductor of 0.05H and capacitor of 20 micro farad with a 100v constant source when the switch is closed at t=0. Find the current transient.	C113.3	1,2,3
A.3.4	Determine the complete solution for the current, when the switch is closed at t=0. For the	C113.3	1,2,3

	given series RLC circuit, the applied voltage is v(t)=400 cos(500t+$\frac{\pi}{4}$). Resistance R=15 ohm, inductance L=0.2H and capacitance C=3 micro farad		

SEMINAR TOPICS

S.No	Name of the Topic
1.	Water circuit analogy to electric circuits
2.	History of ohms' law
3.	Active and Passive components
4.	Linear and Nonlinear elements
5.	Bilateral and Unilateral element
6.	Lumped and Distributed element
7.	Power Triangle
8.	Impedance diagram
9.	AC vs DC
10.	Types of Resistor
11.	Types of Capacitor
12.	Types of Inductor
13.	Types of energy sources
14.	Types of electrical loads
15.	Single phase vs three phase system
16.	Effects of Harmonics
17.	Effects of phase sequence
18.	Effects of power factor
19.	Analogy between magnetic and electric circuit
20.	Application of differential equations to electric circuits
21.	Types of filters-LPF, HPF
22.	Types of Filters-Active and Passive
23.	Star connection vs delta connection
24.	Analog circuit
25.	Digital circuit
26.	Application of Reciprocity theorem
27.	Application of Maximum power transfer theorem
28.	Application of superposition theorem
29.	Transformer
30.	Chopper

A BRIEF HISTORY OF THE COLLEGE

K.L.N. College of Engineering is the first self-financing Co-educational Engineering College in Madurai, started in 1994 by Munificence of Philanthropist and well wishers in Sourashtra Community which is a linguistic minority in Tamilnadu. This college is sponsored by the committee of eminent industrialists and academicians led by enthusiastic, educationalist and industrialist (Late) Thiru K.L.N. Krishnan. This college has the approval of All India Council for Technical Education, New Delhi and is affiliated to Anna University, Chennai.

Thiru. K.L.N. Krishnan, Founder President of this Engineering College has rendered Yeoman service to Sourashtra Arts & Science College and Sourashtra Girls Higher Secondary School, Madurai for the past several years. He also promited a Polytechnic under the name of K.L. Nagaswamy Memorial Polytechnic College in Viraganur, Madurai in 1983. This Engineering College, functioned in the premises of the above polytechnic during the academic years 1994-95 & 1995-96 was shifted to its own premises in the year 1996.

(Late) Thiru K.L.N. Krishnan is the Founder President, and the college is now under the management of Dr. K.N.K. Ganesh as Secretary & Correspondent and other executive committee members.

Campus :

This college is situated on the South Eastern outskirts of Madurai, 11th Km on Madurai – Nedungulam Road. It is built in an area of 53.8 acres. The Campus has multistoreyed buildings consisting of well provided class rooms, drawing halls, seminar halls, conference hall, library, Air-Conditioned Computer centres, staff rooms and student rest rooms. The infrastructure also consists of five double storeyed laboratory buildings and three single storeyed workshops and Machine shop, and an automobile workshop.

The Administrative block (2 storeyed) of 1,185 sq. metre with office in the ground floor, I.T. laboratory in the first floor & class rooms in the second floor has been constructed on the eastern side.

A two storeyed block of 1,185 sq. metre consisting class room has been constructed on the southern side of the administrative block.

A two storeyed block of 1,185 sq. metre with EIE laboratory in the ground floor, DSP laboratory in the first floor & class rooms in the second floor has been constructed on the western side of the administrative block.

A two storeyed block of 2,122 sq. metre with spacious library, video library & Electronic resource section in the ground floor, class rooms in the first floor & CSE laboratory in the second floor has been constructed near the administrative block.

A single storeyed block of 1,193 sq. metre with S.M. laboratory in the ground floor CAD, CAM laboratories in the first floor & class rooms in the second floor has been constructed on the north western side of the administrative block.

Three Mechanical sheds (occupied by three Mech. Engg. Laboratory) of 2460 sq. metre have been constructed on the northern side of the mechanicalblock. An automobile work shop of 2304 sq. metre has been constructed on the north western side of the administrative block.

An Indoor stadium cum Auditorium of 2,221 sq. metre has been constructed on the northern side of the administrative block.

A separate double storeyed post-Graduate block of 4,020 square metre for M.B.A. and M.C.A. departments has been constructed on the South Western side of the administrative Block.

A single storeyed block of two canteens with 2,485 square metre in the ground floor and ladies rest room in the first floor has been contructed on the south western side of the Administrative Block.

A single storeyed block of 1,289 square metre for Electrical & Electronics Engg., Laboratories & class rooms in the ground floor and Electronics & Communication Laboratory and Class rooms in the first floor has been constructed on the western side of the Administrative Block.

A two-storeyed block with an area of 2,956 sq. metre has been constructed as an extension to Block III Opposite the U.G. library Block. This block comprised Physics lab, Chemistry lab and EIE Lab. D.S.P. Lab & Class rooms.

A two-storeyed block with an area of 2076 squre metre for the use of EEE Dept. in the ground floor & ECE Dept. in the first & 2nd floors is now under construction as an extension to the existing EEE & ECE block on the western side of the administrative block.

A two storeyed block with an area of 2,977 sq. metre for the use of Mechanical & Automobile depts. is now under construction, as an extension to the existing Mechanical block on the North-Western side of the administrative block.

A separate building with ground floor of area of 170 sq. metre for the installation of Generator on the South-estern side (Opposite to the Vinayagar temple) of the administrative block is under construction & (nearing completion)

In order to facilitate the easy accessibility for the students, in all, 950 numbers of computers have been installed so far. This sounds the management's conviction in providing essential infrastructure for the learning purpose in our college.

An overhead Tank of 20,000 Litre Capacity at a height of 40 feet has been constructed at a cost of Rs.4 lakhs, donated by Rotary international, Rotary District-1240, Rotary club of LEIGH-ON-SEA. Treated drinking water plant at a cost of Rs.2 lakhs has been installed near the overhead tank.

Well-furnished Men's Hostel, Mess block and canteen block are also inside the campus. The college is a quiet retreat, ideal for concentrated study, away from distractions and disturbances of a large city.

A single storeyed block of 1,330 square metre with a spacious dining hall in the ground floor and 13 rooms in the first floor for men students has been constructed on the northern side of the administrative block and is already in use. A two storeyed hostel block of 2,034 square metre adjacent to the existing hostel for men students has been constructed.

Total expenditure incurred so far towards the cost of equipments & buildings & other assets is about Rs.22.50 crores.

A VINAYAGAR Temple on the eastern side of the administrative Block has been constructed. Eight class rooms for I year B.E. / B.Tech 2 class room for M.E. (P.S.) students, and two staff rooms have been constructed in the ECE/EEE block.

A Ladies Hostel of 1460 sq.m. which can accommodate about 150 students is within the campus.

HISTORY OF THE DEPARTMENT

<table>
<tr><th colspan="2">B.E. - Electrical and Electronics Engineering</th><th colspan="2">M.E. - Power Systems Engineering</th><th colspan="2">Ph.D.</th></tr>
<tr><td rowspan="4">Year of start & History of Intake</td><td>1994, with an intake of 40</td><td rowspan="4">Year of start & History of Intake</td><td>2004, with an intake of 18</td><td>Year of Recognition as Research Centre</td><td>2012</td></tr>
<tr><td>1996, with an intake of 60</td><td rowspan="3">2012, with an intake of 24</td><td rowspan="3">First Renewal</td><td rowspan="3">2015, upto December 2018</td></tr>
<tr><td>2002, with an intake of 90</td></tr>
<tr><td>2011, with an intake of 120</td></tr>
<tr><td colspan="6">Both UG & PG programs are permanently affiliated to Anna University, Chennai.</td></tr>
<tr><td colspan="6">Accreditation status</td></tr>
<tr><td>First Accreditation</td><td>Second Accreditation</td><td>Third Accreditation</td><td colspan="3">Fourth Accreditation</td></tr>
<tr><td>3 YEARS W.E.F. 19-3-2004</td><td>3 YEARS W.E.F. 19-7-2008</td><td>2 YEARS W.E.F. 05-08-2013</td><td colspan="3">Academic Year 2016-17,2017-18 and 2018-19, i.e., upto 30-06-2019</td></tr>
</table>

FACULTY PROFILE as on Jan 2018

Ph.D's	Doing Ph.D	M.E.
10	7	11
Professors	**Associate Professor**	**Assistant Professor**
05	**05**	**18**

SALIENT FEATURES OF THE DEPARTMENT

1.GENERAL

- Started offering B.E. in Electrical and Electronics Engineering in the year 1994 with an intake of 40 (No.-732-50-8/RC/94, dated 11th August 1994, AICTE), an intake of 60 in 1996, an intake of 90 in 2002 (F.No :730-52-227(E)/ET/97 dated 19.06.2002), with the latest intake of 120 in 2011 (F.No.Southern/1-400215781/2011/EOA, dated 01.09.2011, AICTE).
- Started offering M.E. in Power Systems Engineering in the year 2005 with an intake of 20 and increased intake to 24 in 2012 (F.No.Southern/1-687512981/2012/EOA, dated 10.05.2012, AICTE).
- Accredited in March 2004 (First time – F.No.NBA/ACCR-242/2003, dated 24/03/04) and Re-accredited (Second time – F.No.NBA/ACCR-242/2003, dated July 19, 2008), Re-accredited (Third time - For 2 years w.e.f. 28-08-2012), Re-accredited (Fourth time – For 3 years w.e.f. July 2016, upto 30.06.2019, F.No. 33-01/20100-NBA, dated 04.02.2017) by National Board Accreditation, New Delhi.
- Recognized Research Centre No.4490408, Approved by Anna University, Chennai with effect from December 2012, offering guidance for M.S & Ph.D.(Full time/Part time) (Renewed upto December 2018, Lr.No. 4904/IR/EEE/AR1 dated 18.02.2016).
- Both UG and PG programs are permanently affiliated to Anna University, Chennai with effect from December 2012.
- MODROB fund of Rs.5 lakhs was allotted for the year 2011-2012 for the Power Electronics laboratory (No.8024/RIFD/MOD-131(pvt)/Policy-III/2011-2012, dated 06.03.2012).
- Department of Science and Technology (DST), sanctioned financial assistance of ₹19,75,800-/- for the project entitled 'Smart Meter for measuring Power Quality Disturbances using GSM Technology', Dr.K.Gnanambal, Professor/EEE is the Principal Investigator (Ref. No. IDP/IND/4/2015 dated 03.08.2016).

2.INFRASTRUCTURE

- Electrical machines laboratory, Control, Measurement and Instrumentation laboratory, Power Electronics laboratory, Electric circuits and Electronic devices laboratory, Research and Development laboratory and Power System Simulation Laboratory are equipped with machineries, components, signal generating, power supply measuring, recording instruments and computer systems costing Rs.2 crores. The total built up area of laboratories is 1208.21 sq.m.
- Latest softwares on Power system analysis, Power system stability, Power world simulator and Power electronics are available to study, solve, design and simulate research on Power system and Power Electronics problems to experience the real time results.
- All the class rooms are equipped with computer systems, LCD and OHP to promote the Teaching-Learning process more effectively.
- Separate library facility for EEE students with more than two thousand books on core subjects and hard copies of IEEE Journals and magazines from 1999 are available for reference. Staff and students can access the softcopy of Journals, proceedings published by IEEE, Elsevier, ASME, Springer, Mc Graw Hill.
- All laboratories are provided with sufficient computing facilities, printing facility with internet connection to simulate laboratory experiments.

