KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220813
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		1st SEMESTER	
1	Engineering Maths-I	15MAT11.1	To apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.
		15MAT11.2	To use partial derivatives to calculate rates of change of multivariate functions.
		15MAT11.3	To analyze position, velocity, and acceleration in two or three dimensions using the calculus of vector valued functions.
		15MAT11.4	To recognize and solve first-order ordinary differential equations, Newton's law of cooling.
		15MAT11.5	To use matrices techniques for solving systems of linear equations in the different areas of Linear Algebra
2	Engineering Physics	15PHY12.1	Learn and understand intricacies of matter and energy which is essential to explore the role of subatomic particles in understanding properties of matter at macro, micro and nano level.
		15PHY12.2	Exploring the inadequacies of classical theory and to apply the principles of quantum mechanics which suites real time applications.
		15PHY12.3	Learn the niceties of technologically important material such as conductor, semiconductor and superconductor, their potential properties in understanding there use in engineering applications.
		15PHY12.4	Understand the physics of lasers and optical fibers and to appreciate their role in modern instruments.
		15PHY12.5	Understand the basics of crystal structures and apply to engineering field.
		15PHY12.6	Recognize the significance of shock waves and its applications in aerodynamics and aerospace engineering.
3	Elements of Civil Engg. & Mechanics	15CIV13.1	Know the basics of Civil Egineering, its scope of study, knowledge about roads,bridges and dams
		15CIV13.2	Comprehend the action of Forces, Moments and other loads on systems of rigid bodies.
		15CIV13.3	Compute the reactive forces and the effects that develop as a result of the external loads
		15CIV13.4	Locate the Centroid and compute the Moment of Inertia of regular cross sections
		15CIV13.5	Express the relationship between the motion of bodies
4	Elements of Mechanical Engineering	15EME14.1	students shall demonstrate knowledge associated with various energy sources, formation of steam
		15EME14.2	student shall demonstrate knowledge associated with prime movers such as turbines and IC engines
		15EME14.3	students shall demonstrate knowledge associated with various metal removing process and robotics automation
		15EME14.4	students shall understanding of application and usage of various engineering materials
		15EME14.5	students shall demonstrate knowledge associated with refrigeration and air conditioning systems
5	Basic Electrical Engineering	15ELE15.1	Students will be able to comprehend the basic concept of AC and DC circuit
		15ELE15.2	Explain the working principle and construction of AC and DC machines
		15ELE15.3	Explain the working principle and construction of transformer
		15ELE15.4	Understand the electrical wiring concepts, earthing, domestic protection devices and electric shock
6	Workshop Practice	15WSL16.1	The Metal removel process by fitting practice and preparation of joints using appropriate fitting tools
		15WSL16.2	Preparation of welded joints
		15WSL16.3	Development of surfaces and forming models by soldering job.
7	Engg. Physics Lab.	15PHYL17.1	To recognize the importance of light by exploring its interaction with matter and in realizing its characteristic properties.
		15PHYL17.2	Understanding of mechanical properties of the material by the application of stress.
		15PHYL17.3	Appreciating the significance of elementary electric circuits in the functioning of various electric /electronic devices and gaining understanding of physics of the materials.
		15PHYL17.4	Design and implementation of electronic circuits to gain better understanding of physics of semiconductor devices.
		15PHYL17.5	Appreciating the role of Quantum mechanics in exploring the electrical properties of the materials.

