



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Course Outcome



Session 2020-21

**Department of Electrical & Electronics
Engineering**



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Session: 2020-21

Semester: 3rd

Subject Name (Code): Introduction to Soft Computing (KOE-036)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the concepts of learning in basic neural networks, back-propagation neural networks, Kohonen's self organizing networks and Hopfield networks.	4	M
2	Analyze working of fuzzy decision making, rule-based structure identification and fuzzy control systems.	4	M
3	Apply supervised, unsupervised and optimization techniques in adaptive neuro fuzzy networks development.	3	C
4	Analyze the working of Genetic algorithm.	4	M
5	Apply genetic algorithm and neuro fuzzy networks for solving travelling salesman problem and internet search problem.	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	3	2	-	-	-	-	-	2	2	3
CO-2	3	3	3	3	3	2	-	-	-	-	-	2	2	3
CO-3	3	3	3	3	3	2	2	-	1	-	-	2	2	3
CO-4	3	3	3	3	3	2	2	-	1	-	-	2	2	3
CO-5	3	2	3	3	3	2	2	-	2	-	-	2	2	3
Target Level	3	2.8	3	3	3	2	2	-	1.33	-	-	2	2	3

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



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Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Electronics Engineering (KOE-038)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the concept of PN junction and special purpose diodes.	2	C
2	Study the application of conventional diode and semiconductor diode.	1	C
3	Analyze the I-V characteristics of BJT and FET.	4	C, M
4	Analyze the application of Op-Amp, amplifiers, integrator, and differentiator.	4	C, M
5	Understand the concept of digital storage oscilloscope and compare of DSO with analog oscilloscope.	2	C, P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	1	1	1	-	-	-	-	-	1	1	2	2
CO-2	2	2	2	2	1	-	-	-	-	-	1	1	2	3
CO-3	3	3	2	2	1	-	-	-	-	-	1	2	1	3
CO-4	3	3	3	3	1	-	-	-	-	1	2	2	3	3
CO-5	2	2	2	2	1	-	-	-	-	1	2	2	3	3
Target Level	2.4	2.4	2	2	1	-	-	-	-	1	1.4	1.6	2.2	2.8

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

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C: Conceptual

P: Procedural

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Session: 2020-21

Semester: 3rd

Subject Name (Code): Universal Human Values (KVE-301)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the essential complementarities between 'VALUES' and 'SKILLS' with its relation of engineering concept.	2	F
2	Analyze the sustained happiness and prosperity which are the core aspirations of all human beings keeping social environmental, economic, political scenario.	4	P
3	Apply the development of a Holistic perspective among students towards life, profession and happiness, based on a correct understanding of the Human reality and the rest of Existence.	3	P
4	Apply the value based living in a natural way using technological advancement.	3	P
5	Analyze the plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually satisfying human behavior and mutually enriching interaction with nature by using engineering, management principle.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1				1		3	3	3	3	3	3	3		
CO-2				1		3	3	3	3	3	3	3		
CO-3				1		3	3	3	3	3	3	3		
CO-4				1		3	3	3	3	3	3	3		
CO-5				1		3	3	3	3	3	3	3		
Target Level				1		3	3	3	3	3	3	3		

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

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Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Electromagnetic Field Theory (KEE-301)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply different coordinate systems and their application in electromagnetic field theory.	3	C
2	Analyze the concept of static electric field, current, properties of conductors and boundary conditions.	4	P
3	Analyze the concept of static magnetic field, magnetic scalar and vector potential.	4	P
4	Analyze the forces due to magnetic field, magnetization, magnetic boundary conditions and inductors.	4	P
5	Analyze displacement current, time varying fields, propagation and reflection of EM waves and transmission lines.	6	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	3	-	-	-	1	2	-	2	3	3
CO-2	3	3	3	3	3	-	-	-	1	2	-	2	3	3
CO-3	3	3	3	3	3	-	-	-	1	2	-	2	3	3
CO-4	3	3	3	3	3	-	-	-	1	2	-	2	3	3
CO-5	3	3	3	3	3	-	-	-	1	2	-	2	3	3
Target Level	3	3	3	3	3	-	-	-	1	2	-	2	3	3

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

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Session: 2020-21

Semester: 3rd

Subject Name (Code): Electrical Measurements & Instrumentation (KEE-302)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Evaluate errors in measurement as well as identify and analyze different types of instruments for the measurement of voltage, current, power and energy.	5	P
2	Understand the knowledge of measurement of electrical quantities resistance, inductance and capacitance with the help of bridges	2	C
3	Demonstrate the working of instrument transformers as well as evaluate the errors in current and potential transformers	2	P
4	Illustrate the working of electronic instruments like voltmeter, multi-meter, frequency meter and CRO.	2	P
5	Understand the knowledge of transducers, their classifications and their applications for the measurement of physical quantities like motion, force, pressure, temperature, flow and liquid level.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	1	1	1	-	-	-	-	2	3	-
CO-2	3	3	3	3	3	2	1	-	-	-	-	2	3	-
CO-3	2	3	3	3	3	2	1	-	-	-	-	2	3	-
CO-4	3	3	3	2	3	2	1	-	-	-	-	2	3	-
CO-5	3	3	3	3	3	2	2	-	-	-	-	2	3	-
Target Level	2.80	3	3	2.6	2.6	1.8	1.2	-	-	-	-	2.0	3	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Basic Signals & Systems (KEE-303)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Represent the various types of signals & systems and can perform mathematical operations on them.	2	C
2	Analyze the response of LTI system to Fourier series and Fourier transform and to evaluate their applications to network analysis.	4	P
3	Analyze the properties of continuous time signals and system using Laplace transform and determine the response of linear system to known inputs.	4	P
4	Analyze the concept of state-space and develop state-space models of SISO & MIMO system.	4	P
5	Implement the concepts of Z transform to solve complex engineering problems using difference equations.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	1	1	-	-	-	-	-	-	2	2	1
CO-2	3	3	3	1	1	-	-	-	-	-	-	2	2	1
CO-3	3	3	3	2	1	-	-	-	-	-	-	2	2	1
CO-4	3	3	3	2	1	-	-	-	-	-	-	1	2	1
CO-5	3	3	3	2	1	-	-	-	-	-	-	1	2	1
Target Level	3	3	3	1.6	1	-	-	-	-	-	-	1.6	2	1