3.STAFF

- Teams of well qualified, and experienced 31 faculties with cadre ratio as per AICTE, are guiding the students to attain the best educational objectives.
- Excellent research environment promotes the staff and students to participate, present and publish their research works in the National/International Journals and National/International conferences.
- Facility and experienced faculty available for guiding Ph.D.scholars.
- Staff development Programme / Faculty development programme / Workshop/ Seminar are organized regularly to share the knowledge of our experienced faculty with parent institution and other colleges staff and students and Industrial persons.

4.RESEARCH AND DEVELOPMENT

- The Research and Development section is doing research on Industrial Power Harmonics and mitigation and interact with industries in measuring, recording, analyzing and designing of filters for reducing harmonics with the help of Power Quality analyzer, as per IEEE standard.
- Consultancy work on 'Industrial Harmonic Study' and 'Energy Audit' is being carried out regularly by the experienced professors.

5.STUDENTS

- Students secured 99 University Ranks in B.E.-EEE (1998 to 2016) and 17 University Ranks in M.E.-Power Systems Engineering (2007 to 2016) with **Gold medal** in 2000 (UG - EEE) and in 2011 (PG – Power Systems Engineering). Sweety Jain of 2005-2009 batch student secured 2nd rank in Anna University Examination in 2009 among 8500 students who completed degree and out of 240 Engineering colleges all over Tamil Nadu.
- IEEE student's chapter which was started in the year 1999, continuously conducting number of student technical programme. Guest lecturers from industries have been arranged periodically to promote Industry-Institute Interaction and to bridge the gap between curriculum and latest trend in industry. The college received appreciation award for IEEE Student Chapter Activities from IEEE, Madras Section for the year 2015 and 2016. The EEE department recognized as IEI Best Division Award for the Academic year 2016-2017.
- To promote innovation, latest trends in industry and employability skills, student's professional activities are conducted every year in the name of symposium and conferences.
- Workshop/Seminar is regularly conducted for students to meet out the curriculum objectives.
- Inplant trainings are arranged for second and third year students to have hands on training with industry. Industrial visits are arranged every semester to know about the various process taking places in industry.
- Placement oriented training programme were conducted every semester right from the first year to develop soft skills, attitude, aptitude, self confidence, communication skills, interview skills etc, so as to face the campus placement programme organized by the college. Professional Trainers from software companies, Bangalore, Chennai are being invited for such training programme.

K.L.N. COLLEGE OF ENGINEERING, POTTAPALAYAM – 630 612

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

FACULTY LIST

S.No.	Name of the Faculty	Designation	Mobile No.	Email id
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2.	Dr.S.Venkatesan	Professor	9790672188	vensenn@yahoo.com
3.	Dr.K.Gnanambal	Professor	-	gnans_balu@rediffmail.com
4.	Dr. S.Parthasarathy	Professor	9443402901	sarathy_sps@yahoo.co.in
5.	Dr. S.Venkatanarayanan	Professor	9677320576	venjey@yahoo.co.uk
6.	A.Marimuthu	Associate Professor	9865002712	marimuthu_a@yahoo.com
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27.	R.Sridevi	Assistant Professor	-	sridevirs87@gmail.com
28.	M. Bharani lakshmi	Assistant Professor	-	bharanilakshmi.m@gmail.com

PLACEMENT ACTIVITY – REMINDER

1. In the month of October every first year students must fill forms online in TATA CONSULTANCY SERVICES (TCS) campus recruitment using **nextsteptcs.com** website and must submit the following documents in the department.
   a. SSLC and HSC mark sheet photo copy at least 5.
   b. Latest passport size Photo at least 5.
   c. Current address proof with parent contact cell numbers.
   d. Create your own two E-mail id using Gmail.
   e. Resume with Scanned copy of passport size Photo.
   f. CT number registered in the TCS website.
2. Every semester end update CGPA in your resume and TCS profile.
3. An Engineering student from Electrical and Electronics Engineering should complete the following courses in order to enhance their software skills. This will be most helpful during their successful completion in Curriculum during 4th Semester and in the software company campus recruitment.
   a. Should complete **C Programming** before joining **2nd Semester**.
   b. Should complete **C++ Programming** before joining **3rd Semester**.
   c. Should complete **JAVA Programming** before joining **4th Semester**. (for the successful completion of object oriented Programming theory paper and laboratory during 4th Semester)
4. An Engineering student from Electrical and Electronics Engineering should complete the **Micro Processor, Micro Controller and Embedded Systems** courses before joining **5th Semester** in order to enhance their Hardware skills. This will be most helpful during their successful completion in Curriculum from 5th to 6th Semester and in the Core company campus recruitment. (for the successful completion of Micro Processor and Micro Controller theory as well as laboratory during 5th Semester and Embedded Systems during 6th Semester)
5. From 6th Semester Summer vacation onwards all should prepare for GATE Examination because all Engineering students from Electrical and Electronics Engineering should appear GATE Examination in order to settle in their life by pursuing higher education in the reputed colleges like IIT, NIT and Anna University or else to join as a Graduate Engineer trainee in a public sector companies like IOC, BHEL, PGCI etc.,
6. Before joining 7th Semester all should get any international certification programme course like OCJP, CCNA, etc., and upload the certification details in TCS campus commune website. This will be most helpful during the TCS campus and other MNC company recruitment.

Activity	Semester							
	1	2	3	4	5	6	7	8
TCS Online form Filling in nextsteptcs.com	In the month of October							
Documents to be submitted in the EEE Department/ Placement Coordinator	a. SSLC and HSC mark sheet photo copy at least 5. b. Latest passport size Photo at least 5. c. Current address proof with parent contact cell numbers. d. Create your own two E-mail id using Gmail. e. Resume with Scanned copy of passport size Photo. f. CT number registered in the TCS website.							
Updating CGPA in resume and TCS online profile	✓	✓	✓	✓	✓	✓	✓	✓
C Programming	✓	✓						
C++ Programming		✓						
JAVA Programming			✓					
Micro Processor & Micro Controller				✓				
Embedded Systems					✓			
GATE / UPSC/ TNPSC Preparation			✓	✓	✓	✓	✓	
International Certification – OCJP / CCNA						✓	✓	

GENERAL REMINDERS

I. General

1. Keep at least 5 photocopies of birth certificate, ration card, Voters ID card, College ID card,Aadhar card, 10th ,+2 mark sheets, 10th /+2 Transfer Certificates,[* all proofs to be kept in your bag, in your house and in your mail, all kept in a water proof file-remember Chennai flood]. This will be required at anytime, anywhere.

2. Apply for Savings Bank account in any of the nationalized banks in first year. Apply for LIC schemes, saving schemes right from the first year. [*Refer]

3. Get Driving license during third year of your Degree course [*Refer]

4. Get Passport before the completion of 6th semester. [*Refer]

5. Always keep ID card issued by competent authority while moving from one city to another/ one state to another. It is better to wear ID card always.(except during bathing).

6. Never share your username and password of mail accounts to anyone even in your home/ to teachers/ friends. Never reply to un trusted mail/fake messages.

7. Share only legal, ethical, non-political, educational value based information/ photos/videos with your friends or any others through social media. Posting of illegal/political/unethical/ information/comments will spoil your career. Remember that all such communications in social media/mails are continuously monitored and recorded by intelligent agencies in the country and abroad, due to security threats.

8. Don't involve teasing of students of your class, juniors or seniors in the classrooms, laboratories or in hostels. Don't loan the cell phone to anyone. Also don't keep your cell phone easily accessible by anyone.

9. Don't send obscene messages or pictures through cell phones/ internet to anyone. Defaulters will be easily tracked by Cyber Crime Agencies. Don't purchase/loan someone's laptop/mobile phone, due to theft complaints.

10. Avoid two wheeler riding for long travelling, and night travelling. Wear helmet. Follow traffic rules. Lot of accidental deaths reported due to negligence of traffic rules. About 1.5lakhs of people lost their life in accidents in our country every year.

11. For any transaction of money, use cheques or bank accounts(for more than Rs. 10,000/-) because finding fake notes is difficult.

12. Always keep 10 passport and stamp size photographs, 10 no.s of revenue stamps, all ID proofs whenever going for banks/pass port office.

13. Keep at least email ids and good friendship of 25 students of your branch who have been placed in different companies. Collect background information on core/IT companies(minimum 25)

14. Develop good reading habit/read News papers daily/watch news channel daily/Watch films nominated for Oscar award.Watch channels like Discovery/Nat Geo/History/ any other news channels.(not more than an hour)

15. Speak in English only. Develop good writing skills by reading books.

16. Have a Desk top/Laptop, Printer before entering 5th semester.

17. Have internet facility in home for educational purpose. Keep all NPTEL material.

18. Keep all kind of stationary in your table for use at any time [pencil, sharpener, eraser, ball point pen of different colours, sketches, bell clip, stapler, single punch, tag, gum, knife,scissors,A4 paper, cello tap, emergency lamp, scale, protractor, compass, pen drive, CD, whitener, calculator, diary, stapler pin box]

19. Never transfer/ deposit money to any unknown mail. Beware of fraud/cheating by any one.

II. Education:

20. Download Anna University examination results immediately after the publication of result from AU website. Mark sheet attestation will not be given without the above copy

21. Always keep 5 copies of AU mark sheets , of each semester. Post it on your mail.

22. Discrepancy in mark sheets such as Name, Date of Birth, CGPA awarded, register number should be corrected immediately.

23. Always keep Rs 5,000/- in a semester for the payment of Book fee/AU exam fee/Training fee/purchase of competitive exam books/Educational tour/seminar/additional course/ certification course etc. Educate your parents for the above. This may be required in a particular month or in several months spread in a semester.

24. Enroll in IEEE membership during first/second year. Attend at least one programme at Chennai.

25. Collect 5 sets of AU question papers, subject wise, in a semester(within 10 days)

26. Prepare good quality Resume. Consult TPO, placed final year students. Resume preparation is an art that ensures your quality and getting jobs in reputed concern. Update your resume, monthly (by attending value added courses, online courses, co-curricular and extracurricular activities, publishing articles in conferences, symposium, technical events, journals, News papers, inplant training, internship, new languages learnt, project developed, industrial visits, social services participated etc.)

27. Attend any courses after consulting with HOD/senior staff to avoid courses not suited to your branch.

28. Purchase text/reference books every semester.

29. Purchase competitive exam books , like Objective type QB,GATE/TANCET/IES/IAS and prepare for the exams from second year onwards.

30. Collect aptitude/reasoning/analytical/numerical/verbal/test questions from the placed students or download from the website. For successful placement, preparation from the first year in the above topics is required.

31. Collect information like Product, clients, branches, head office, annual turnover, GM,CEO, etc of 25 core companies, and 25 software companies.

32. Attend atleast one seminar/workshop/ paper presentation contest per semester, applicable to your branch of study.

33. Plan your study for current subject/assignment work/observation work/record work/aptitude training for technical /non-technical daily/weekly/monthly.

34. Decide & justify clearly, your objective before 6th semester and plan accordingly. Options are placement(ON/OFF) in core/IT companies, higher studies/ civil services , parents business , start your own business. Confused mind never take a decision.