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220813
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		2nd SEMESTER	
8	Engineering Maths-II	15MAT21.1	To solve differential equations of electrical circuits, forced oscillation of mass spring and elementary heat transfer
		15MAT21.2	To solve partial differential equations fluid mechanics, electromagnetic theory and heat transfer
		15MAT21.3	To evaluate double and triple integrals to find area, volume, mass and moment of inertia of plane and solid region.
		15MAT21.4	To use curl and divergence of a vector valued functions in various applications of electricity, magnetism and fluid flows
		15MAT21.5	To use Laplace transforms to determine general or complete solutions to linear ODE
9	Engineering Chemistry	15CHE22.1	Knowledge on the types of electrodes, electrochemical and concentration cells, classical and modern batteries and fuel cells
		15CHE22.2	Knowledge on the causes and effects of corrosion of metals and control of corrosion. Modification of the surface properties of metals to develop resistance to corrosion, wear, tear, impact, etc. by electroplating and electroless plating.
		15CHE22.3	Knowledge on the importance of energy conservation in the context of energy crisis, fuel properties and propose some amicable alternatives for energy which are also sustainable.
		15CHE22.4	Knowledge on the replacement of conventional materials by polymers for various applications
		15CHE22.5	Knowledge on the boiler troubles, sewage treatment and desalination of sea water and overviewing of synthesis, properties and applications of nanomaterials.
10	Programming in C & Data Structures	15PCD23.1	Achieve knowledge of design and development of problem solving skills.
		15PCD23.2	Understand the basic principles of programming in C language.
		15PCD23.3	Design and develop modular programming skills.
		15PCD23.4	Effective utilization of memory using pointer technology,
		15PCD23.5	Understand the basic concepts of preprocessor directives, data structures & file operations
11	Computer Aided Engineering Drawing	15CED24.1	Students will be able to demonstrate the usage of CAD software.
		15CED24.2	Students will be able to visualize and draw projection of points and lines
		15CED24.3	Students will be able to visualize and draw Orthographic projections, Sections of solids and Isometric views of solids
		15CED24.4	Students are evaluated for their ability in appl ying various concepts to solve practical problems related to engineering drawing
12	Basic Electronics	15ELN25.1	Understand the characteristics of PN Junction diode
		15ELN25.2	Understand the biasing methods of BJT and applications of BJT
		15ELN25.3	Discuss ideal and practical operational amplifier (op-amp) parameters and apply them to design various applications
		15ELN25.4	Describe the various types of modulation schemes and transducer applications
		15ELN25.5	Understand and apply the various Boolean Logic to build the combinational logics circuits and understand the applications of 8051 microcontrollers.
13	Computer Programming Lab.	15CPL26.1	Gaining knowledeg of variousparts of computers
		15CPL26.2	Able to draw flowchart and write algorithms
		15CPL26.3	Able design and development of C problem solving skills
		15CPL26.4	Able design and develop module programming skills
		15CPL26.5	Able tto trace and debug the program
14	Engineering Chemistry Lab.	15CHEL27.1	Students will have the knowledge in handling different types of instruments for analysis of materials using small quantities of materials involved for quick and accurate results
		15CHEL27.2	Students will have the knowledge in carrying out different types of titrations for estimation of concerned in materials using comparatively more quantities of materials involved for good results

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329.