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

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KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Analog Electronics Lab (KEE-351)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the characteristics and applications of the Semiconductor devices.	2	C
2	Draw the characteristics of BJT, FET and MOSFET.	3	P
3	Understand the parameters of Operational Amplifier and instrumentation Amplifier with their applications.	2	F
4	Understand the V-I characteristics of Power devices like SCR, TRIAC	2	C
5	Analyze various parameters of semiconductor devices.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	3	-	-	-	-	-	-	1	2	
CO-2	3	3	3	3	3	-	-	-	-	-	-	1	2	
CO-3	3	3	3	3	3	-	-	-	-	-	-	1	2	1
CO-4	3	3	3	3	3	-	-	-	-	-	-	1	2	1
CO-5	1	2	2	2	2	-	-	-	-	-	-	1	1	
Target Level	2.6	2.8	2.8	2.8	2.8	-	-	-	-	-	-	1	1.8	1

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Electrical Measurements and Instrumentation Lab (KEE-352)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the importance of calibration of measuring instruments.	2	C
2	Demonstrate the construction and working of different measuring instruments.	3	P
3	Apply the knowledge of AC and DC bridges in different measuring applications	3	P
4	Determine electrical engineering parameters like voltage, current, power & phase difference in industry as well as in power generation, transmission and distribution sectors.	5	C
5	Analyze and solve the variety of problems in the field of electrical measurements.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	3	3	3	3	1	-	-	2	2	2	3	2	2
CO-2	2	3	3	3	3	1	-	-	2	2	2	3	2	2
CO-3	2	3	3	3	3	1	-	-	2	2	2	3	2	2
CO-4	2	3	3	3	3	1	-	-	2	2	2	3	2	2
CO-5	2	3	3	3	3	1	-	-	2	2	2	3	2	2
Target Level	2	3	3	3	3	1	-	-	2	2	2	3	2	2

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Electrical Workshop (KEE-353)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand various types of electrical connections.	2	F
2	Analyze the difference between various electrical wires, cables and accessories.	4	C
3	Understand the layout of electrical substation & various safety measures.	2	C
4	Understand the construction, working and application of various workshop tools.	2	C
5	Develop small circuits on printed circuit boards.	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	2	-	-	-	-	-	2	1	2	1	1
CO-2	3	3	3	2	-	-	-	-	-	2	2	2	2	2
CO-3	3	2	3	2	-	-	-	-	-	2	2	2	2	2
CO-4	3	2	2	2	-	-	-	-	-	2	2	2	2	2
CO-5	3	2	2	2	-	-	-	-	-	2	2	3	2	3
Target Level	3	2.4	2.4	2	-	-	-	-	-	2	1.8	2.2	1.8	2

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 3rd

Subject Name (Code): Mini Project or Internship Assessment (KEE-354)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand research papers for exploring new fields and review reporting.	2	C
2	Evaluate new directions of various cutting edge technologies.	5	P
3	Create various skills by preparing detailed project report including all the findings.	6	C, P
4	Effective communication by making an oral presentation to show the findings.	3	P
5	Create facts related knowledge by preparing detailed report including outcomes.	6	C, P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	2	1	-	-	-	3	2	2	3	3
CO-2	3	3	3	3	3	1	-	-	-	3	2	2	3	3
CO-3	3	3	3	3	2	1	-	-	-	3	2	2	3	3
CO-4	3	3	3	3	2	1	-	-	-	3	2	2	3	3
CO-5	3	3	3	3	3	1	-	-	-	3	2	2	3	3
Target Level	3.0	3.0	3.0	3.0	2.4	1	-	-	-	3.0	2.0	2.0	3.0	3.0

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Mathematics-IV (KAS-402)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Identify the application of partial differential equations and apply for solving Linear and non- linear partial differential equations	4	P
2	Understand the classification of second order partial differential equations and by using the	3	P
3	Method of separation of variables to evaluate the general solution of Heat, Wave, Laplace equations and Transmission lines.	4	P
4	Remember the concept of moments, skewness, kurtosis and moment generating function and analyze the linear and non-linear regression.	4	P
5	Remember the concept of probability, random variable and apply for solving the problem related to discrete and continuous probability distribution	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	3	2	3	2	-	-	-			3	2
CO-2	3	3	3	3	2	3	1	-	-	-	1	3	3	3
CO-3	3	3	2	2	3	3	1	-	-	-	1	3	3	2
CO-4	3	3	3	2	3	3	2	-	-	-	2	3	3	2
CO-5	3	3	3	3	3	3	1	-	-	-	1	3	3	3
Target Level	3	3	2.6	2.6	2.6	3	1.4	-	-	-	1.25	3	3	2.4

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Technical Communications (KAS-401)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society.	2	C
2	Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society.	2	C
3	Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their role in ensuring a harmonious society.	2	C
4	Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.	2	C
5	Student will be able to Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1						1	1	1	2	3	2	2		
CO-2								1	1	3	2	2		
CO-3								1	2	3	2	2		
CO-4						1	1		1	3	2	3		
CO-5									2	3	2	1		
Target Level						1	1	1	1.6	3	2	2		

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Digital Electronics (KEE-401)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Implement gates using concepts of binary number system	3	C
2	Design combinational logic circuits	4	P
3	Design sequential logic circuits	4	P
4	Implement the design of synchronous & asynchronous sequential circuits	3	P
5	Apply the concept of Digital Logic Families in circuit-implementation	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	3	2	2	-	-	-	-	-		1	-	1
CO-2	3	3	3	3	3	-	-	-	-	-	1	2	-	1
CO-3	3	3	3	3	3	-	-	-	-	-	1	2	-	2
CO-4	3	3	3	3	3	-	-	-	-	-	1	1	-	2
CO-5	3	3	3	3	3	-	-	-	-	-	1	3	-	3
Target Level	3.0	2.8	3.0	2.8	2.8	-	-	-	-	-	1	1.8	-	1.8