35. Attend inplant training(Min:one week,Max:One month) during semester holidays. Avoid industrial visit (Energy waste) and educational tour (Money waste).

36. Do mini project in second, third year of your study .Update these in final year. Project should be based on the need of the society/industry.

III. Health

37. Health is wealth. Read Dalailama statement on life of a man. We work hard , earn and save money sacrificing our health. Later we spent lot of money for medical treatment due to poor healthcare.

38. Have regular exercise either in the forenoon/evening. (an hour walk is must everyday).

39. Your food habits decides what you are and how long you will live with peace. Avoid junk foods/road side eatery. Use hot water for drinking.

40. Consult doctors in case of health problems. Periodical medical checkup, once in 6 months, is necessary for health and dental care. This may require Rs.2,000/- per year. Otherwise you need to pay a lot. It is advisable to stay in a house, within 500 metre (walkable distance) from a multispecialty hospital, otherwise 250 meters from any hospital. This is required to tackle emergency situations and also to avoid paying more for transport.

41. Avoid roaming/walking during summer/rainy season.

42. Attend yoga classes/ do meditation.

43. Apply group insurance medical policy at the age of 20.

44. Follow ethics and be Nationalistic.

Developing Leadership Skills

No one is a born leader; everyone can develop leadership skills and everyone can benefit from using them. First, take time to honestly analyze yourself. Learn to understand yourself. It's the first step to understanding others. Consider these important questions:

1. What kind of leader am I? One who helps to solve problems? A leader who helps people get along? How do others see me as a leader?
2. What are my goals, purposes, and expectations in working with this particular group?
Identify areas for improvement.

Ask yourself these questions:
1. Do I try to be aware of how others think and feel?
2. Do I try to help others perform to the best of their abilities?
3. Am I willing to accept responsibility?
4. Am I willing to try new ideas and new ways of doing things?
5. Am I able to communicate with others effectively?
6. Am I a good problem solver?
7. Do I accept and appreciate other perspectives and opinions?
8. Am I aware of current issues and concerns on campus or in my community?
Then after analyzing your strengths and weaknesses -- take action
Devise a strategy for upgrading your skills. Here are a few strategies to consider:

1) Communicate effectively:
Effective communication is dialogue. Barriers are created by speaking down to people, asking closed questions that elicit yes or no answers, using excessive authority, and promoting a culture that depends on unanimity. If your focus is winning the argument or if you react defensively to criticism, you'll create fear of openness and hinder the organization's growth.
Try these steps to effective communication:
• Listen actively - ask open questions. Be genuinely interested in what other's say.

• Thank people for their openness -- stress how much you value it -- even if you don't like specifically what is being said.
• Point to areas of agreement before jumping on areas of disagreement - this reduces defensiveness; members wont fear being "attacked."
• Set aside your authority to create an atmosphere of partnership to reduce fear in group members.
• Promote a culture of constructive dissent - though not to the point of paralysis.
• Portray disagreement as simply a difference of opinion. Get rid of the "I'm right, you're wrong" attitude.

2) Encourage enthusiasm and a sense of belonging. Show:
• Friendliness: others will be more willing to share ideas if you're interested in them as people too.
• Understanding: everyone makes mistakes. Try to be constructive, tolerant and tactful when offering criticism.
• Fairness: equal treatment and equal opportunity lead to an equally good effort from all group members.
• Integrity: members will take tasks more seriously if you show that you're more interested in group goals than your own personal gain.

3) Keep everyone working toward agreed upon goals:
• Remind everyone of the group's purposes from time to time. It's easy to become too narrowly focused and lose sight of the larger goals.
• Provide encouragement and motivation, by showing your appreciation for good ideas and extra effort.
• Harmonize differences and disagreements between group members by stressing compromise and cooperation.
• Involve everyone in discussions and decisions, even if asking for opinions and ideas means a longer discussion.

4) Get to know the people around you Everyone has different abilities, wants, needs, and purpose in life.
To get along with others and get results, you need to get to know them.
• Interact with group members as often as possible. The only way to get to know someone is through direct personal contact.
• Become familiar with every member of your group. Take note of each person's unique qualities and characteristics.

5) Treat others as individuals
Put your knowledge and understanding of each group member to work!
• Be aware of expectations. Everyone expects something different: recognition, a chance to learn, a chance to work with other people, etc.
• Be creative. A repetitious routine can cause boredom. A successful leader thinks of new and better approaches to old ways of doing things.
• Provide rewards. Recognition by the group is a source of personal satisfaction and positive reinforcement for a job well done.
• Delegate responsibilities. If everyone shares the work, everyone can share pride in the group's accomplishments. Let each member know what's expected of him/her, available resources, deadlines, etc.

6) Accept responsibility for getting things done
• Take the initiative. Why stand around and wait for someone else to get things started? Set an example.
• Offer help and information. Your unique knowledge and skills may be just what's needed.

• Seek help and information. Ask for advice if you need it. This will encourage group involvement and help accomplish group goals.
• Make things happen. By being decisive, energetic, and enthusiastic, you can and will help get things done!
• Know when and how to say “no.” If your time and resources are already committed, turn down extra tasks, but do it nicely.

7) Problem solve in a step - by-step way

Whether you are faced with a decision to make or a conflict to resolve, following a logical approach will help.

1. State the problem as simply and clearly as possible.
2. Gather all relevant information and available resources.
3. Brainstorm as many ideas or solutions as you can think of (with others if possible).
4. Evaluate each idea or solution and choose the best one.
5. Design a plan for using your idea or solution. Include a timetable, assigned roles, and resources to be used.
6. Follow up on your plan by asking if your idea worked and why or why not.

Tips for Effective Communication

Have courage to say what you think. Be confident in knowing that you can make worthwhile contributions to conversation. Take time each day to be aware of your opinions and feelings so you can adequately convey them to others. Individuals who are hesitant to speak because they do not feel their input would be worthwhile need not fear. What is important or worthwhile to one person may not be to another and may be more so to someone else.

Practice. Developing advanced communication skills begins with simple interactions. Communication skills can be practiced every day in settings that range from the social to the professional. New skills take time to refine, but each time you use your communication skills, you open yourself to opportunities and future partnerships.

Make eye contact. Whether you are speaking or listening, looking into the eyes of the person with whom you are conversing can make the interaction more successful. Eye contact conveys interest and encourages your partner to be interested in you in return.

Use gestures. These include gestures with your hands and face. Make your whole body talk. Use smaller gestures for individuals and small groups. The gestures should get larger as the group that one is addressing increases in size.

Manifest constructive attitudes and beliefs. The attitudes you bring to communication will have a huge impact on the way you compose yourself and interact with others. Choose to be honest, patient, optimistic, sincere, respectful, and accepting of others. Be sensitive to other people's feelings, and believe in others' competence.

Develop effective listening skills: Not only should one be able to speak effectively, one must listen to the other person's words and engage in communication on what the other person is speaking about. Avoid the impulse to listen only for the end of their sentence so that you can blurt out the ideas or memories your mind while the other person is speaking.

Enunciate your words. Speak clearly and don’t mumble. If people are always asking you to repeat yourself, try to do a better job of articulating yourself in a better manner.

Pronounce your words correctly. People will judge your competency through your vocabulary. If you aren’t sure of how to say a word, don’t use it.

Use the right words. If you’re not sure of the meaning of a word, don’t use it. Grab a dictionary and start a daily habit of learning one new word per day. Use it sometime in your conversations during the day.

Slow your speech down. People will perceive you as nervous and unsure of yourself if you talk fast. However, be careful not to slow down to the point where people begin to finish your sentences just to help you finish.

All India Installed Capacity (in MW) of Power Stations

This is a **list of states and territories of India by installed capacity of power utilities** with electricity generation mode break-up as on **31 March 2017** with figures in Megawatts.

Revised

INSTALLED CAPACITY (IN MW) OF POWER UTILITIES IN THE STATES/UTS LOCATED IN SOUTHERN REGION

INCLUDING ALLOCATED SHARES IN JOINT & CENTRAL SECTOR UTILITIES

(As on 31.03.2017)

State	Ownership/ Sector	Modewise breakup							Grand Total
		Thermal				Nuclear	Hydro (Renewable)	RES (MNRE)	
		Coal	Gas	Diesel	Total				
Andhra Pradesh	State	4410.00	235.40	0.00	4645.40	0.00	1747.93	89.50	6482.83
	Private	3673.88	4295.00	36.80	8005.68	0.00	0.00	6074.92	14080.60
	Central	1607.60	0.00	0.00	1607.60	127.27	0.00	0.00	1734.87
	Sub-Total	**9691.48**	**4530.40**	**36.80**	**14258.68**	**127.27**	**1747.93**	**6164.42**	**22298.30**
Telangana	State	4082.50	0.00	0.00	4082.50	0.00	2306.60	0.00	6389.10
	Private	1189.45	350.00	0.00	1539.45	0.00	0.00	1545.88	3085.33
	Central	1878.12	0.00	0.00	1878.12	148.73	0.00	0.00	2026.85
	Sub-Total	**7150.07**	**350.00**	**0.00**	**7500.07**	**148.73**	**2306.60**	**1545.88**	**11501.28**
Karnataka	State	5020.00	0.00	127.92	5147.92	0.00	3599.80	155.33	8903.05
	Private	1958.50	0.00	25.20	1983.70	0.00	0.00	7302.64	9286.34
	Central	2429.20	0.00	0.00	2429.20	698.00	0.00	0.00	3127.20
	Sub-Total	**9407.70**	**0.00**	**153.12**	**9560.82**	**698.00**	**3599.80**	**7457.97**	**21316.59**
Kerala	State	0.00	0.00	159.96	159.96	0.00	1881.50	145.02	2186.48
	Private	615.00	174.00	0.00	789.00	0.00	0.00	193.70	982.70
	Central	1108.18	359.58	0.00	1467.76	362.00	0.00	0.00	1829.76
	Sub-Total	**1723.18**	**533.58**	**159.96**	**2416.72**	**362.00**	**1881.50**	**338.72**	**4998.94**
Tamil Nadu	State	4320.00	524.08	0.00	4844.08	0.00	2203.20	122.70	7169.98
	Private	4687.67	503.10	411.70	5602.47	0.00	0.00	10502.30	16104.77
	Central	4389.52	0.00	0.00	4389.52	1448.00	0.00	0.00	5837.52
	Sub-Total	**13397.19**	**1027.18**	**411.70**	**14836.07**	**1448.00**	**2203.20**	**10625.00**	**29112.27**
NLC	State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Private	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Central	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
	Sub-Total	**100.00**	**0.00**	**0.00**	**100.00**	**0.00**	**0.00**	**0.00**	**100.00**
Puducherry	State	0.00	32.50	0.00	32.50	0.00	0.00	0.00	32.50
	Private	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08
	Central	248.40	0.00	0.00	248.40	86.00	0.00	0.00	334.40
	Sub-Total	**248.40**	**32.50**	**0.00**	**280.90**	**86.00**	**0.00**	**0.08**	**366.98**
Central - Unallocated		1664.00	0.00	0.00	1664.00	450.00	0.00	0.00	2114.00
Total (Southern Region)	State	17832.50	791.98	287.88	18912.36	0.00	11739.03	512.55	31163.94
	Private	12124.50	5322.10	473.70	17920.30	0.00	0.00	25619.52	43539.82
	Central	13425.02	359.58	0.00	13784.60	3320.00	0.00	0.00	17104.60
	Grand Total	**43382.02**	**6473.66**	**761.58**	**50617.26**	**3320.00**	**11739.03**	**26132.07**	**91808.36**

'*'Renewable Energy Sources (RES) includes small hydro projects, wind, solar, tidal, biomass and urban & industrial waste power.