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220813
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		3rd SEMESTER	
15	Engg. Maths - III	15MAT31.1	To know the use of periodic signals and to calculate Fourier series of periodic as well as non-periodic functions
		15MAT31.2	To find the infinite Fourier transform and Z-transform of various functions and its applications to solve difference equations
		15MAT31.3	To employ appropriate numerical methods to solve algebraic and transcendental equations
		15MAT31.4	To calculate the values of unknowns by various numerical methods and solve the definite integrals by various numerical methods
		15MAT31.5	To apply vector integral theorems to solve the integrals and to find the extremal of the functional
16	Electric Circuit Analysis	15EE32.1	Understand different transformation techniques, laws and methods to solve simple/complex electrical circuits
		15EE32.2	Mathematically analyze few of DC/AC circuits with use of different reduction rules and theorems
		15EE32.3	understand network topologies and circuit behavior under resonance for both series and parallel
		15EE32.4	Determine different types of parameters for two port networks
		15EE32.5	Analyze the circuit under transient conditions for RLC loads
17	Transformer & Generators	15EE33.1	To understand the concept of transformer and their analysis
		15EE33.2	To suggest the suitable three phase transformer for a particular operation
		15EE33.3	To understand the concept of generator and evaluate their performance
		15EE33.4	To explain the requirement for parallel operation of transformers and synchronous generators
18	Analog Electronics	15EE34.1	Students will be able to Analyze the diode equivalent circuits and its application in rectifier circuits, clipping and clamping circuits
		15EE34.2	Analyze operating points and design for different biasing circuits with BJT and methods of bias stabilization
		15EE34.3	Modeling of BJT and FET using hybrid equivalent parameters and Re model for low frequencies.
		15EE34.4	Analyze, design and solve problems on BJT Amplifiers and Oscillators
19	Digital System Design	15EE35.1	Students will be able to Apply the knowledge of number system codes and Boolean algebra for the analysis and design of digital logic circuit. Apply the knowledge of the various design method to solve the problem of control circuit of a given input and output
		15EE35.2	Design and analyze various logic circuits like decoder, encoder, comparator, multiplexer, de-multiplexers etc
		15EE35.3	Design and analyze various logic circuit such as Flip-Flop, shift registers and mod counters
		15EE35.4	Apply the knowledge of design methods to solve problems on sequential circuit of multiple input/output and draw the state machine and analyze them
		15EE35.5	To provide the basic knowledge aboutVHDL and it's use
20	EE Measurements	15EE36.1	Capable of understanding the methods to find R, L and C by different techniques and concepts of units and dimensions.
		15EE36.2	Capable of understanding the different construction and operating principle of equipments used for measuring electrical quantities.
		15EE36.3	Capable of understanding the different principle of recorders and different displays used in the instrumentation system.
21	Electric Machines Lab -I	15EEL37.1	Conducting different test on transformers and synchronous machines and evaluation of their performance.
		15EEL37.2	Verify the parallel operation of two single phase transformers.
		15EEL37.3	Study the connection of single phase transformers for three phase operation and phase conversion
		15EEL37.4	Study of synchronous generator connected to infinite bus.
22	Electronics Lab	15EEL38.1	Able to Apply the knowledge of number system codes and Boolean algebra for the analysis and design of digital logic circuit. Apply the knowledge of the various design method to solve the problem of control circuit of a given input and output
		15EEL38.2	Design and analyze various logic circuits like full adder, parallel adder subtractor, code convertors like bcd to excess 3 ,binary to gra
		15EEL38.3	Design and analyze various logic circuit such as Flip-Flop, shift registers and mod counters
		15EEL38.4	Apply the knowledge of design methods to solve problems on sequential circuit of multiple input/output and draw the state machine and analyze them
		15EEL38.5	Apply the knowledge of design methods to solve problems on analog circuits

Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329.