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Electrical Machines-I (KEE-402)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the working of EMEC devices, singly and doubly excited systems.	4	P
2	Analyze the response of the dc machine on the basis of Armature Reaction and commutation.	4	P
3	Evaluate the performance of dc machine by performing Swinburne' and Hopkinson's test.	5	P
4	Evaluate the performance of single-phase transformer by performing open circuit test, short circuit test and Sumpner's test.	5	P
5	Understand the different types of 3 phase transformer connections & conversion of 3-phase to 2-phase.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-2	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-3	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-4	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-5	3	2	2	1	2	-	-	-	-	1	-	2	2	-
Target Level	3	2	2	1	2	-	-	-	-	1	-	2	2	-

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Network Analysis & Synthesis (KEE-403)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply the knowledge of basic circuit law, nodal and mesh methods of circuit analysis and simplify the network using Graph Theory approach.	3	C
2	Analyze the AC and DC circuits using Kirchhoff's law and Network simplification theorems.	4	P
3	Analyze steady-state responses and transient response of DC and AC circuits using classical and Laplace transform methods.	4	P
4	Demonstrate the concept of complex frequency and analyze the structure and function of one and two port network.	4	P
5	Synthesize one port network and analyze different filters.	6	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	2	-	-	-	-	2	-	2	2	2
CO-2	3	3	3	2	2	-	-	-	-	2	-	2	2	2
CO-3	3	3	3	2	2	-	-	-	-	2	-	2	2	2
CO-4	3	3	3	2	2	-	-	-	-	2	-	2	2	2
CO-5	3	3	3	2	2	-	-	-	-	2	-	2	3	3
Target Level	3	3	3	2	2	-	-	-	-	2	-	2	2.20	2.20

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Circuit Simulation Lab (KEE-451)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply the knowledge of basic circuit law, nodal and mesh analysis for given circuit.	3	P
2	Analyze AC and DC circuits using simulation techniques.	4	C
3	Analyze the transient response of AC circuits.	4	C
4	Evaluate the two-port network parameters.	5	P
5	Estimate the parameters of different filters.	5	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	3	-	-	-	-	-	-	2	2	1
CO-2	3	3	3	2	3	-	-	-	-	-	-	2	2	1
CO-3	3	3	3	2	3	-	-	-	-	-	-	2	2	1
CO-4	3	3	3	2	3	-	-	-	-	-	-	2	2	1
CO-5	3	3	3	2	3	-	-	-	-	-	-	2	3	2
Target Level	3	3	3	2	3	-	-	-	-	-	-	2	2.20	1.20

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Electrical Machine-I Lab (KEE-452)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Perform the speed control of dc motor above and below the rated speed.	3	P
2	Evaluate the efficiency of dc motor by conducting load test.	5	P
3	Evaluate the efficiency of transformer by performing load test.	5	P
4	Evaluate the parameters of equivalent circuit of transformer by conducting short circuit and open circuit test	5	P
5	Design transformer and dc machine parts using MATLAB	6	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-2	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-3	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-4	3	2	2	1	2	-	-	-	-	1	-	2	2	-
CO-5	3	2	2	1	2	-	-	-	-	1	-	2	2	-
Target Level	3	2	2	1	2	-	-	-	-	1	-	2	2	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 4th

Subject Name (Code): Digital Electronics Lab (KEE-453)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand Digital Binary System and apply it in implementation of Gates.	2, 3	P
2	Design the Sequential circuits with the help of Combinational circuits and feedback element.	6	P
3	Design data selector circuits with the help of universal Gates.	6	P
4	Design the counters with the help of sequential circuit and basic Gates.	6	P
5	Implement the projects using the digital ICs and electronics components.	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	2	2	-	-	2	3	2	2	3	3
CO-2	3	3	3	2	2	2	-	-	2	3	3	2	3	2
CO-3	3	3	3	2	2	2	-	-	2	2	3	3	2	1
CO-4	3	2	2	3	3	3	-	-	2	2	2	2	3	2
CO-5	3	3	3	3	2	3	-	-	2	2	2	3	2	2
Target Level	3	2.8	2.8	2.4	2.2	2.4	-	-	2	2.4	2.4	2.4	2.6	2

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Power System-I (KEE-501)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Describe the working principle and basic components of conventional and nonconventional power plants as well as the other aspects of power generation.	2	F, C
2	Analyze the role and functioning of different types of supply systems, conductors and performance of transmission lines.	4	C, P
3	Calculate the sag and tension in overhead lines with wind & ice loading, potential distribution over a string of insulators, string efficiency and its improvement.	3	C, P
4	Calculate the inductance and capacitance of single phase, three phase lines with symmetrical and unsymmetrical spacing including effect of earth on capacitance of transmission lines.	3	C, P
5	Calculate the resistance and capacitance parameters of different types of cables including grading of cables.	3	C, P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	3	2	-	-	1	-	-	-	-	1	3	1
CO-2	3	3	3	2	-	-	-	-	-	-	-	1	3	1
CO-3	3	3	3	2	-	-	-	-	-	-	-	1	3	1
CO-4	3	3	3	2	-	-	-	-	-	-	-	1	3	1
CO-5	3	3	3	2	-	-	-	-	-	-	-	1	3	1
Target Level	3	2.8	3	2	-	-	1	-	-	-	-	1	3	1

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Control System (KEE-502)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Calculate the transfer function for the operation of open loop and closed loop control systems.	3	C, P
2	Evaluate the performance of basic control systems in the time domain.	5	C, P
3	Analyze the stability of linear time-invariant systems in time domain using Routh Hurwitz criterion and root locus technique.	4	C, F, P
4	Analyze the stability of linear time-invariant systems in frequency domain using Nyquist criterion and Bode plot.	4	F, P, M
5	Design different types of compensators to achieve the desired performance of control System by root locus and Bode plot method.	6	P, M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	2	3	1	1	-	-	-	1	3	3	3
CO-2	3	3	2	2	3	1	1	-	-	-	1	3	3	3
CO-3	3	3	2	2	3	1	1	-	-	-	1	1	3	3
CO-4	3	3	2	2	3	1	1	-	-	-	1	1	3	3
CO-5	3	3	2	2	3	1	1	-	-	-	1	1	3	3
Target Level	3	3	2	2	3	1	1	-	-	-	1	1.8	3	3