GOVERNMENT OF INDIA

MINISTRY OF SKILL DEVELOPMENT AND ENTERPRENEURSHIP

DIRECTORATE GENERAL OF TRAINING

ADVANCED TRAINING INSTITUTE

(AN ISO 29990 : CERTIFIED)

Guindy, CHENNAI, Tamilnadu

Phone : 044-22501211/0252Fax : 044-22501460, Email : atichn@vsnl.com,atichn@yahoo.com, Url : www.atichennai.org.in

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ATI Chennai : Regular Course Training Schedule

Advanced Vocational Training Scheme (AVTS) - Short Term Programme

Annual Training calendar 2017 – 2018

(Short Term Skill Training Programme)

	Course Code	Course Title	Duration (Week)	Date	
				From	To
GROUP:1	**ELECTRICAL CONTROL MAINTENANCE**				
	01.01	Protective Relays , Circuit Breakers, & Switch Gear Protection	01	03-04-2017	07-04-2017
				15-05-2017	19-05-2017
				05-06-2017	09-06-2017
				10-07-2017	14-07-2017
				21-08-2017	25-08-2017
				09-10-2017	13-10-2017
				13-11-2017	17-11-2017
				18-12-2017	22-12-2017
				29-01-2018	02-02-2018
				19-02-2017	23-02-2017
	01.02	Operation and Maint. Of Power Transformers	01	17-04-2017	21-04-2017
				12-06-2017	16-06-2017
				17-07-2017	21-07-2017
				04-09-2017	08-09-2017
				23-10-2017	27-10-2017
				20-11-2017	24-11-2017
				01-01-2018	05-01-2018
				05-02-2018	09-02-2018
				26-02-2017	02-03-2017
				19-03-2017	23-03-2017
	01.03	Operation & Control of Industrial AC / DC Motors	01	24-04-2017	28-04-2017
				22-05-2017	26-05-2017
				19-06-2017	23-06-2017
				24-07-2017	28-07-2017
				28-08-2017	01-09-2017
				18-09-2017	22-09-2017
				31-10-2017	03-11-2017
				04-12-2017	08-12-2017
				08-01-2018	12-01-2018
				05-03-2018	09-03-2018
	01.04	Electrical Safety at Work Place and First Aid	01	01-05-2017	05-05-2017
				29-05-2017	02-06-2017
				03-07-2017	07-07-2017
				07-08-2017	11-08-2017
				11-09-2017	15-09-2017
				06-11-2017	10-11-2017
				04-12-2017	08-12-2017
				15-01-2018	19-01-2018
				12-02-2018	16-02-2018
				12-03-2018	16-03-2018

Phone : 044-22501211/0252Fax : 044-22501460

Email : atichn@vsnl.com,atichn@yahoo.com

Url : www.atichennai.org.in

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ATI Chennai : Regular Course Training Schedule

Advanced Vocational Training Scheme (AVTS) - Short Term Programme

Annual Training calendar 2017 – 2018

(Short Term Skill Training Programme)

GROUP:1	**ELECTRONIC CONTROL MAINTENANCE**			
Course Code	Course Title	Duration (Week)	**Date**	
			From	To
02.01	Power Electronics and its Industrial Applications	01	03-04-2017	07-04-2017
			05-06-2017	09-06-2017
			02-10-2017	06-10-2017
			04-12-2017	08-12-2017
			19-02-2018	23-02-2018
02.02	8051 Programming & Applications	01	10-04-2017	14-04-2017
			12-06-2017	16-06-2017
			31-07-2017	04-08-2017
			21-08-2017	25-08-2017
			09-10-2017	13-10-2017
			11-12-2017	15-12-2017
			26-02-2018	02-03-2018
02.03	PIC Micro Controller Programming & Applications	01	24-07-2017	28-07-2017
			25-09-2017	29-09-2017
02.04	Siemens S7-400 PLC Step-7 (Level-1)	01	17-04-2017	21-04-2017
			19-06-2017	23-06-2017
			07-08-2017	11-08-2017
			16-10-2017	20-10-2017
			18-12-2017	22-12-2017
			04-09-2017	08-09-2017
			05-03-2018	09-03-2018
02.05	Computer Hardware maintenance & Net Working	01	24-04-2017	28-04-2017
			26-06-2017	30-06-2017
			11-09-2017	15-09-2017
			23-10-2017	27-10-2017
			25-12-2017	29-12-2017
			05-02-2018	09-02-2018
			12-03-2018	16-03-2018
02.06	Siemens S7-400 PLC Programming (TIA PORTAL) (Level-1)	01	01-05-2017	05-05-2017
			29-05-2017	02-06-2017
			03-07-2017	07-07-2017
			18-09-2017	22-09-2017
			30-10-2017	03-11-2017
			01-01-2018	05-01-2018
			19-03-2018	23-03-2018
02.07	Siemens PLC-S7-1200 & Drive for Position Control Applications	01	08-05-2017	12-05-2017
			10-07-2017	14-07-2017
			06-11-2017	10-11-2017
			08-01-2018	12-01-2018

List of PSUs through GATE Exam

Name of PSU	Eligible Branches	Name of PSU	Eligible Branches	Name of PSU	Eligible Branches
ONGC Ltd.	XE, GG	MDL	ME, EE	NLC	ME, EE, EC, IN, MN, CE
NHPC Limited	EE	PSPCL Ltd	ME, EE, EC, IN, CE, CS	NALCO	ME, EE, EC, IN, MT, CE, MN, CS, CH
BPCL Limited	ME, EE, CH, IN, CE	OPGC Ltd	ME, EE, CE, C & I	RITES	CE, ME
CEL	EC, ME, EE, XE	IRCON International Ltd	EC, EE, IN	NPCCL	CE
Coal India Ltd.	ME, EE, MN, GG	BNPM	ME, EE, EC, CH	MECL	ME, CY, GG
POWERGRID	EE, CE, CS	AAI	EC, EE	NBCC Ltd.	CE
Indian Oil	CH, CE, CS, EE, EC, GG, IN, ME, MT, MN	BBNL	EC, EE, CS	PAPCL	EE, EC, ME, IN, CS
THDC India Ltd	ME, EE, CE	NFL	EE, CS, CH, IN, XE		
HPCL	ME, EE, CE, IN, CH, EC	GSECL	EE, ME, MT, C & I		
NTPC Limited	ME, EC, EE, IN	GAIL	ME, EE, IN, CH		

Lists of TOP 10 software companies to offer jobs in India

S. No.	Name of the Company	About the company	Head quarters	Revenue	No. of Employees	Website
1.	**Tata Consultancy Services**	TCS was established in 1968 and is spread across 47 countries.	Mumbai, India	US$ 13.44 billion	300,464	www.tcs.com
2.	**Cognizant Technology Solutions**	CTS was founded in year 1994 by Srilankan American Kumar Mahadeva.	Teaneck, New Jersey, United States	US$ 8.84 billion	178,000	www.cognizant.com
3.	**Infosys**	Infosys was founded in year 1981.	Bangalore, Karnataka	US$ 8.4 billion	160,405	www.infosys.com
4.	**Wipro**	Azim Premji is the Chairman & TK Kurien is the CEO of Wipro.	Mumbai, India	US$7.3 billion	146,053	www.wipro.com
5.	**Tech Mahindra**	Tech Mahindra was founded in year 1986	Mumbai	$4.09 billion	89,500	www.techmahindra.com
6.	**HCL Technologies**	HCL was founded by Shiv Nadar in year 1991.	Noida, Uttar Pradesh	US$335 million	90,190	www.hcltech.com
7.	**iGate**	iGate was earlier known as Patni Computer Systems and was founded by Narendra Patni and his wife.	Bridgewater, New Jersey, U.S	US$ 1.15 billion	31,000 +	www.igate.com
8.	**Mphasis**	MPhasis was founded by Jaithirth Rao in year 2000	Bangalore, India	US$1.0 billion	45,426 +	www.MphasiS.com
9.	**Larsen &Toubro Infotech**	L & T Infotech was founded in year 1997	Mumbai	US$ 650 million	16,000+	www.lntinfotech.com
10.	**Oracle Financial Services Software Limited**	Oracle Financial Services Software Limited was earlier know as i-Flex Solutions Limited. It is spread across 130 countries around the globe and provides the IT solutions to the financial companies.	Mumbai, India	US$610 million	9,682	www.oracle.com

Lists of TOP 10 core companies to offer Electrical jobs

1 | Bharat Heavy Electricals Ltd.
Corporate office – New Delhi, India | **Establishment** – 1964 |
Business – Electrical equipments | **Website** – *www.bhel.com* |

Bharat Heavy Electricals Ltd established in the year 1964 is a leading power plant equipment manufacturer and has expertise in engineering, manufacture, construction, testing, designing and servicing of various products of the core sectors such as defense, power, industries etc. BHEL is among the top electrical companies in India and which has total 16 manufacturing divisions and four regional offices. It is currently operating more than 150 project sites across India and abroad.

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2 | Alstom
Corporate office – Levallois-Perret, France | **Establishment** – 1928 |
Business – Power generation and transmission | **Website** – *www.alstom.com* |

Alstom a multinational corporation is one of the best electrical companies in India and world, operating in hydroelectric power transportation and generation and it is active in many core industry sector. Company has a workforce of 9000+ employees in India and over 85000+ worldwide.

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3 | ABB
Corporate office – Zürich, Switzerland | **Establishment** – 1988 |
Business – Electrical equipments | **Website** – *www.abb.com* |

ABB holds interests in robotics and mainly in the automation and power areas. ABB is active in the field of electricity grids manufacturing and other technologies in the field of automation and power. ABB is one of the few giant electrical player at global level and among the largest engineering company in the world.

4| Siemens
Corporate office – Erlangen, Germany | **Establishment** – 1847 |
Business – Renewable energy, Power generation & transmission| **Website** – *www.energy.siemens.com* |

Siemens a German conglomerate is rated one the finest electrical company in India. Company's product line includes generators, steam turbines, compressors, high-voltage switching products and many more. Siemens employees more than 86000 people worldwide and it is a leading supplier of energy related products worldwide.

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5 | Crompton Greaves
Corporate office – Mumbai, Maharashtra | **Establishment** – 1878 |
Business – Electrical | **Website** – *www.cgglobal.com* |

Crompton Greaves is a part of Avantha Group which is headquartered in Mumbai. CGL deals in manufacturing, marketing and designing of power transmission and generation related products. CGL has manufacturing units in Canada, France, Hungary, UK, US, Indonesia, Ireland, India and Belgium.

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6 |Bajaj Electricals Ltd.
Corporate office – Mumbai, Mharashtra | **Establishment** – 1938 |
Business – Electrical Appliances | **Website** – *www.bajajelectricals.com* |

Bajaj Electricals is a leader in the field of electrical equipment and headquartered in Mumbai. It is one of the top 5 electrical companies in India having 19 branch offices across India. Bajaj Electricals provides

complete range of consumer durable such as fan, electrical appliances, lighting which includes tubes, lamps etc.