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220815
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		4th SEMESTER	
23	Engg. Maths - IV	15MAT41.1	To solve higher order differential equation by various numerical techniques
		15MAT41.2	To solve the ordinary and partial differential equation by using special functions.
		15MAT41.3	To interpret the analyticity, calculate potential field residues and poles of complex potentials
		15MAT41.4	To calculate and analyze the probability distribution of the given statistical data
		15MAT41.5	To analyze statistical inference based on the sampling distribution
24	Power Generation & Economics	15EE42.1	Students will be able to describe the working of hydroelectric, steam, diesel, gas turbine and nuclear power plants and working of major equipment of the power plants.
		15EE42.2	Students will be able to classify various substations and explain the operation of different substation equipment.
		15EE42.3	Students will be able to understand the importance of grounding and different grounding methods used in practice.
		15EE42.4	Students will be able to explain the economic aspects of power generation and the importance of power factor improvement.
25	Transmission & Distribution	15EE43.1	Derive expression for sag and tension at all levels with the effect of wind and ice.
		15EE43.2	Understand concept of corona and derive expressions for methods of string efficiency for insulator.
		15EE43.3	Analyze different types of HV cables and derive expression for insulation resistance of cable.
		15EE43.4	Derive expressions for capacitance and inductance of 3 phase lines with equilateral and unsymmetrical spacing.
		15EE43.5	Derive expression for performance of all the transmission lines and classification of distribution system.
26	Electric Motors	15EE44.1	Students will be able to Explain the constructional features of motors and select a suitable drive for specific application
		15EE44.2	Students will be able to Analyze and assess the performance characteristics of DC motors by conducting suitable tests and control the speed by suitable method.
		15EE44.3	Students will be able to Explain the constructional features of Three Phase and Single phase induction Motors and assess their performance.
		15EE44.4	Students will be able to Explain the operation of Synchronous motor and special motors.
27	Electromagnetic Field Theory	15EE45.1	Student will be able to: Scalars and Vectors, Vector algebra, Cartesian co-ordinate system, Vector components and unit vectors Understand calculation of electric field and electric potential, capacitance for different charge geometries and able to solve problem based on that.
		15EE45.2	Learn and Calculate magnetic field magnetic vector potential, magnetic boundary condition, force calculation between current carrying wires.
		15EE45.3	Understand the concept of Faradays law, displacement current, thereby deriving the Maxwell's equations
		15EE45.4	Understand wave equations and its solution in free space, dielectric, conductor & poynting therom.
28	Opamp & Linear IC's	15EE46.1	Students will be able to Understand the basic operation of op-amp as AC amplifier.
		15EE46.2	Analyze design and solve problems on op-amp circuit stability and compensating methods.
		15EE46.3	Analyze design and solve problems on op-amp signal processing circuits.
		15EE46.4	Analyze design and solve problems on op-amp non-linear circuits and signal generators.
		15EE46.5	Analyze design and solve problems on op-amp active filters, voltage regulators.
29	Electric Machines Lab -II	15EEL47.1	Performance evaluation / Parameters of a DC Shunt Motor and Series Motor by different methods
		15EEL47.2	Speed control of DC Shunt Motor
		15EEL47.3	Performance evaluation / Parameters of a 1- ϕ and 3- ϕ Induction Motor by direct and indirect methods.
		15EEL47.4	The V and inverted V curves of an a Synchronous Motor
30	Opamp & Linear IC's Lab	15EEL48.1	Design & verify the operation of Op-amp
		15EEL48.2	Design & realize the frequency response of Op-amp.
		15EEL48.3	Design & realize the different converters, comparators, timers etc.,

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329.