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Electrical Machines-II (KEE-503)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the performance of the synchronous machines using voltage regulation methods, voltage and frequency control, load sharing and parallel operation	4	M
2	Analyze the performance of salient pole synchronous machine using two reaction theory and effect of varying field current at different loads	4	P
3	Analyze the performance of induction machine using phasor diagram and torque slip characteristics	4	P
4	Analyze the performance of induction machine using different speed control methods	4	M
5	Analyze the performance of single-phase induction machine using no-load and block rotor test and different starting methods	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	2	3	-	-	-	-	1	1	3	3	3
CO-2	3	3	3	3	3	-	-	-	-	1	2	3	3	3
CO-3	3	3	3	3	2	-	-	-	-	1	1	3	3	3
CO-4	3	3	3	3	3	-	-	-	-	1	1	3	3	3
CO-5	3	3	2	2	3	-	-	-	-	1	1	3	3	3
Target Level	3	3	2.6	2.6	2.8	-	-	-	-	1	1.2	3	3	3

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Robotics (KEE-051)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Express the basic terminology used in robotics.	2	C
2	Explore 3-D translation & orientation of robot arm kinematics.	3	P
3	Classify different robotic actuators and power transmission systems.	4	C
4	Classify the types of robotic grippers used in automation industries.	4	P
5	Describe robotic sensorics systems and their interfacing with robot controllers.	1	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	1	1	1	-	-	2	-	-	-	-	1	-	-
CO-2	3	3	2	1	-	2	3	-	-	1	2	2	1	2
CO-3	3	1	2	1	-	-	3	-	-	-	-	2	-	-
CO-4	1	2	1	1	-	-	2	-	-	-	-	1	-	-
CO-5	3	3	3	2	2	2	3	-	1	2	3	3	2	3
Target Level	2.4	2	1.8	1.1	2	2	2.6	-	1	1.5	2.5	1.8	1.5	2.5

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Sensors & Transducers (KEE-052)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Complete understanding of sensors used in industry for measurement of displacement, force and pressure.	2	C
2	Understanding of sensors in industry for measurement of temperature, position, accelerometer, vibration sensor, flow and level.	2	C
3	Understand image processing and analysis, training the vision system in a pick and place robot.	2	C
4	Complete understanding of concepts related to signal conditioning and data acquisition methods	2	C
5	Understand the usage of smart sensors and their applications in automation systems	2	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	1	2	1	1	-	1	-	1	-	-	2	2	1
CO-2	2	1	2	2	1	-	1	-	-	-	-	1	2	2
CO-3	2	1	1	1	1	-	1	-	1	-	-	2	1	1
CO-4	1	2	1	1	2	-		-	1	-	-	1	2	2
CO-5	2	1	1	1	1	-	1	-	1	-	-	1	2	2
Target Level	1.80	1.20	1.40	1.20	1.20	-	1.00	-	1.00	-	-	1.40	1.80	1.60

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Neural Network & Fuzzy System (KEE-056)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand and analyze the concepts of learning in neural network.	4	C
2	Apply neural network for designing linear and non-linear type problems.	3	C
3	Understand and analyze the concepts of fuzzy logic.	4	M
4	Apply fuzzy logic for designing control systems.	3	M
5	Understand the concepts of neuro-fuzzy networks and apply neuro-fuzzy systems for solving conventional problems.	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	1	2	1	1	-	1	-	1	-	-	2	2	1
CO-2	2	1	2	2	1	-	1	-	-	-	-	1	2	2
CO-3	2	1	1	1	1	-	1	-	1	-	-	2	1	1
CO-4	1	2	1	1	2	-	-	-	1	-	-	1	2	2
CO-5	2	1	1	1	1	-	1	-	1	-	-	1	2	2
Target Level	1.80	1.20	1.40	1.20	1.20	-	1.00	-	1.00	-	-	1.40	1.80	1.60

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Analog & Digital Communication (KEE-058)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Remember the concept of Amplitude Modulation in communication system.	1	C
2	Understand the concept of Frequency & Phase modulation.	2	C
3	Apply the concept of Pulse Modulation Techniques.	3	P
4	Analyze the concept of Digital Modulation Techniques and their use in communication system.	4	P
5	Analyze the concept of Information Theory in Communication Engineering.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	2	3	1	-	-	-	-	-	-	2	2	2
CO-2	3	3	2	3	2	-	-	-	-	-	-	3	2	2
CO-3	3	3	3	3	3	-	-	-	-	-	-	3	2	3
CO-4	3	3	3	3	3	-	-	-	-	-	-	3	2	3
CO-5	2	2	2	2	1	-	-	-	-	-	-	2	2	1
Target Level	2.6	2.6	2.4	2.8	2.0	-	-	-	-	-	-	2.6	2.0	2.2

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Power System Lab-I (KEE-551)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Formulate a program/simulation model for calculation of various parameters of transmission line	6	P
2	Formulate a program to determine the ABCD constant of transmission line	6	P
3	Formulate a program /simulation model to determine the Ferranti effect in transmission line	6	P
4	Formulate a program /simulation model to determine the sag & tension and string efficiency of insulator of transmission line	6	P
5	Formulate a program /simulation model to determine the skin effect, and ground clearance of transmission line	6	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	2	1	2	-	-	-	1	1	-	2	2	-
CO-2	3	2	2	1	2	-	-	-	1	1	-	2	2	-
CO-3	3	2	2	1	2	-	-	-	1	1	-	2	2	-
CO-4	3	2	2	1	2	-	-	-	1	1	-	2	2	-
CO-5	3	2	2	1	2	-	-	-	1	1	-	2	2	-
Target Level	3	2	2	1	2	-	-	-	1	1	-	2	2	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Control System Lab (KEE-552)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the characteristics of control system components like ac servo motor, synchro, potentiometer, servo voltage stabilizer.	4	P
2	Analyze the performance of control systems with different controllers / compensators.	4	P
3	Analyze the behavior of dc motor in open loop and closed loop.	4	P
4	Analyze the system's stability with different methods of time & frequency domain using MATLAB software.	4	P,M
5	Apply the conversion of transfer functions into state space & vice versa and check the performance parameters in time domain response of a second order system for step input via MATLAB software.	3	P,M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	2	2	2	2	2	-	-	2	2	2	2	-
CO-2	2	2	2	2	2	2	2	-	-	2	2	2	2	-
CO-3	2	2	2	2	2	2	2	-	-	2	2	2	2	-
CO-4	2	2	2	2	2	2	2	-	-	2	2	2	2	-
CO-5	2	2	2	2	2	2	2	-	-	2	2	2	2	-
Target Level	2	2	2	2	2	2	2	-	-	2	2	2	2	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Electrical Machines-II Lab (KEE-553)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Evaluate the parameters and performance of the synchronous machines.	4	M
2	Synchronize two alternators for parallel operation.	4	M
3	Evaluate the parameters and performance of the three phase induction motors.	4	M
4	Evaluate the performance of single-phase induction motor under different operating conditions	4	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	3	3	1	-	-	3	2	2	3	2	-
CO-2	3	3	2	3	3	1	-	-	3	2	2	3	2	-
CO-3	3	3	2	3	3	1	-	-	3	2	2	3	2	-
CO-4	3	3	2	3	3	1	-	-	3	2	2	3	2	-
CO-5	3	3	2	3	3	1	-	-	3	2	2	3	2	-
Target Level	3	3	2	3	3	1	-	-	3	2	2	3	2	-