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7 | Eason Reyrolle
Corporate office – Bangalore, Karnataka | **Establishment** – 1986 |
Business – Electric Equipments & Industrial Consumables | **Website** – *www.easunreyrolle.com* |

Established in 1980 Easun Reyrolle is a Power Management Products, Transmission, Distribution & Industrial Application, Systems, Solutions and Services provider having significant presence in global market as reputed electrical products manufacturer.

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8 | Schneider Electrical
Corporate office – Rueil Malmaison, France | **Establishment** – 1981 |
Business – Electric Equipment | **Website** – *www.schneider-electric.co.in* |

Schneider Electric a French company established in the year 2000 is among the top electrical companies in India which is involved in energy management. Company has a workforce of more than 17000 employees and has 31 global manufacturing Plants.

9| Wipro Lighting
Corporate office – Pune, Maharashtra | **Establishment** – |
Business – Lamps, Luminaires and Accessories | **Website** – *www.wiprolighting.com* |

Wipro lightings a part of Wipro group and a leading electrical company in India producing Lamps, luminaries and accessories. Company's product portfolio comprises of high end lighting control and architectural dimming system, high intensity discharge lamp Luminaries, brightness management lighting products etc.

10| Kelvin Electrical
Corporate office – Al-Ain, U.A.E | **Establishment** – 2005 |
Business – | **Website** – *www.kelvin-electrical.com* |

Kelvin Electrical LLC founded in 2005 is based in United Arab Emirates (UAE). Kelvin Electrical deals in Cable Management Systems, Interior, Architectural, Exterior and Special lighting, Cable Support Systems, Raised Floor, Wiring Accessories etc.

K.L.N. COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Lists of core companies to offer Electrical jobs in India

Types of Electrical Core Companies

1. **Electrical motors and Generators**
2. **Consultancy (Electrical Engineering)**
3. **Electrical appliances**
4. **Electrical components companies**
5. **Lighting & luminaries**
6. **Power Generation**
7. **Electric wires & Cables**
8. **Electrical exporters**
9. **Measurements & Instrumentation**
10. **Power Distribution**
11. **Transformers**
12. **Green Energy Companies in India**
13. **Internationally renowned MNC'S**
14. **Top 20 core companies in India to offer electrical jobs**
15. **Exclusive Government jobs for Electrical Engineers**

Electrical motors and Generators

1. Ajay Engineers http://www.ajayengineers.com
2. All India Electric Motor Manufacturers' Association http://www.aiemma.com/
3. Aqua Brand Submersible Sewage Pump http://www.aquapumps.com
4. Compact http://www.compactlighting.net
5. Crown Electric Company http://www.crown-gear.com
6. Lawkim http://lawkimindia.com/
7. MMC Electric Company http://www.dynafluxindia.com
8. MS Enterprises and Trimega Power Corporation http://www.msein.com
9. National Electrical Industries - Ahmedabad. http://www.elmomachines.com/
10. Numeric Power Systems http://www.numericups.com
11. Pranshu Electricals http://www.pranshuelec.com/
12. Reva Industries http://www.reva.com/
13. Rotomag Motors & Controls Pvt. Ltd. http://www.rotomag.com
14. Rudrashakti Electronics http://www.rudrashakti.com
15. Sanjay Diesels - Diesel Generating Sets. http://www.dgsets.com/
16. Venus Industrial Corporation http://www.venusind.com/
17. A-One Industries. http://www.aoneindustries.com/contactus.html

Consultancy (Electrical Engineering)

1. APJ Projects http://www.apjprojects.com
2. Consolidated Consultants and Engineers Pvt. Ltd http://www.consolidatedconsultants.com
3. DSON Enterprises http://www.dsonenterprises.com
4. Eltech Engineers http://www.eltechindia.com/
5. John Mech-El Technologies (P) Ltd http://www.johnmech-el.com/
6. Mandvi Electric Works http://www.bicserve.com/

7. Miraj Instrumentation Services http://www.mirajinstrumentation.com
8. PG Associates http://www.engineeringconsultant.in
9. Power Gem Engineers - Consultants in Power Generation. http://www.powergem.com/
10. Secon Engineers http://www.seconindia.com
11. Shanti Enterprises Electricals Limited http://www.shantielectricals.com
12. Shashi Electricals http://www.shashielectricals.com
13. SK Systems http://www.sksystem.com
14. Tata Consulting Engineers http://www.tce.co.in
15. Nutronics India http://www.nutronicsindia.com/

Electrical appliances

1. Ajay Industrial Corporation http://www.ajayindustrial.com/
2. Ankit Electricals http://www.ankitelectricals.com
3. A.P.C. System & Products Pvt. Ltd http://www.apcsp.com
4. Arka Trading & Services http://www.mfdplaza.in
5. Bajaj Electricals Ltd - Part of Bajaj Group. http://www.bajajelectricals.com/
6. Electroil http://www.electroil.com/
7. Eveready Industries India Ltd http://www.evereadyindustries.com/
8. Graftec india http://graftec.trade-india.com
9. Indexelectronics http://www.indexelectronics.com
10. Khaitan Group http://www.khaitan.com/
11. Lloyd Electric & Engineering Limited http://www.lloydengg.com/
12. Modern Electrical Stores http://www.modernelectricalsindia.com/
13. Needo electronics and electricals pvt. Ltd. http://www.needoindia.com
14. Picasso home products http://www.picassoappliances.com/
15. Polor Industries Ltd http://www.polarinc.com/
16. Rajshree India Ltd. http://www.rajshreefans.com
17. Shilpa Electricals http://www.shilpaelectricals.com/
18. Super Impex http://www.superimpex.com
19. Tri Star Engineering Industries http://www.tristarengg.com
20. Vijay Electricals http://www.vijayelectricalspune.com/
21. Vxl Technologies Ltd. http://www.vxldesign.com
22. XtremeWorx http://www.xtremeworx.net

Electrical components companies

1. Ace Bimetalliks India Pvt. Ltd. http:// www.aceelectricals.com
2. Aditron India Pvt. Ltd. (Engineering Division) http://www.aiplen.com
3. Admir Ovens http://www.admir.com
4. Arvind Anticor Ltd http://www.picklingplant.com
5. Asiatic Electronic Industries. http://www.asiatic-india.com/
6. Axis Electrical Components India Pvt. Ltd. http://www.axis-india.com
7. Balar Marketing Pvt. Ltd http://www.allelectricalproducts.com/
8. Bhartia Industries Limited http://www.bchindia.com
9. Brass Copper & Alloy (I) Ltd. http://www.hexworldwide.com
10. Brightech Valves and Controls Pvt. Ltd. http://www.brightechvalves.com
11. Caltech Engineering Services http://www.caltechindia.com
12. Color Design India http://www.colordesigntech.com/
13. Consult Techniques (I) Pvt. Ltd http://www.consulttechnique.com/

14. Deki Electronics Ltd. http://www.dekielectronics.com
15. Elpro International Limited http://www.elproindia.com/
16. Elymer http://www.elymer.com
17. E S Electronics (India) Pvt. Ltd http://www.energysaversindia.com/
18. Finetech Engineering Corporation http://www.finetechindia.com
19. Gayatri Control, Ahmedabad http://www.gayatricontrol.com/
20. Gemscab Industries Ltd http://www.gemscab.com/
21. Hallmark Electronics http://www.hallmarkelect.com/
22. India International House Ltd http://www.builderhardware.com/
23. Jaykrishna magnetics pvt.ltd http://www.jkmagnetics.com
24. Leotech Group http://www.leotechindia.com/
25. Maxx Mobile Phone Accessories Pvt. Ltd http://www.maxmobile.co.in
26. Mehta Engineering Enterprise http://www.mehtaswitch.com
27. Mehta Tubes Ltd http://www.mehta-group.com/
28. Mellcon Engineers http://www.mellcon.com
29. Micromot Controls http://www.micromotcontrols.com
30. Muskaan Engineers http://www.electricitysaver.com/
31. Neelam Import Pvt. Ltd. http://www.cellking.org
32. Onload Gears http://www.onloadgears.com/
33. Orton Engineering Pvt. Ltd, Thane http://www.ortonengineering.com/
34. Persang Alloy Industries http://www.webmasterindia.com/persangalloy
35. PMT Engineers http://www.pmtengineers.com
36. Powercap Systems (Madras) Pvt. Ltd http://www.transformersindia.com/
37. Powertek Equipment Company http://www.powertekindia.com/
38. Pragati Electrocom Pvt. Ltd http://www.pragatielectrocom.com/
39. Pran Electronics Pvt. Ltd. http://www.pranelectronics.com
40. Precicraft Components India Pvt. Ltd http://www.precicraft.com/
41. Prima Automation India Pvt. Ltd http://www.prima-automation.com/
42. Rittal India Pvt Ltd http://www.rittal-india.com
43. Sanghi Yantra Udyog http://www.skyuindia.com/
44. SKN - Bentex Group of Companies. http://www.sknbentex.com/
45. South India Industrial Suppliers http://siis-india.com/bus_bar_support.html
46. Square Automation Pvt. Ltd http://www.squareautomation.com/
47. Sudhir Switchgears http://www.sudhirswitchgears.com
48. Syntron Controls http://www.syntron-controls.com
49. Torque Master Tools Pvt. Ltd http://www.torquemasterindia.com/
50. United Core http://www.unitedcores.com/
51. Utiliti Controls http://www.utiliticontrols.com/
52. valrack modular systems pvt.ltd http://www.valrack.com
53. Wavetronics http://www.wavetronicsindia.com
54. Rane Holdings Limited http://www.rane.co.in

Lighting & luminaries

1. A.K. Electricals http://www.akelectricals.com/
2. APCO India http://www.indiabizclub.net/Electrical/APCO_INDIA.html
3. Aquascape engineers http://www.fountainsnozzles.com
4. Arihant Enterprises : http://www.arihantsecurityindia.com/

5. Atlas Electricals www.indiabizclub.net/Electrical/ATLAS_ELECTRICALS.html
6. Baliga Lighting http://www.baliga.com/
7. Crompton Greaves Limited. http://www.cglonline.com/
8. Decon Lighting http://deconlighting.com
9. GE Lighting India http://www.gelighting.com/india/index.html
10. Jain Industrial Lighting Corporation http://www.indiamart.com/jilco/
11. Jayanta Lamp Industries Pvt.Ltd : http://www.jayantagroup.com
12. Kuber Lighting Pvt Ltd http://www.kuber.biz
13. Litray Lighting : http://www.litraylighting.com/
14. Mindscreen Pvt. Ltd. http://www.mindscreenfilms.com/
15. Peralites http://www.indiabizclub.net/Electrical/PEARLITES.html
16. Sam International http://www.indiamart.com/
17. Shyam Electricals - http://www.shyamelectricals.com/
18. Hpl Electric & Power Pvt.Ltd http://www.hplindia.com