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220813
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		5th SEMESTER	
31	Management & Entrepreneurship	15EE51.1	Students will be able to explain the field of management, managerial control in business, social responsibility of business and leadership following functions of management.
		15EE51.2	Students will be able to explain the role and importance of entrepreneur in economic development, small scale industries and business plans.
		15EE51.3	Students will be able to explain concepts of project management, development of project reports and implementation of same by following control techniques with the support of state and central level institutions.
32	Microcontroller	15EE52.1	Students will be able to understand the general aspects related to microcontroller, types, applications of 8051 etc. Architecture, Pin Diagram & Block Diagram of 8051 Microcontroller.
		15EE52.2	Addressing Modes, Instruction Set of 8051 microcontroller & able to write Assembly Program. Also Assembly & C program for interfacing 8051 with ADC, DAC, Stepper motor etc using 8255 also.
		15EE52.3	Timers, Interrupts & Serial Communication of 8051 & able to write Assembly & C programs.
33	Power Electronics	15EE53.1	Students will be able to identify different types of power electronic switches and are able to understand diode characteristics, its types and single phase full wave diode rectifier with different types of loads.
		15EE53.2	Students will be able to explain power transistors such as BJTs, MOSFETs and IGBTs; their characteristics and gate drives (or base drives).
		15EE53.3	Students will be able to Understand types of thyristors, their operation, gate characteristics and gate control requirements.
		15EE53.4	Students will be able to Explain the design and characteristics of thyristor controlled rectifiers. Also able to discuss principle of operation of basic types of DC-DC and DC-AC converters.
34	Signals And System	15EE54.1	Understand the rise of sources of signals, need of processing it through elementary signals and system and properties of system.
		15EE54.2	Analyze continues and discrete time system (CTS and DTS) in time domain.
		15EE54.3	Find Fourier and Inverse Fourier Transform of given CTS and DTS and analyze CTS and DTS systems with FT.
		15EE54.4	Find Z and Inverse Z Transform of given DTS signals and analyze CTS and DTS systems with ZT.
35	Elect. Engg,. Materials (P)	15EE552.1	Discuss electrical and electronics materials, their importance, classification and operational requiremen
		15EE552.2	Discuss conducting materials, dielectric materials, insulating materials, magnetic materials and superconducting materials used in engineering, their properties, classification and applications
		15EE552.3	Explain plastics, its properties and applications. also discuss materials used for opto-electronic devices
36	Programmable Logic Controller	15EE556.1	Students will be able to explain the hardware components, operating principle and programming languages of plc
		15EE556.2	Students will be able to analyze the programming of timers, counters and control instructions.
		15EE556.3	Students will be able to analyze the instruction for data manipulation, math operation and shift registers.
		15EE556.4	Students will be able to explain the various process controls, data communications and application of plc for scada system.
37	Microcontroller Lab	15EEL57.1	Write assembly language programs for data transfer, arithmetic, Boolean and logical instructions.
		15EEL57.2	Write ALP for code conversions.
		15EEL57.3	Write ALP using subroutines for generation of delays, counters, configuration of SFRs for serial communication and timers.
		15EEL57.4	Perform interfacing of stepper motor and dc motor for controlling the speed.
		15EEL57.5	Generate different waveforms using DAC interface.
38	Power Electronics Lab	15EEL58.1	Students will be able to verify the static characteristics of semiconductor devices such as MOSFET, IGBT, SCR & TRIAC and discuss their performance.
		15EEL58.2	Students will be able to demonstrate the triggering of SCR and commutation of SCR by different methods.
		15EEL58.3	Students will be able to verify the performance of single phase full wave controlled rectifier (with R and RL loads), AC voltage controller (with R and RL loads) and single phase full bridge inverter (with R load).
		15EEL58.4	Students will be able to demonstrate the speed control of a dc motor, universal motor and stepper motors.

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329.

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220813
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		6th SEMESTER	
39	Control System	15EE61.1	Students will be define, classify control systems and form mathematical model of physical systems.
		15EE61.2	Students will be able to apply block diagram manipulation and signal flow graph method to obtain transfer function of system.
		15EE61.3	Students will be able determine transient and steady state time response of a simple control system.
		15EE61.4	Students will be able to discuss stability analysis using RH criterion, Root locus, Bode plots and Nyquist plots.
		15EE61.5	Students will be able to design controller or compensator for given control system.
40	P S Analysis - I	15EE62.1	Represent the large power system as per unit impedance and reactance diagram and analyze for symmetrical faults
		15EE62.2	Understand and compute the sequence components of a given unbalnced vector. Futher understand the sequence impedance of individual power components and be able to construct sequence diagram for large power system
		15EE62.3	Analyze the given power system network under unsymmetrical faults
		15EE62.4	Understand the basic concept of stability and assess the same using EAC. Further analyze the 3 phase induction motor under unbalanced condition
41	Digital Signal Processing	15EE63.1	To understand the basics related to DSP and student should be able to compute and evaluate the DFT and IDFT of given DTS.
		15EE63.2	Student should be able to compute and evaluate the DFT and IDFT of given DTS by DIT and DIF-FFT algorithms.
		15EE63.3	To understand the basic related to analog filters and their design. Further students should able to design digital IIR and FIR filters and develop the computation structures of them.
42	Electrical Machine Design	15EE64.1	Understand the different electrical and magnetic materials & their properties used in electrical machine
		15EE64.2	Design DC Machines based on given specifications.
		15EE64.3	Design Transformers (1Φ,3Φ) based on given specifications
		15EE64.4	Design 3Φ Induction Motors based on given specifications.
		15EE64.5	Design Synchronous Machine based on given specifications.
43	Solar And Wind	15EE654.1	Students will be able to understand the necessity of renewable energy sources.
		15EE654.2	Students will be able to explain the concept of solar energy conversion & storage devices.
		15EE654.3	Students will be able to explain the solar pv system & its applications.
		15EE654.4	Students will be able to explain the wind energy conversion technique & its applications.
44	Sensors & Transducers	15EE662.1	Students will be able to discuss the need of transducers, their classification, advantages, disadvantages and working operation. Also discuss the recent trends in sensor technology and their selection.
		15EE662.2	Students will be able to discuss the basics of signal conditioning and their equipment. Also discuss the configuration of Data Acquisition System, data conversion, data transmission and Telemetry.
		15EE662.3	Students will be able to understand the measurement of various non-electrical quantities namely temperature, flow, speed, force, torque, power and viscosity.
45	Control System Lab	15EEL67.1	Students will be able to execute time response analysis of a second order control system using MATLAB
		15EEL67.2	Students will be able to analyze and interpret stability of the system through Root Locus and Bode plot
		15EEL67.3	Students will be able to design Lag, Lead, Lag-Lead compensators and verify experimental results using MATLAB
		15EEL67.4	Students will be able to analyze toque- speed characteristics of DC and AC servomotors
		15EEL67.5	Students will be able to analyze the effect of P, PI, PD and PID controllers on a control system
46	D S P Lab	15EEL68.1	To Understand how to compute Impulse response, Linear convolution and solution of Difference equation and verify in MATLAB.
		15EEL68.2	To Understand how to compute DFT, circulation convolution, and verify in MATLAB
		15EEL68.3	To Understand how to design IIR and FIR filter and verify in MATLAB