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 5th

Subject Name (Code): Mini Project or Internship Assessment (KEN-554)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand research papers for exploring new fields and review reporting.	2	C
2	Evaluate new directions of various cutting-edge technologies.	5	P
3	Create various skills by preparing detailed project report including all the findings.	6	C, P
4	Effective communication by making an oral presentation to show the findings.	3	P
5	Create facts related knowledge by preparing detailed report including outcomes.	6	C, P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	2	1	-	-	-	3	2	2	3	3
CO-2	3	3	3	3	3	1	-	-	-	3	2	2	3	3
CO-3	3	3	3	3	2	1	-	-	-	3	2	2	3	3
CO-4	3	3	3	3	2	1	-	-	-	3	2	2	3	3
CO-5	3	3	3	3	3	1	-	-	-	3	2	2	3	3
Target Level	3.0	3.0	3.0	3.0	2.4	1	-	-	-	3.0	2.0	2.0	3.0	3.0

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Power System-II (KEE-601)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the role of components and one line diagram in power system studies including network under both balanced and unbalanced fault conditions.	4	C, P
2	Perform load flow analysis of an electrical power network.	4	C, P
3	Apply the concept of travelling wave theory in transmission lines operations.	3	C, P
4	Analyze the steady state and transient state stability of the power system under various conditions.	4	C
5	Understand the operating principle and applications of various types of relays and circuit breakers in power systems.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	1	-	-	-	-	-	-	1	-	3	-
CO-2	3	3	3	1	-	-	-	-	-	-	1	-	3	-
CO-3	3	3	2	1	-	-	-	-	-	-	1	-	3	-
CO-4	3	3	3	1	-	-	-	-	-	-	1	-	3	-
CO-5	3	3	2	1	-	-	-	-	-	-	1	-	3	-
Target Level	3	3	2.4	1	-	-	-	-	-	-	1	-	3	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Microprocessor & Microcontroller (KEE-602)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the basic architecture of 8085 & 8086 microprocessors .	2	C
2	Illustrate the programming model of microprocessors using 8085 microprocessor.	2	C
3	Illustrate the interfacing of different external peripheral devices with 8085 microprocessor.	2	C
4	Understand the architecture of 8051 microcontroller.	2	C
5	Illustrate advance level microprocessor & microcontroller for different applications	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	1	-	-	-	-	2	-	-	2	2	2
CO-2	3	3	2	2	1	-	-	-	2	-	-	2	2	2
CO-3	3	3	2	2	1	-	-	-	2	-	-	2	2	2
CO-4	3	3	3	3	-	-	-	-	2	-	-	2	3	2
CO-5	3	3	2	2	1	-	-	-	2	-	-	2	2	2
Target Level	3	3	2.2	2	1	-	-	-	2	-	-	2	2.2	2

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Power Electronics (KEE-603)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the characteristics as well as the operation of BJT, MOSFET, IGBT, SCR, TRIAC and GTO and identify their use in the power switching applications	3	C
2	Analyze the non-isolated DC-DC converters and identify their use in different Power electronics applications.	3	P
3	Evaluate the performance parameters of phase controlled rectifiers	5	P
4	Analyze single-phase ac voltage controllers, cyclo-converters and their various applications	4	P
5	Analyze the single-phase and three phase bridge inverters, Voltage source inverters and current source inverters	6	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	1	2	2	-	-	-	-	-	-	2	2	2
CO-2	3	3	2	3	3	1	-	-	-	1	1	2	3	2
CO-3	3	3	2	3	2	1	-	-	-	1	1	2	2	3
CO-4	3	3	2	3	3	1	-	-	-	1	2	2	2	3
CO-5	3	3	2	3	2	2	-	-	-	2	2	3	3	1
Target Level	3.00	3.00	1.8	2.8	2.40	1.25	-	-	-	1.25	1.5	2.20	2.4	2.2

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Special Electrical Machines (KEE-061)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the concepts of the construction, performance and control of poly phase AC machines.	2	C
2	Analyze the operation, performance and characteristics of SEIG, DEIG and two phase AC servomotors.	3	C
3	Understand the construction, working, performance of different types of motors used in industrial application like stepper motor, switched reluctance motor etc.	2	C
4	Apply the concept of permanent magnet machine and single phase synchronous motor.	3	C, P
5	Understand the working of single phase commutator motor and evaluate the characteristics of repulsion motor and linear induction motor.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	1	2	-	1	2	-	-	1	-	3	3	3
CO-2	3	2	1	2	-	1	2	-	-	1	-	3	3	3
CO-3	3	2	1	2	-	1	2	-	-	1	-	3	3	3
CO-4	3	2	1	2	-	1	2	-	-	1	-	3	3	3
CO-5	3	2	1	2	-	1	2	-	-	1	-	3	3	3
Target Level	3	2	1	2	-	1	2	-	-	1	-	3	3	3

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Embedded System (KEN-062)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze concepts of embedded systems, memory classification, 8051 architecture and its instructions.	4	M
2	Apply I/O programming, timers, serial communication and concept of 8051 interrupts.	3	C
3	Differentiate types of embedded processor and there use in embedded system.	4	M
4	Analyze the RTOS applications in embedded system such as semaphores, mailbox, and the architecture of high-end processor.	4	M
5	Apply various communication protocols and demonstrate interfacing of microcontroller with various components such as LCD, motor, stepper motor and pushbuttons.	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	2	2	2	-	-	-	-	1	1	1
CO-2	3	3	3	3	3	3	2	-	-	1	2	2	1	2
CO-3	3	3	3	2	2	1	2	-	-	1	-	1	-	1
CO-4	3	3	3	2	2	2	3	-	-	-	1	1	2	1
CO-5	3	3	3	3	3	2	3	-	-	-	2	1	1	1
Target Level	3	3	3	2.4	2.4	2	2.4	-	-	1	1.67	1.2	1.25	1.20