Power Generation

1. Advance Engineering Company - http://www.advanceengineering.com/
2. APGENCO http://www.apgenco.com/
3. Birla Power Solutions Limited http://www.birlapower.com
4. Dyna Hitech Power Systems Ltd http://www.dynahitech.com
5. Essar Group http://www.essar.com/Group/group.asp
6. Essar Power Ltd. http://www.essar.com/
7. Jindal Steel & Power Ltd. http://www.jindalsteelpower.com
8. Kaiga Atomic Power Station http://www.npcil.org/docs/kaigaps.htm
9. Kakrapar Atomic Power Station http://www.npcil.org/docs/kaps.htm
10. Kirloskar Electric Co http://www.kirloskar-electric.com/
11. Lanco Industries http://www.lancogroup.com/groups/kpower/kpower.html
12. Madras Atomic Power Station (MAPS) http://www.npcil.org/
13. Magnum Power Generation Ltd http://www.magnumgrouponline.com/power/
14. Narora Atomic Power Station http://www.npcil.org/docs/naps.htm
15. National Thermal Power Corporation (NTPC) http://www.ntpc.co.in
16. NEPC India Ltd http://www.nepcindia.com
17. PTC India http://www.ptcindia.com
18. Rajasthan Atomic Power Station (RAPS) http://www.npcilraps.com/
19. Rajasthan Renewable Energy Corporation Limited (RRECL) http://www.rrecl.com/
20. Reliance Energy http://www.rel.co.in
21. Tarapur Atomic Power Station http://www.npcil.org/docs/taps.htm
22. Tata Electric Companies http://www.tata.com
23. Tata Power http://www.tatapower.com/
24. Techno Instrument India Pvt.Ltd web site url: http://www.tiiindia.com/
25. Torrent Power web site url: http://www.torrentpower.com/
26. Uttar Pradesh Power Corporation Ltd http://www.uppcl.org/
27. ABB Ltd www.abb.co.in/
28. Adani Power Ltd www.adanipower.com/
29. Aplab Ltd www.aplab.com/
30. BF Utilities Ltd www.bfutilities.com/
31. CESC Ltd. www.cescltd.com/

32. CMI Ltd. www.cmilimited.com.au/
33. DLF Power Limited www.eipowertech.com/dlf_power_limited.htm
34. DPSC Ltd www.dpscl.com/
35. Energy Development Company Ltd www.energy.com.ph/
36. Entegra Ltd www.entegra.co.in/
37. GMR Infrastructure Ltd www.gmrgroup.in/
38. Gujarat Industries Power Company Ltd www.gipcl.com/
39. GVK Power & Infrastructure Ltd www.gvk.com/
40. HBL Power Systems Ltd www.hbl.in/
41. Indowind Energy Ltd www.indowind.com/
42. Indo power projects Ltd www.indopowerprojects.in/
43. Jaiprakash Power Ventures Ltd www.jppowerventures.com/
44. Kalpataru Power Transmission Ltd www.kalpatarupower.com/
45. KSK Energy Ventures Ltd www.ksk.co.in/
46. National Wind & Power Corpn. Ltd www.nationalwind.com/
47. Neyveli Lignite Corpn. Ltd www.nlcindia.com/
48. NHPC Ltd. www.nhpcindia.com/
49. NTPC Limited www.ntpc.co.in/
50. Power Grid Corpn. Of India Ltd www.powergridindia.com/
51. PTC India Ltd www.ptcindia.com/
52. Reliance Power Ltd www.reliancepower.co.in/
53. Savant Infocomm Ltd www.savant-infocomm.com/
54. Sun Source (India) Ltd www.sunsource.in/about_us.htm
55. Suryachakra Power Corpn. Ltd www.suryachakra.in/
56. Suzlon Energy Limited www.suzlon.com/

Electric wires & Cables

1. Aksh Optifibre Limited http://www.akshoptifibre.com/
2. Anant Distributors Private Ltd. http://www.proflexcable.com/
3. Brimson Cables Private Ltd http://www.brimsoncable.com/
4. Capital Cables India Limited - http://www.indiantrade.com/cci/
5. Colt Cables Private Limited http://www.coltcables.com/
6. Cords Cable Industries Ltd http://www.cordscable.com/
7. Delton Cables Limited - http://www.deltoncables.com/
8. Fort Gloster Industries Limited http://www.glostercables.com/
9. Kaydour Cables India http://www.kaydourcables.com
10. KEI Industries Limited http://www.kei-ind.com/
11. Lapp India http://www.lappindia.com/
12. National Cable Industries http://www.nationalcables.com/
13. Navinbhai Cables Private Ltd http://www.ncplindia.com/
14. Neolex Cables http://www.neolexcable.com/
15. North Eastern Cables Private Ltd //www.khetangroup.com/
16. Novoflex Marketing Private Limited. http://www.novoflexgroup.com/
17. Polycab Wires Private Limited http://www.polycab.com/
18. Q-Flex Cables Limited http://www.qflexcable.com/
19. Ravin Cables limited - Primecab brand of cables. http://www.primecab.com/
20. Relemac India http://www.relemacindia.com

21. RollRing Industries - Calicut, Kerala. http://www.rollring.com/
22. Samdaria Electricals http://www.samdariaelectricals.co.in/
23. Satish Enterprises http://www.satishenterprise.com/
24. Shree Nakoda Cables Private Limited. http://www.nakodacables.com/
25. Skytone Electricals (India) http://www.skytonecables.com/
26. Surbhi Cables Industries Private Limited. http://www.indiamart.com/surbhi/
27. Surbhi Telelink Pvt. Ltd http://www.surbhiindia.com/
28. Torrent Cables Ltd http://www.torrentcables.com/
29. Universal Cables http://www.universalcablesltd.com
30. Usha Martin http://www.ushamartin.com
31. Weather Crafts Ltd http://www.weathercraft.com/
32. Finolex Cables Limited http://www.finolex.com

Electrical exporters

1. Arbariya steels http://www.arbariya.com/
2. Bajaj International Pvt. Ltd. http://www.bajajinternational.com/
3. Biax http://www.biaxmetals.com/
4. Brightech Valves and Controls Pvt Ltd http://www.brightechvalves.com
5. Dynamic Scaffolding & Equipment Co http://www.dynamicscaffolding.com/
6. Excel Metal And Engg. Industries http://www.excelmetal.net
7. Impex Trading Company http://www.impextradingco.com
8. Miltop Trading Company http://www.miltop.com/
9. Om(India)Exports http://omindiaexpo.com
10. Oriental Export Corporation http://www.indialinks.com/oriental/
11. Sevana Electrical Group http://www.sevana.com/
12. Veejay Lakshmi Engineering Works Limited http://www.veejaylakshmi.com
13. Vishal Electromag Industries http://www.vishalmotor.com
14. Vaibhav Electricals http://www.vaibhavelectricals.com
15. Industrial Forging Industries http://www.ifi-india.net/
16. Imperial Brass Component http://electronics-electrical.exportersindia.com
17. M/s Horizon Exports http://www.horizonexport.net
18. Golden Crest Marketing Network Pvt. Ltd. http://www.aceenergy.co.in/
19. Shree Krishna Enterprises http://www.shreekrishnaenterprises.co.in/
20. Sahiba International Trading Company http://www.sahibainternational.com
21. Pushpak Metals web site url: http://www.pushpakmetals.com/
22. IEEMA http://www.ieema.org
23. ELSTER METERING (P) LTD http://www.elstermetering.com/
24. Shivam Electronics http://www.shivamelectronics.com
25. SUBRTO http://www.subrtoburnishing.com/
26. Unitek Engineers http://www.unitekengineers.com
27. Euro Technologies http://www.eurotapes.in/

Measurements & Instrumentation

1. Active Control Pvt Ltd http://www.indiamart.com/activecontrols/
2. Autometers Alliance Limited. http://www.autometers.com/
3. EIP Bulk Control Pvt Ltd http://www.eipbulkcontrols.com/
4. IMP Power Limited http://www.imp-power.com/
5. Instruments International http://www.indorecity.com/ii/index.html

6. Kanji Precision Works http://www.kanjimeters.com
7. Mittal Enterprises http://www.indiamart.com/mittalenterprises/
8. Modsonic http://www.modsonic.com/
9. Nippon Instruments http://www.nipponinstruments.com/
10. Poonawala Electro Weigh http://www.peweigh.com
11. Prok Devices http://www.prokdvs.com
12. Shanti Instruments http://www.shanti-instruments.com
13. Texlab Industries http://www.texlabindia.com
14. Vasavi Electronics http://www.vasavi.com
15. VPL Infotech http://vplinf.com

Power Distribution

1. Areva T&D India http://www.areva-td.co.in/
2. BSES Yamuna Power Ltd and BSES Rajdhani Power Ltd. http://www.bsesdelhi.com/
3. Central Power Distribution Company of Andhra Pradesh Limited http://www.apcentralpower.com/
4. CESC Limited http://www.cescltd.com
5. Eastern Power Distribution Company of Andhra Pradesh Limited http://www.apeasternpower.com/
6. Elpro International Limited http://www.elproindia.com/
7. Gujarat Electricity Board http://www.gseb.com
8. Haryana Power Utilities http://www.haryanaelectricity.com/
9. Hubli Electricity Supply Company Limited (HESCOM) http://www.hescom.org/
10. Maharashtra State Electricity Distribution Company Limited http://www.mahadiscom.in
11. Natinal Hydroelectric Power Corporation of India http://www.nhpcindia.com
12. Noida Power Company Ltd http://www.noidapower.com
13. North Delhi Power Limited http://www.ndplonline.com/
14. Power Grid Corporation Of India http://www.powergridindia.com
15. Southern Power Distribution of Andhra Pradesh http://www.apspdcl.in
16. Transmission Corporation of Andhra Pradesh (AP TRANSO) http://www.aptranscorp.com/

Transformers

1. Emco Limited http://www.emcoindia.com
2. Golecha Electro Stampings. http://www.golecha.com/
3. Intaf India http://www.intafindia.com/
4. Kappa Electricals Private Ltd http://www.kappaelectricals.com/
5. Kotsons Transformers http://www.kotsons.com/
6. Mahindra Electrical Works http://www.mewindia.com
7. Marson's Electricals http://www.marsonselectricals.com/
8. P.M. Electronics Limited. http://www.indiamart.com/pme/
9. Prismatic India http://www.wind-it.com/
10. Raksan Transformers Private Ltd http://www.raksantransformers.com/
11. Roland Electronics and devices Private Ltd. http://www.redpl.com/
12. Sai Electricals http://www.saielectricals.com/
13. Tesla Transformers Limited http://www.teslatransformers.com/
14. Transformers and Electricals Kerala Limited. http://www.telk.com/
15. Transformers and Rectifiers (India) Ltd. http://www.jmtril.com
16. T.S. International http://www.transformers-reactors.com

Green Energy Companies in India

1. **Suzlon Energy:** Suzlon is of course the first company that comes to mind. They are one of the leading wind energy companies in India are one of the better known alternative energy companies in India. Here are some details from their website.

Conceived in 1995 with just 20 people, Suzlon is now a leading wind power company with:

- Over 16,000 people in 25 countries
- Operations across the Americas, Asia, Australia and Europe
- Fully integrated supply chain with manufacturing facilities in three continents
- Sophisticated R&D capabilities in Belgium, Denmark, Germany, India and The Netherlands
- Market leader in Asia, Suzlon Market Share (Combined with REpower) rose to 9.8% thereby making Suzlon 3rd * largest wind turbine manufacturing company in the world.