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220813
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		7th SEMESTER	
47	Power System Analysis - 2	15EE71.1	Formulate network matrices.
		15EE71.2	Perform steady state power flow analysis of power systems using numerical iterative techniques.
		15EE71.3	Show knowledge of optimal operation of generators on a bus bar, optimal unit commitment, power system security and reliability.
		15EE71.4	Analyze short circuit faults in power system networks using bus impedance matrix.
		15EE71.5	Perform numerical solution of swing equation for multi-machine stability
48	Power System Protection	15EE72.1	To understand the various protection schemes related to overcurrent, overvoltages, 3 phase faults, frame leakage, etc
		15EE72.2	To study the requirement, working and implementation of relays, fuses and circuit breakers
		15EE72.3	To apply the various principles of protection techniques for power system components like transformers, generators, busbars, etc
49	HIGH VOLTAGE ENGINEERING	15EE73.1	Able to understand and approximately judge different breakdown phenomena of different insulators (solids, liquids & gases) with understanding to theories and laws applicable
		15EE73.2	Able to understand and describe the principles behind different ways of generating high voltage AC/DC/Impulse voltages and currents by studying different generating devices, circuits and necessary calculation. Causes for Over voltages - Lightning Phenomenon, Overvoltage due to Switching Surges, System Faults and Other Abnormal, Principles of Insulation Coordination on High Voltage and Extra High Voltage Power Systems
		15EE73.3	Able to discuss the measurement principles of different measuring instruments, circuits and techniques for measurement of high voltages for AC/DC/Impulse Supply
		15EE73.4	Able to discuss different testing procedures of different Electrical Apparatus used in high voltage for surge as well as Non- destructive level Voltages / Currents
50	Utilization of Electrical Power	15EE742.1	Distinguish between different types of heating and welding application
		15EE742.2	Learn application of electro chemical science to metallurgy
		15EE742.3	The working of electric lamps and design the illumination system for different applications
		15EE742.4	Explain the electric traction system by considering the various parameters, classification of traction, traction motor selection, controlling of traction motor and hybrid electrical vehicles
51	TESTING AND COMM. Of P.S.A.	15EE752.1	Able to understand different types tools , accessories and testing equipments required for installation and commissioning.
		15EE752.2	Able to understand meaning of specification, standards, procurement, installation of electrical equipment.
		15EE752.3	Able to understand the testing and commissioning and maintenance of electrical equipments.
52	Power System Simulation Lab	15EEL76.1	Create a matlab code to solve problems on transmission line performance, performance of synchronous generator and network matrices.
		15EEL76.2	Create a simulation model using mipower and use mipower software package to perform load flow studies, fault analysis and economical dispatch problem.
		15EEL76.3	Use simulink to perform power system stability studies.
53	RELY AND HIGH VOLTAGE LAB	15EEL77.1	Flashover characteristics or air medium subjected to AC / Dc with different electrode set up.
		15EEL77.2	Breakdown of oil and its properties and breakdown down theories.
		15EEL77.3	Abnormal conditions an IM and generator and its protection .
		15EEL77.4	Inverse and definite characteristics of both electromechanical and static relay (OC / OV / UV)
54	PROJECT PHASE I + SEMINAR	15EEP78.1	Students are able to connect different areas of knowledge & to generate, develop, evaluate ideas & information related to the project work.
		15EEP78.2	Students can express their ideas clearly & effectively both verbally & in written form.
		15EEP78.3	Students can work as a team to achieve common goal.
		15EEP78.4	Students are able to learn on their own, reflect on their learning & improve upon it.