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Understanding the Human Being Comprehensively (KOE-069)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the comprehensive human goal of life.	2	F,C
2	Understand the harmony of nature and existence.	2	F,C
3	Analyze the activities of self in its completeness.	4	F,C,P
4	Analyze the coexistence in all four orders of nature.	4	F,C,P
5	Analyze the human traditions from self to entire existence.	4	F,C,P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	-	-	-	-	-	3	3	3	3	3	3	3	-	-
CO-2	-	-	-	-	-	3	3	3	3	3	3	3	-	-
CO-3	-	-	-	-	-	3	3	3	3	3	3	3	-	-
CO-4	-	-	-	-	-	3	3	3	3	3	3	3	-	-
CO-5	-	-	-	-	-	3	3	3	3	3	3	3	-	-
Target Level	-	-	-	-	-	3	3	3	3	3	3	3	-	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Power System-II Lab (KEE-651)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Compare the different performance characteristics of various relays including data provided by manufacturers.	5	P
2	Develop programs for load-flow solutions using NR and GS methods.	6	P
3	Develop programs for various types of faults in power network.	6	P
4	Demonstrate different numerical integration methods and factors influencing transient stability.	3	P
5	Determine the effect of load in long transmission line.	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	-	-	-	-	2	1	-	-	3	-
CO-2	3	3	3	2	3	-	-	-	2	1	-	-	3	-
CO-3	3	3	3	2	3	-	-	-	2	1	-	-	3	-
CO-4	3	3	2	2	2	-	-	-	2	1	-	-	3	-
CO-5	3	3	2	2	-	-	-	-	2	1	-	-	3	-
Target Level	3	3	2.6	2	2.6	-	-	-	2	1	-	-	3	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Microprocessor & Microcontroller Lab (KEE-652)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the microprocessor system.	2	C
2	Apply the concept of flow chart for understanding the data flow.	3	P
3	Apply the concept of assembly language to program microprocessor-based system.	3	P
4	Interfacing different peripheral devices with the microprocessor.	4	P
5	Analyze and Building logic for microprocessor-based system.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	-	-	-	-	-	-	-	2	-	-	1	2	2
CO-2	3	1	2	1	1	-	-	-	2	-	-	1	2	2
CO-3	3	2	2	1	1	-	-	-	2	-	-	1	2	2
CO-4	3	3	2	2	1	-	-	-	2	-	-	1	2	2
CO-5	3	3	2	2	1	-	-	-	2	-	-	1	2	2
Target Level	2.8	2.25	2	1.5	1	-	-	-	2	-	-	1	2	2

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 6th

Subject Name (Code): Power Electronics Lab (KEE-653)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Investigate and simulate rectifier circuit	4	P
2	Investigate and simulate inverter circuit	4	P
3	Investigate and simulate chopper circuit	4	P
4	Investigate and simulate cycloconverter	4	P
5	Investigate and simulate rectifier circuit	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	3	3	3	2	2	2	2	2	2	2	2	2	2
CO-2	2	3	2	2	2	2	2	2	2	2	2	2	2	2
CO-3	3	3	3	2	3	2	2	2	2	3	2	2	3	2
CO-4	3	3	3	2	2	2	2	2	3	2	2	2	2	2
CO-5	2	3	3	3	2	2	2	2	2	2	2	2	2	2
Target Level	2.5	3	2.75	2.25	2.25	2	2	2	2.25	2.25	2	2	2.25	2

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Introduction to Smart Grid (ROE-072)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the basic concepts, definitions, functions and opportunities of Smart Grid.	2	C
2	Analyze Smart Meters, AMR, Hybrid Vehicles, V2G and Automation.	4	P
3	Evaluate the concept of various Smart Grid Technologies.	5	M
4	Evaluate the concept of Microgrid and Distributed Energy Resources.	5	M
5	Evaluate Power Quality issues and Management in Smart Grid.	5	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	3	2	3	2		1			2	2	3	1	2
CO-2	3	3	2	3	3		2			3	2	3	3	3
CO-3	2	3	3	3	2		2			2	3	3	2	2
CO-4	3	3	3	2	3		2			3	3	3	3	3
CO-5	3	3	3	3	3		2			3	3	3	3	3
Target Level	2.6	3	2.6	2.8	2.6		1.8			2.6	2.6	3	2.4	2.6

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Understanding the Human Being Comprehensively (UHBC) (ROE-074)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the comprehensive human goal of life.	2	C,F
2	Understand the harmony of nature and existence.	2	C,F
3	Analyze the activities of self in its completeness.	4	F,P
4	Analyze the coexistence in all four orders of nature.	4	C,F
5	Analyze the human traditions from self to entire existence.	4	C,F

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1						3	3	3	3	3	3	3		
CO-2						3	3	3	3	3	3	3		
CO-3						3	3	3	3	3	3	3		
CO-4						3	3	3	3	3	3	3		
CO-5						3	3	3	3	3	3	3		
Target Level						3	3	3	3	3	3	3		

