RAAJDHANI ENGINEERING COLLEGE
Course Outcome

Subject(Code):Electric Power Transmission & Distribution (C301) Year/Semester of Study: 3rd/5th

COs+A407:C413	CO Statements
C301.1	Students will able to explain the different types of power generation systems
C301.2	Learn electrical characteristics of transmission line parameters , their calculation also effects on transmission line
C301.3	analyse the short ,medium and long transmission line and effect of corona
C301.4	analyse the methods of components, evaluate line insulators and transformers
C301.5	learn mechanical design along with the types of insulators
C301.6	describe types of substations, earthling schemes and bus-bar schemes

Subject(Code): Control System(C302) Year/Semester of Study: 3rd/5th

COs	CO Statements
C302.1	Implement the mathematical model of the physical systems.
C302.2	Analyze the time domain response of the closed and open loop systems.
C302.3	Analysis nature of stability of the system by RH criteria & Root Locus technique.
C302.4	Analysis in frequency domain to explain the nature of stability of the system.
C302.5	Design the various kinds of compensator.
C302.6	Analyze and develop state space models.

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Subject(Code):Electrical Mechines -II (C303) **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C303.1	Analyse the physical arrangement of windings in the stator and cylindrical rotor.
C303.2	Demonstrate knowledge of the magnetic field produced in winding under various conditions.
C303.3	Integrate knowledge of construction, performance characteristics, and parameter variations to design efficient induction motor systems.
C303.4	Discuss the fundamental control practices speed control strategies for different applications
C303.5	Analyze the double revolving, cross field theory for working of the single phase induction motor.
C303.6	Apply to use different methods for the computation of voltage regulation of an alternator under various loading conditions

Subject(Code): Electrical mechine Design (C304) **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C304.1	Analyse design of transformer to estimate the performance characteristics
C304.2	Understand the concepts to design Electrical Machine
C304.3	Understand the Concept of Armature Windings.
C304.4	Analyze design of stator core & stator winding of an Induction motor
C304.5	Understand the design of rotor core & rotor winding of an induction motor to calculate load current & other performance
C304.6	Analyse the design of overall dimensions of synchronous machine to analyze role of various factors like: saliency, shape of pole shoe, SCR, air gap length etc.

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Subject(Code):Renewable Power Generationg System (C305) **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C305.1	Analyze the properties of solar energy resource, PV systems and Distributed Generation Systems.
C305.2	Design of PV systems for domestic, commercial and industrial application.
C305.3	Analyse the wind energy resource and its types, principles of conversion technologies.
C305.4	Understand the operation and constraints of wind turbine generators and wind power plant,
C305.5	Judge operating principles of biomass operation, biomass classification conversion and applications.
C305.6	Design different types of hybrid systems, such as Diesel-PV, wind-PV, micro hydel-PV, biomass-diesel hybrid system and hybrid electric vehicles.

Subject(Code):Universal Human Values **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C306.1	Understand self, preconditioning and natural acceptance
C306.2	Understand self-exploration and its application for self-evaluation and development.
C306.3	Analyze the concept of co-existence & evaluate the program to ensure self regulation.
C306.4	Understand the role of harmony in family, society and universal order.
C306.5	Understand the holistic perception of harmony at all levels of existence.
C306.6	Apply professional ethics in their future profession to contribute for making a value based society.

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Subject(Code): EPTD (C307) **Year/Semester of Study:3rd/5th**

COs	CO Statements
C307.1	Analyse Ferranti effect in short medium and long transmission lines
C307.2	Determine string efficiency, ABCD parameters in transmission lines
C307.3	Analyse earth resistance and Compute series and shunt capacitance in transmission line
C307.4	understand and analyse the transformer oil testing
C307.5	Analyse the various types and applications of lightning arrester
C307.6	Understand the concept of power factor improvement in distribution systems and corona discharge in transmission lines

Subject(Code):Control Instrumentation Lab(308) **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C308.1	Demonstrate the use of DC position control system.
C308.2	Study the frequency response of a different types of compensators.
C308.3	Evaluate transform function of network by using transfer function analyser.
C308.4	Classify and demonstrate different types of transducers.
C308.5	Analyze the bridges for the measurement resistance, inductance and capacitance.
C308.6	Validate the Energy meter for the measurement of electrical energy

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Subject(Code): Electrical Machines Lab-II(C309) **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C309.1	Predict the performance of alternator using standard equivalent circuit models.
C309.2	Understand and analyze synchronous Motor.
C309.3	Understand parameter of synchronous machines.
C309.4	Understand the performance of grid connected induction motor
C309.5	Understand the characteristic of induction motor.
C309.6	Understand the characteristic of 3-phase induction motor.

Subject(Code): Evaluation of Summer Internship (C310) **Year/Semester of Study: 3rd/5th**

COs	CO Statements
C310.1	Develop an understanding of real time problems/challenges in contemporary areas of power sector.
C310.2	Understand and analyse real-time challenges in Renewable Energy industry, green energy projects, energy efficiency, energy audit & management and policy & regulations
C310.3	Explain the impact of engineering solutions, developed in a project, in a global, economic, environmental, and societal context
C310.4	Realize Standard Operating Procedure of industry for specific project domain
C310.5	Effectively communicate the learning through project report and oral presentation
C310.6	Use new tools and technologies