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329.

KLS Vishwanathrao Deshpande Institute of Technology
(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi)
(Recognised Under Section 2(f) by UGC, New Delhi)
Udyog Vidya Nagar, Haliyal – 581329, Dist: Uttar Kannada (Karnataka)
Phone: 08284-220861, 220334, 221409, Fax: 08284-220815
www.klsvdit.edu.in principal@klsvdit.edu.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Co,s STATEMENTS FOR THE SCHEME 2015 (BATCH : 2016 - 2020)

Sl No	Subject Name	CO's	CO Statement
		8th SEMESTER	
55	Power System Operation And Control	15EE81.1	Students will be able to understand and explain the basics of SCADA and unit commitment technique.
		15EE81.2	Students will be able to analyze the hydrothermal scheduling, AGC and ALFC techniques.
		15EE81.3	Students will be able to explain and analyze the methods of voltage and reactive power control.
		15EE81.4	Students will be able to explain the power system reliability, security and state estimation techniques.
56	Industrial Drives and Applications	15EE82.1	Students will be able to explain the fundamental aspects of electrical drives, load torques, Heating and Cooling Curves of different classes of motor duty and ratings of motors.
		15EE82.2	Students will be able to understand the basic design of Power Electronic Converters and Closed Loop Control techniques of basic AC motors, DC motors and Stepper Motor drives.
		15EE82.3	Students will be able to summarize the applications of electric drives in Textile Mills, Steel Rolling Mills, Cranes, Hoists and Machine Tools.
57	Smart Grid	15EE831.1	To describe various levels of controls in power systems and the vulnerability of the system
		15EE831.2	To define unit commitment and explain various constraints in unit commitment and the solution methods
		15EE831.3	To explain issues of hydrothermal sheduling and solution of hydro thermal problem
		15EE831.4	To explain automatic generation control, voltage and reactive power control in an interconnected power system.
58	Internship/Professional Practice	15EE84.1	Students will be able to Get acquainted with industry and understand real time problems.
		15EE84.2	Improve the soft skills, report writing skills and team work.
59	Project Work Phase-II	15EE85.1	Students are able to connect different areas of knowledge & to generate, develop, evaluate ideas & information related to the project work.
		15EE85.2	Students can express their ideas clearly & effectively both verbally & in written form.
		15EE85.3	Students can work as a team to achieve common goal.
		15EE85.4	Students are able to learn on their own, reflect on their learning & improve upon it.
60	Seminar	15EE86.1	To analyse the presentation skills for research literature of technical field.
		15EE86.2	To analyse the discussion variance on diverse social and academic issues
		15EE86.3	To develop ethics,discipline,team work ,problem solving techniques .
		15EE86.4	To analyse the modern tools usage for environment and society development in all fields

0

HEAD
Dept. of Electrical & Electronics Engg.
KLS's V. D. Institute of Technology
HALIYAL-581 329.