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Utilization of Electrical Energy & Electric Traction (REE-071)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand different types of electric heating.	2	C
2	Analyze concept of electric welding and electrolyte process.	3	P
3	Design of interior and exterior lighting systems- illumination levels for various purposes light fittings- factory lighting- flood lighting- street lighting.	6	M
4	Apply concepts related to the fundamental concepts of electric traction.	3	P
5	Understand to apply the knowledge of power electronics converters in Electric Traction.	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	2	2	2	2	-	-	-	-	2	2	2	-
CO-2	3	2	2	2	2	2	-	-	-	-	2	2	2	-
CO-3	3	3	3	2	2	2	-	-	-	-	2	2		-
CO-4	3	3	2	2	2	2	-	-	-	-	2	2	1	-
CO-5	3	2	2	2	2	2	-	-	-	-	2	2	1	-
Target Level	2.80	2.40	2.20	2.00	2.00	2.00	-	-	-	-	2.00	2.00	1.50	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Energy efficiency and conservation (REE-076)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply the energy conservation techniques in the surroundings and industries and familiarization with energy conservation legislation.	2	P
2	Analyze the aim and strategy of energy audit that can use the instruments for it, and explain HVAC systems.	4	P
3	Understand concept, scope, evolution, strategy, and application of Demand Side Management (DSM).	2	C
4	Apply the concept of calculation and control of various parameters of voltage and reactive power.	3	P
5	Analyze load scheduling, testing and controlling of energy-efficient motors, and also different parameters, control of lighting system.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	2	2	2					1	2	2	2	
CO-2	2	2	2	2	2					1	2	2	2	
CO-3	2	2	2	2	2					1	2	2	2	
CO-4	2	2	2	2	2					1	2	2	2	
CO-5	3	3	3	3	3					1	2	2	2	
Target Level	2	2	2	2	2					1	2	2	2	

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Communication System (REN-701)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the concept of Amplitude modulation & demodulation, AM transmitters and receivers.	2	C
2	Understand the concept of Frequency modulation & demodulation, Noise in AM, and Noise in FM System.	2	C
3	Analyze Pulse Communication and Digital Modulation techniques.	4	C
4	Understand the concept of Radio Propagation and Satellite Communication.	2	C
5	Understand the concept of TV systems and Fiber Optical Communication systems	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	3							1	1	1
CO-2	3	3	3	3	3							1	2	1
CO-3	3	3	3	3	3							1	2	1
CO-4	3	3	3	3	3							1	1	1
CO-5	3	3	3	3	3							1	1	1
Target Level	3	3	3	3	3							1	1.4	1

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Power System Protection (REE-702)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the need for the protection of electric equipment and their protection schemes.	2	C
2	Describe different types of relays used for power system protection and its application	2	P
3	Identify the appropriate protection schemes for transmission line protection along with the concept of auto reclosing.	1	C
4	Understand the concept of arc extinction theories of circuit breakers and CB testing methods	2	C
5	Illustrate feasible protection schemes for each main part of the power system and understand the operation of AC and D.C circuit breakers	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	1	2	1	1	1	-	-	-	-	-	2	1	-
CO-2	2	1	2	1	2	2	-	-	-	-	-	2	2	-
CO-3	2	1	2	1	2	2	-	-	-	-	-	2	2	-
CO-4	2	1	2	1	1	1	-	-	-	-	-	2	1	-
CO-5	2	1	2	1	2	2	-	-	-	-	-	2	2	-
Target Level	2	1	2	1	1.6	1.6	-	-	-	-	-	2	1.6	-

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Industrial Automation & PLC Lab (REE-751)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand automation, PLC, I/O modules of PLC, Programming languages and instructions of PLC	2	C
2	Analyze Ladder diagram concept to test digital logic gates, Boolean expression, Demorgan's theorem."	3	P
3	Understand the Ladder program for DOL starter, timers, and counters	2	C
4	Understand evolution and architecture of DCS, hierarchical control in DCS, programming DCS	2	C
5	Explain the concept of basic digital electronics and data manipulation, basic PLC circuits for entry-level PLC applications.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	3	1	1	-	2	3	3	3	3	3
CO-2	3	3	3	3	3	1	1	-	2	3	3	3	3	3
CO-3	3	3	3	3	3	1	1	-	2	3	3	3	3	3
CO-4	3	3	3	3	3	1	1	-	2	3	3	3	3	3
CO-5	3	3	3	3	3	1	1	-	2	3	3	3	3	3
Target Level	3.00	3.00	3.00	3.00	3.00	1	1	-	2.00	3.00	3.00	3.00	3.00	3.00

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Power System Lab (REE-752)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Determine the direct axis reactance (X_d), quadrature axis reactance (X_q), sub transient direct axis reactance and sub transient quadrature axis reactance of a salient pole alternator.	5	P
2	Analyze the characteristic of IDMT over current relay & percentage differential relay	4	P
3	Understand the concept to locate fault in cables.	2	C
4	Determine the break down voltage of transformer oil.	5	P
5	Estimate load flow analysis, transmission line performance of power system, symmetrical fault and unsymmetrical fault analysis using MATLAB.	5	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	1	1	2								2	2	
CO-2	3	2	2	2								2	3	
CO-3	3	1	1	1								2	3	
CO-4	3	2	2	3								2	3	
CO-5	3	3	2	3	3							2	3	
Target Level	3	1.8	1.6	2.2	3							2	2.8	

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Industrial Training (REN-753)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze comprehensive learning platform to students where they can enhance their employ ability skills and become job ready along with real corporate exposure.	4	M
2	Apply skills to enhance students' knowledge in one particular technology.	3	M
3	Apply practical skills to Increase self-confidence of students and helps in finding their own proficiency	3	P
4	Evaluate leadership ability and responsibility to perform or execute the given task.	5	M
5	Evaluate the industrial exposure to provide learners hands on practice within a real job situation.	5	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	2	3	3	2	2	3	2	3	2	3	2	3
CO-2	2	2	3	3	3	2	2	2	3	3	3	3	2	2
CO-3	3	2	2	3	3	3	2	3	3	3	3	3	2	3
CO-4	2	2	3	3	3	3	3	2	2	3	3	3	2	2
CO-5	3	2	3	2	3	3	2	3	2	3	2	3	2	3
Target Level	2.4	2	2.6	2.8	3	2.6	2.2	2.6	2.4	3	2.6	3	2	2.6

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 7th

Subject Name (Code): Project-1 (REN-754)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Demonstrate a sound technical knowledge of their selected project topic.	2	P
2	Identification of problem, interpretation and solution.	3	C
3	Formulate engineering solutions to complex problems utilizing a systems approach.	6	M
4	Design and Develop an engineering project and Communicate with engineers and the community at large in written and oral forms.	6	M
5	Demonstrate the knowledge, skills and attitudes of a professional engineer as a team.	2	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	2	2	1	2	2	2	2	2	2	2	2
CO-2	2	3	2	2	2	1	2	2	2	2	2	2	2	2
CO-3	3	3	3	3	3	2	2	2	2	2	2	2	2	3
CO-4	2	3	3	2	2	3	2	2	2	3	3	3	3	3
CO-5	2	2	2	2	2	3	2	2	3	3	3	2	3	3
Target Level	2.4	2.8	2.4	2.2	2.2	2	2	2	2.2	2.4	2.4	2.2	2.4	2.6