2. **Orient Green Power Limited:** Primarily engaged in the Wind and Biomass energy space. Currently wind constitutes the majority of their energy portfolio, so this is another one of India's wind energy companies. As of March 31, 2010, their total portfolio of operating projects included 193.1 MW of aggregate installed capacity, which comprised 152.6 MW of wind energy projects and 40.5 MW of biomass projects. Their portfolio of committed and development projects included approximately 815.5 MW of prospective capacity, which comprised an estimated 622.0 MW of wind energy projects, 178.5 MW of biomass projects and a 15.0 MW small hydroelectric project

3. **Indowind Energy Limited:** Indowind Energy Limited is also a wind energy company that develops wind farms for sale, manages the wind assets, and generates green power for sale to utilities and corporates. Turnkey implementation of Wind Power Projects, from concept to commissioning. Wind Asset Management Solution for installed assets, including operations, billing, collection of revenue to project customers. Supply of Green Power to Customers. CERs (Carbon Credit) Sales and Trading.

4. **Suryachakra Power Corporation Limited:** SPCL is the flagship company of Suryachakra Group with interests in Power generation – renewable energy (biomass, Solar, hydro, Wind) and Clean Technology / Ultra Super Critical Thermal Power Plants (coal, Gas), Engineering Consultancy and Urban infrastructure development activities. Suryachakra Power Corporation Limited has established 3 wholly owned subsidiaries for setting up of renewable energy (biomass) power projects and also acquired stake in Sri Panchajanya Power Private limited, which was setting up a 10 MW Biomass Power Plant at Hingoli, Maharashtra.

5. **NEPC India:** This is a Public Limited Company promoted by the Khemka Group with the primary objective of promoting wind energy. This successful Group has a multi crore turnover from diversified activities in the field of Power Generation from Wind Energy and manufacture and marketing of Wind Turbine Generator (a renewable energy device).

6. **Azure Power:** Azure Power is the green energy space as it is one of the solar energy companies in India. It is a solar power company, and they are supplying power to 20,000 people in 32 villages in Punjab.

7. **AuroMira Energy:** Auro Mira is also a green technology energy company that is private, and present in the Biomass, Small Hydel and Wind Sectors. It plans to develop over 1000 MW capacity by 2012. AME is presently focusing in Biomass, Small Hydro and Wind Sectors. AME plans to invest $ 900 Million to develop, own and operate over 1000 MW in clean energy in addition to WTG manufacture and to develop over 15000 acres of energy plantation in the next five years. AME intends to foray into other clean energy technologies, solar, bio-diesel etc. in the future.

8. **Husk Power Systems:** This is truly an alternate energy company which owns and operates 35-100 kW "mini power-plants" that use discarded rice husks to deliver electricity to off-grid villages in the Indian "Rice Belt

9. **RRB Energy Limited:** This company is in the field of Wind Power Generation, and is an ISO 9001:2008 and ISO 14001:2004 certified Company. RRBEL is also an Independent Power Producer having established wind farms of aggregate megawatt capacity.

10. **Moser Baer Solar Limited:** This is a subsidiary of Moser Baer that is one of the solar energy companies as well. The Group's photovoltaic manufacturing business was established between 2005 and 2007 with the primary objective of providing reliable solar power as a competitive non-subsidized source of energy.

Internationally renowned MNC's to offer electrical jobs

Cisco, Hewlett Packard, Intel, AMD, IBM, Ford, General Electric, General Motors, Lockheed Martin, Lucent Technologies, Moog, Micron, Motorola, Nokia, Qualcomm, Rockwell, Sun Microsystems, Atto Technology, MTI and Texas Instruments.

Top core companies in India to offer electrical jobs

1. Bharat Sanchar Nigam Limited
2. Tata Consultancy Services
3. Bharti Airtel Limited
4. Wipro Ltd
5. Infosys Technologies Limited
6. Hewlett-Packard India
7. HCL Infosystems Limited
8. Reliance Communications Ltd
9. LG Electronics India Pvt Ltd
10. IBM India Pvt Ltd
11. Videocon Industries Ltd
12. HCL Technologies Limited
13. Satyam Computer Services Ltd
14. Siemens Ltd.
15. Samsung India Electronics Pvt. Ltd.
16. Mahanagar Telephone Nigam Ltd
17. Redington (India) Limited
18. Cognizant Technology Solutions
19. Idea Cellular Ltd
20. Videsh Sanchar Nigam Limited

Exclusive Government jobs for Electrical Engineers

1. ISRO
2. DRDO
3. BEL
4. BHEL
5. GAIL
6. SAIL
7. HAL
8. HPCL
9. NTPC
10. ONGC
11. IOCL
12. RRB
13. ECIL
14. APGENCO
15. APTRANSCO

Ref: http://www.regencyengg.com/eee_job_offer.html

K.L.N. COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Training plan for the Academic Year 2017-2018

Year/TPO/ Department Activity	TPO	DEPARTMENT	STAFF
First Year	Path Transformations, ICE(Initiate Create Expose)	C,C++ Programming (Application Oriented Programming Skill is must) -3Days, BEC Training, Tell About Yourself TCS Campus Commune Registration(Test Portal) Smart India Hackathalon Code Vita, Enginx Awareness on GATE,TANCET, GMAT, IES, IAS, BOAT, TOEFL, NTPC, ISRO Attitude- Behavior-Dress coding-Personality-Hairstyle-Certificates Filing Awareness on Profile of the Core and IT Companies Direct Placement through Company Webportal Awareness on Bond Rules Real Time Projects	R.Divya M.S.C.Sujitha Mr. S. Rajalingam
Second Year	Level-I: Aptitude Training/ Verbal Reasoning/Quantitative Aptitude	LABVIEW,Core1,Core2, C,C++ Programming(Application Oriented Programming Skill is must), MOCK Awareness, MOCK GD, Tell About Yourself, Core Training-Data Pattern-Syllabus available-EDC,LIC,DLC TCS Campus Commune Registration(Test Portal) Project Contest Smart India Hackathalon Code Vita, Enginx CCNA Certification Awareness on GATE,TANCET, GMAT, IES, IAS, BOAT, TOEFL, NTPC, ISRO Attitude- Behavior-Dress coding-Personality-Hairstyle-Certificates Filing Direct Placement through Company Webportal Awareness on Bond Rules Real Time Projects	M.JeyaMurugan S.Manoharan Dr. M. Mahalakshmi Mr. S. Rajalingam
Third Year	Level-II: Aptitude Training/ Verbal Reasoning/Quantitative	JAVA Programming (10 Days-Even Semester) C,C++ Programming (Application Oriented Programming Skill is must)	Dr. S. Venkatesan, Dr. K. Gnanambal, Dr. S. M. Kannan,

	Aptitude AMCAT Specific Training(Aptitude, Core, Language-Syllabus available), AMCAT Exam(4 Hrs Exam-2 times) Resume Preparation Email writing NIIT Aptitude Exam TCS Webinar	Texas Instruments (5 Days-Odd Semester)[Java Certification must for ZOHO, MindTree, IVTL, Salary: 6.5 Lakhs] MOCK Awareness, MOCK GD, Tell About Yourself Training-Data Pattern- Syllabus available-EDC,LIC,DLC TCS Campus Commune Registration(Test Portal) Project Contest Smart India Hackathalon Code Vita, Enginx CCNA Certification Awareness on GATE,TANCET, GMAT, IES, IAS, BOAT, TOEFL, NTPC, ISRO Attitude- Behavior-Dress coding-Personality-Hairstyle-Certificates Filing Direct Placement through Company Webportal Awareness on Bond Rules Real Time Projects	Mr. A. Marimuthu, M. Ganeshkumari,
Final Year	Level-III: Aptitude Training/ Verbal Reasoning/Quantitative Aptitude Company Specific Training Programme AMCAT Exam(4 Hrs Exam-2 times) Resume Preparation, Email writing MOCK Group Discussion, MOCK Interview Awareness Programme for Higher Education-Abroad TCS Webinar	IoT Techniques, C,C++ Programming(Application Oriented Programming Skill is must) MOCK GD Training-Data Pattern- Syllabus available-EDC,LIC,DLC,VLSI,MPMC,ES,DSP Jasmin InfoTech- C, C++,MPMC,DSP-Application Oriented CADENCE – CT(Salary: 8 Lakhs) TESSOLVE- EDC, LIC, DLC (Semiconductor Based) LABVIEW- CLAD Certification TCS Campus Commune Registration(Test Portal) Project Contest Smart India Hackathalon Code Vita, Enginx CCNA Certification, Oracle Certification Awareness on GATE,TANCET, GMAT, IES, IAS, BOAT, TOEFL, NTPC, ISRO Attitude-Behavior-Dress coding-Personality-Hairstyle-Certificates Filing Direct Placement through Company Webportal, Awareness on Bond Rules Real Time Projects	Dr. A.S.S. Murugan M. Jegadeesan R. Jeyarohini A. Manoj N.Vimal Radha Vignesh

www.guvi.com - **Real Time problem and Programming Skill**

ANNA UNIVERSITY

CENTRE FOR UNIVERSITY INDUSTRY COLLABORATION (CUIC)

A READY RECKONER FOR ENHANCING PLACEMENT ACTIVITIES

Dr. T .Thyagarajan, Director- CUIC

ROLES AND RESPONSIBILITIES OF PLACEMENT REPRESENTATIVES

- Collect list of HR contact details through your friends/ relatives/ Newspaper/ Faculty members/ Seniors /Alumni
- Pass on the HR Contact details to Placement Officer for sending official invitations
- Ensure Placement Officer contact details in all the Department Brochures, to have single point contact
- Keep the hard and soft copies of Curriculum and Syllabus
- Keep the contact details (Email, Landline No. & Mobile No.) of all your classmates
- Keepthecompletedetailsabouteachstudent(SSLC,HSC,SemesterwiseGPA,CGPA,DOB, Community, History & Current Arrears)
- Keep the contact details of other Placement Representatives
- Generate comprehensive Question Bank (Both Technical and Non-Technical)
- CollectAptitudeQuestions/GDTopics/InterviewQuestionstocreateQuestionBank
- Give training to the needy students
- Avoid spreading Rumors / False / Assumed information (This will lead to blacklisting)
- Avoid accepting false information / Track records from students (This will lead to rejection of offer)
- Avoid arguing with company HRs about previous year's branch preferences

TIPS TO FACE INTERVIEWS

- Maintain Professional Ethics and Moral Standards
- Read Frequently Asked Questions by interviewers and prepare the answers and practice them
- Prepare a Comprehensive Resume
- Practice with Mock Aptitude Test / Mock GD / Mock Interview etc.,
- Prepare well in fundamental & core subjects of respective branches
- Update database after declaration of revaluation / Arrear result
- View the placement Notice Board regularly
- As for as possible change of contact details should be avoided
- Visitthecompany'swebsitebeforeattendingthePrePlacementTalk(PPT)togetclearidea
- Avoid Wearing Jeans / T-shirts/ Cheppal / Half sleeves
- Be punctual for PPT as well as for Test /Interview
- Avoid standing outside or near the PPT hall
- Occupy first benches also, during the PPT
- Maintain Gender separation during the PPT
- Maintain discipline during PPT
- Avoid coming late to the PPT/test/interview
- Ask only relevant / valid questions during the PPT
- Carry Pen, Pencil, Eraser, Passport Size Photograph etc., for the test

- Avoid contacting the HR directly. It should be through CUIC only.
- Carry Resume / Copy of Mark Sheets / Community / Co-curricular / Extra-curricular Certificate etc for the interview
- Bring OBC Certificate for PSU interview
- Bring doctor certificate for differently abled physique
- Informatthebeginningitselfaboutcolourblindness,hearingdisordertoavoiddisqualificationatthe end.
- Attend the interview with clean dress (tucked-in) and neatly shaved to maintain dignity and decorum
- Wishtheinterviewerwhileenteringtheroom.Thanktheinterviewerbeforeleavingtheroom
- During the interview, relax and avoid showing your nervousness obvious
- Speak loudly, clearly; sit up straight; try to look at the interviewer's eyes when you speak to him/her
- Be honest in your approach
- Keep your answers brief and to the point.
- Do not give 'YES' or 'NO' replies.
- Don't discuss your personal difficulties
- Show your enthusiasm and willingness
- Exhibit your skills and abilities.
- AvoidpassingbadcommentsRemarksabouttheCollege/University/Staffduringtheinterview
- Prepare in advance, the questions you want to ask about the job and company
- Be available till the announcement of results
- Maintain silence during announcements of results
- Do not exhibit bad mannerism during the placement activity

FREQUENTLY ASKED QUESTIONS (FAQ)

- Tell me about yourself
- What are your long range goals, ambitions, future plans?
- What do you want to be doing 5 or 10 years from now?
- How do you feel that you can contribute to this job?
- What are your hobbies?
- What are your strengths? Your weaknesses?
- What are your big accomplishments?
- What are your special abilities?
- Why you think that you are suitable for this kind of job?
- What is your career goal?
- What do you know about our company?
- Why are you applying for a job with us?
- What salary do you expect?
- Do you have any plans to go back to school?
- What kind of job profile you enjoy the most, the least and why?
- I have interviewed others for this job, why should I give you the job?
- Would you be willing to take an aptitude test?
- Can you tell me any thing about yourself that you think I might want to know?
- What is the lowest salary you would accept?
- Can you handle criticism? How do you deal with it?
- Do you have any questions?