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 8th

Subject Name (Code): Renewable Energy Resources (ROE-086)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand various non-conventional energy resources and their availability along with knowledge on Solar Cells	2	C
2	Understand solar radiation, flat plate collectors and focusing type collector along with solar thermal power plants knowledge.	2	M
3	Analyze Geothermal Energy, Magneto-hydrodynamics and Fuel Cells	4	C
4	Analyze thermo-electrical and thermionic Conversions and wind energy	4	M
5	Understand Bio-mass, Ocean Thermal Energy Conversion and Wave and Tidal Wave	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	1	1	3	2	3			1		2		
CO-2	2	3	3	2	3	3	3			1		3		2
CO-3	3	3	3	2	3	2	3			1		2		1
CO-4	2	3	3	2	3	3	3			1		3		1
CO-5	3	3	3	1	2	3	3			1		3		2
Target Level	2.6	3	2.6	1.6	2.8	2.6	3			1		2.6		1.5

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 8th

Subject Name (Code): Introduction to Power Quality & FACTS (REE-081)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the concept of different types of compensators in the power system.	4	P
2	Evaluate adequate knowledge in the static and dynamic response of SVC.	5	M
3	Understand basic knowledge in the operation of TCSC controller circuit for enhancing the transmission capability and modeling for stability studies.	2	C
4	Evaluate the operation of STATCOM, UPFC, and modeling of UPFC for load flow studies.	5	M
5	Analyze the current and voltage harmonics: measurement of harmonics; effects of harmonics on Transformers, AC Motors, Capacitor Banks, Cables, and Protection Devices	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	1	3	2	1	1					3	2	3	3	3
CO-2	3	2	3	3	2					3	2	3	3	3
CO-3	3	2	3	3	2					2	2	3	3	3
CO-4	3	2	3	3	2					2	2	3	3	3
CO-5														
Target Level	2.5	2.25	2.75	2.5	1.75					2.5	2	3	3	3

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 8th

Subject Name (Code): Optical Fiber Communication (REN-080)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the optical fiber communication system & principle of optical fiber wave guide	2	C
2	Apply the concept of Transmission Characteristics, Attenuation & losses in optical fiber communication system.	3	P
3	Evaluate the basic concepts Einstein relations and population inversion optical feedback, direct - indirect band gap, Hetero junction & DH structure & Drawbacks.	5	P
4	Apply the concept of photo detections, characteristics of photo detectors, photoconductors & direct detection receiver performance.	3	P
5	Analyze the principal Components of an optical fiber communication system and Optical Power meters.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	2								1	1
CO-2	3	3	3	2	2									1
CO-3	3	3	3	2	2								1	1
CO-4	3	3	3	2	2									1
CO-5	3	3	3	2	2								1	1
Target Level	3	3	3	2	2								1	1

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 8th

Subject Name (Code): Power Theft & Energy Management (REE-086)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Illustrate the concepts of Energy Demand and Supply, Energy Crisis and Power Theft (National and Global Scenario)	4	C
2	Identify the basic techniques for tempering and Power Theft in Electro-mechanical and Electronic Energy Meters.	4	P
3	Analyse the different methods of Energy Conservation, Energy Audit and Site Surveys.	4	P
4	Analyse the Estimated Electrical Load, Lighting Management and Demand Side Management.	4	P
5	Illustrate the concepts of Energy Demand and Supply, Energy Crisis and Power Theft (National and Global Scenario)	4	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	3	2	3	2		1	1		2	2	2	2	2
CO-2	3	3	2	3	3		1	1		3	2	2	2	2
CO-3	2	3	3	3	2		1	1		2	3	3	2	2
CO-4	3	3	3	2	3		1	1		3	3	2	2	2
Target Level	2.5	3	2.5	2.75	2.5		1	1		2.5	2.5	2.25	2	2

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 8th

Subject Name (Code): GD and Seminar (REN-851)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Demonstrate the knowledge, skills and attitudes of a professional engineer as a team.	2	P
2	Analyze and explore creative avenues of expression, solve problems, and make consequential decisions.	4	P
3	Analyze to improve the mass communication by GD and seminar.	4	P
4	Create an opportunity to exercise their rights to express them.	5	P
5	Evaluate the purpose of life and meaning through transformation experiences that foster an understanding of self and global perspectives.	6	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	3	3	2	3	3	3	3	3		2	1	
CO-2	3	3	3	2	2	2	2	3	3	3		2	1	
CO-3	3	3	3	2	2	2	2	3	3	3		2	1	
CO-4	3	2	2	2	3	3	2	3	3	3		2	1	
CO-5	3	2	2	2	2	2	2	3	3	3		2	1	
Target Level	3.00	2.40	2.60	2.20	2.20	2.40	2.20	3.0	3.0	3.0	0.0	2.0	1.0	0.0

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Session: 2020-21

Semester: 8th

Subject Name (Code): Project-2 (REN-852)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Demonstrate a sound technical knowledge of their selected project topic.	2	P
2	Identification of problem, interpretation and solution.	3	C
3	Formulate engineering solutions to complex problems utilizing a systems approach.	6	M
4	Design and Develop an engineering project and Communicate with engineers and the community at large in written and oral forms.	6	M
5	Demonstrate the knowledge, skills and attitudes of a professional engineer as a team.	2	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	2	2	1	2	2	2	2	2	2	2	2
CO-2	2	3	2	2	2	1	2	2	2	2	2	2	2	2
CO-3	3	3	3	3	3	2	2	2	2	2	2	2	2	3
CO-4	2	3	3	2	2	3	2	2	2	3	3	3	3	3
CO-5	2	2	2	2	2	3	2	2	3	3	3	2	3	3
Target Level	2.4	2.8	2.4	2.2	2.2	2	2	2	2.2	2.4	2.4	2.2	2.4	2.6

BL-1: Remember

BL-2: Understand

BL-3: Apply

BL-4: Analyze

BL-5: Evaluate

BL-6: Create

F: Factual

C: Conceptual

P: Procedural

M: Metacognitive



The End