H.R.EXPECTATIONS

- Sincerity and honesty in the answers
- Attentiveness in listening to the questions
- Body language: gesture, posture, eye contact and confidence level
- Stress handling capability

- Positive approach in answering the questions
- Exhibition of skills, accomplishments and talents
- Enthusiasm and motivation level
- Command over communication skills
- Willingness and positive approach
- Exhibition of talents and accomplishments

POINTS DECIDED BY THE ORGANISATION

- Interview time and venue
- Decision on allowing identical branches
- Execution of Bond
- Change in eligibility criteria
- Place of work
- Percentage cut-off/ history of arrears / standing arrears
- Postponement of dates/cancellation
- The number of recruits, on-board date

USEFUL WEBSITES FOR APTITUDE, GD, TECHNICAL & HR INTERVIEW

http://www.indiabix.com
http://www.fresher world.com
http://www.placementpapers.net
http://www.allinterview.com
http://www.geekinterview.com
http://www.careersvalley.com
http://www.sampleplacementpapers.com
http://www.chetanasinterview.com
http://www.ittestpapers.com
http://www.indianfresher.com
http://www.freeplacementpapers.com
http://www.educationindiaworld.com
http://www.jobsnresults.com
http://www.psychometric-success.com
http://testfunda.com
http:/www.test4free.com
http://www.placementexpress.com

TECHNICAL
http://www. mechanicalengineeringblog.com
http://www.indiabix.com

USEFUL WEBSITES FOR ENGLISH COMMUNICATION

http://www.nonstopenglish.com
http://www.talkenglish.com
http://www.freeenglishnow.com
http://www.ego4u.com
http://www.focusenglish.com
http://www.bbc.co.uk/worldservice/learningenglish
http:/www.englishclub.com
http://www.easyenglish.com

http://learnenglish.britishcouncil.org
englishbee.net
http://www.english4today.com/free_content.cfm
http://www.english-the-international-language.com
http://www.teachingengtish.org.uk
http://esl.about.com
http://www.learnenglish.de
http://www.busuu.com
http://free-esl.com

'FACTS' TO PERFORM WELL IN THE PLACEMENTS

F - Clear the subjects in **F**irst attempt

- Learn **F**oreign Language (German, Japanese, French, Chinese)

A - Have right **A**ttitude

C - Have good **C**ommunication Skills

Maintain a **C**GPA above 7.5

T - **T**hink Positive

Develop creative **T**hinking

S - Be **S**agacious. Express your wisdom and Exhibit your Talents

K.L.N. College of Engineering.

How to prepare for Anna University Examinations.

Don't study just for passing the tests/exams. Ensure that you understood the concepts and you can explain/ demonstrate/justify/analyze/ answer/ argue/ design /implement/draw/develop any mathematical model, based on what you have learnt. If you are confident enough, you can successfully solve any question papers/technical interviews/competitive examinations at any time without fear/confusion/ delay. Remember that, you will be working in an environment, after graduation, where all the process/operation of machineries/equipment's are based on the basic scientific and engineering concepts what you have studied from first year to final year of your Engineering programme, where you are the only person to solve any problems aroused. You can't get away/escape from these. Hence, it is a lifelong learning, a wonderful experience.

Syllabus, books (at least 2-one Text books as prescribed in the syllabus, -one local author book) previous year question papers(atleast10), class notes, are your God/religion/food/ destiny/light. Ensure that you have studied all the contents of the syllabus, prepared correct answers for all questions in the AU question paper. Remember that ignoring any one word in the syllabus means you are losing 5 to 10 marks in each unit in the AU exams. Similarly, ignoring any one questions in the previous year question paper means you are losing 10 marks in each unit of AU exams. Don't expect that your Professor would cover 100% of the syllabus. Even if he/she has covered 100% of the syllabus don't think that he/she has covered 100% of each line in the syllabus. It is your responsibility to prepare 10% in excess of each lines in each units of the syllabus in addition to the contents taught by your Professors. This is possible by referring the books and the questions asked in the competitive exam books like GATE/TANCET/IES.

Plan your studies –right from the second week of the commencement of the classes till the semester examination is over. In a year, you will be attending the college only for 200 days(including theory/practical exams-8hours /day). You have 165 days (24 hours /day) away from the college. Prepare a time table from Monday-Friday. Take a rest on Saturday and Sunday. Allocate 3-4 hours in the evening for study.1-2 hours for completing assignments/observation/record note work. Remaining 2-3 hours for studying subjects A,B.(Mon),C,D(Tue)E,F(Wed), A,B(Thu),C,D(Fri),E,F(Sat or Sun).Each day, in addition to studying subjects for the current syllabus, you should refer competitive exam books (GATE/TANCET/IES/ Objective type questions –technical) corresponding to the current syllabus. This parallel preparation will ensure that you have prepared for state level and National level examinations there by you will be meeting the expectations of the Engineering Educational Objectives. Your preparation for AU examination should be vigorous (minimum), 15 days from the commencement of the exam and it should be maximum 2 days before the exam. You need to allocate for 8 hours per day during minimum days (early morning-6AM-10AM with a break for an hour, 10AM-12 Noon-sleep/rest,12 noon-2PM-study,2PM-5PM-sleep/rest,6PM-10PM –study). Repetition/memorizing is required to retain certain contents to improve confidence on the subject. During rest time you can have group discussion with your friends or you can teach slow learners, thereby you will gain more knowledge and also help others.

Presentation – AU Exam-General complaints by students that the valuation is not fair or poor valuation. Remarks of examiners that there is nothing in the answer paper. Parents may say that either "college is not good" or "it is a fate". Public may say "poor quality" and the experts may comment that "only 20% are employable". These statements will go on for centuries. Many students believes that they have written

right answers mostly (but many of them actually wrong) and few examiners assumed certain answers by students are wrong (but many of them are actually correct). It is 70% true that students are not presenting the answers well and it is 30% true that the valuation is not fair. But it is 95% true that the deserved students are getting expected results in most of the papers. This is because of good presentation. Good presentation involves many factors such as legible writing, good handwriting. answering correctly (100% correct),all answers with mathematical modeling/pictorial representation/drawing/layout/sketches with different colors, writing 7 pages for 16 mark questions with valid points and sketches, 4 pages for 8 marks with valid points and sketches/drawings/equations, characterizes,. Such students will solve problems correctly without any overwriting/ strikeouts. Simply, they do not cheat. These are the in-born qualities or developed over the years due to good habits, friendship, good character, obedience, hard work, well brought up by parents and blessing by God. Everyone can become like them if their attitude is good. Fear of God is the beginning of Wisdom. The examiners will know about your quality, just by referring the way you have answered Part-A- questions. A well prepared student would get a maximum of 18 out of 20. This impresses the examiner so that they will award a maximum of 14-16 for each part-B-question. Most of the students would answer wrongly in the Part-A-questions. This is due to their poor preparation during Class tests/internal tests, frequently taking leave, lot of diversion, skipping the classes for attending Co-Curricular/ /extra-curricular activities etc inside or outside the college.. Attending the classes is more important than attending college. Students are expected to attend 98%classes to maintain the continuity of the subjects learnt. One-day absence means it will take a week to study on his/her own. If he/she fails to study on his/her own to review the classes not attended means a loss of 10 marks in the exams.

Know well about Why one should apply for revaluation without /with Photocopy, schedule and fees to be paid. Sometimes a well-deserved students get low CGPA than he/she expected or even may fail. This may be due to error in valuation/data entry. Hence such students should not hesitate to apply for revaluation with/without photocopy. The parents should also be informed, all about these unfortunates (the misunderstanding between parents /sons/daughter/faculty may lead to unnecessary things). 90% of those deserved students who applied for revaluation with photo copy benefitted after revaluation. Ignorance/communication failure of these formalities, by deserved students, may damage their life. Some students failed in revaluation secured “O”grade in the REVIEW, shows some hope in the examination system and the better prospect of the students.

Need to maintain high CGPA in every semester. This is possible only when one gets “O” grade in all practical’s (from first to eighth semester).Those who are regular in attending the lab classes, submitting the observation and record note in time, disciplined behavior with staff and students in the class room/laboratory/campus etc. will impress the faculty in-charge of practical’s, so that he/she will help such students during regular lab classes. This will improve the students to do the lab experiments with confidence and fetch them to get more marks. This will reflect in internal assessment marks also. Classification of degree- First class with distinction- More than 8.5 CGPA (passed all subjects in first attempt), First class- More than 7.0 CGPA at the end of eighth semester, less than this would be second class.

K.L.N. COLLEGE OF ENGINEERING
POTTAPALAYAM - 630 612 (11KM from Madurai City)
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(Sponsored by K.L.N. Sourashtra College of Engineering Council)

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To become a Premier Institute of National Repute by Providing Quality Education, Successful Graduation, Potential Employability and Advanced Research & Development through Academic Excellence.

MISSION

To Develop and Make Students Competent Professional in the Dynamic Environment in the field of Engineering, Technology and Management by emphasizing Research, Social Concern and Ethical Values through Quality Education System.

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VISION

To become a high standard of excellence in Education, Training and Research in the field of Electrical & Electronics Engineering and allied applications.

MISSION

To produce excellent, innovative and Nationalistic Engineers with Ethical Values and to advance in the field of Electrical & Electronics Engineering and allied areas.

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4. Computer Science & Engineering (Accredited by NBA)
5. Information Technology (Accredited by NBA)
6. Automobile Engineering
7. Electronics & Instrumentation Engineering

PG COURSES

1. Master of Computer Applications
2. Master of Business Administration
3. M.E. – CAD / CAM
4. M.E. – Communication Systems
5. M.E. – Power Systems Engineering
6. M.E. – Computer Science & Engineering
7. M.E. – Computer Science & Engineering (with Specialization in Networks)