

B.N.COLLEGE OF ENGINEERING & TECHNOLOGY & TECHNOLOGY, LUCKNOW

Course Outcomes 6th Semester

POWER SYSTEMS-II (KEE-601)

Pre-requisites of course: Basic Electrical Engineering, Networks Analysis and Synthesis, Electromagnetic Field Theory, Power System-I, Electrical Machines-II

Course Outcomes:		Knowledge Level, KL
Upon the completion of the course, the student will be able to:		
CO 1	Identify power system components on one line diagram of power system and its representation including the behaviour of the constituent components and sub systems and analyse a network under both balanced and unbalanced fault conditions and design the rating of circuit breakers.	K4
CO2	Perform load flow analysis of an electrical power network and interpret the results of the analysis.	K4
CO3	Describe the concept of travelling waves in transmission lines and use the travelling wave theory to determine the over voltage caused by surge propagation in transmission networks.	K4
CO4	Assess the steady state and transient stability of the power system under various conditions.	K4
CO5	Describe Operating Principle of a relay and classify them according to applications. Explain working principle of Circuit breaker and phenomenon of arc production and quenching.	K3

KL- Bloom's Knowledge Level (K1, K2, K3, K4, K5, K6)

K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create

MICROPROCESSOR AND MICROCONTROLLER (KEE-602)

Pre-requisites of course: Digital Electronics Computer Basics.

Course Outcomes:		Knowledge Level, KL
Upon the completion of the course, the student will be able to:		
CO 1	Demonstrate the basic architecture of 8085 & 8086 microprocessor.	K2
CO2	Illustrate the programming model of microprocessors & write program using 8085 microprocessor.	K3
CO3	Interface different external peripheral devices with 8085 microprocessor.	K3
CO4	Comprehend the architecture of 8051 microcontroller.	K2
CO5	Compare advance level microprocessor & microcontroller for different applications.	K4

KL- Bloom's Knowledge Level (K1, K2, K3, K4, K5, K6)

K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create

POWER ELECTRONICS (KEE-603)

Pre-requisites of course: Basic Electrical Engineering, Network Analysis & Synthesis.

Course Outcomes:		Knowledge Level, KL
Upon the completion of the course, the student will be able to:		
CO 1	Demonstrate the characteristics as well as the operation of BJT, MOSFET, IGBT, SCR, TRIAC and GTO and identify their use in the power switching applications.	K4
CO2	Comprehend the non-isolated DC-DC converters and apply their use in different Power electronics applications.	K3
CO3	Analyze the phase controlled rectifiers and evaluate their performance parameters.	K5
CO4	Apprehend the working of single-phase ac voltage controllers, cyclo-converters and their various applications.	K3
CO5	Explain the single-phase and three phase bridge inverters differentiate between CSI and VSI and apply PWM for harmonic reduction.	K4

KL- Bloom's Knowledge Level (K₁, K₂, K₃, K₄, K₅, K₆)

K₁ – Remember K₂ – Understand K₃ – Apply K₄ – Analyze K₅ – Evaluate K₆ – Create

SPECIAL ELECTRICAL MACHINES (KEE-061)

Pre-requisites of course: Electrical Machines-I & Electrical Machines-II.

Course Outcomes:		Knowledge Level, KL
Upon the completion of the course, the student will be able to:		
CO 1	Describe the working principle, Constructional Features of different types of electrical machines including the fractional kilowatt machines.	K2
CO2	Analyse torque- speed characteristics of different electrical machines and interpret their performance and identify the suitable machine for an operation.	K4
CO3	Study different types of control techniques for a machine and identify the best control strategy based upon different constraints.	K4
CO4	Illustrate the use of stepper, BLDCs, SRM, and other special machines in the area of the various industrial and domestic as well as commercial applications of various fractional kilowatt machines.	K3

KL- Bloom's Knowledge Level (K₁, K₂, K₃, K₄, K₅, K₆)

K₁ – Remember K₂ – Understand K₃ – Apply K₄ – Analyze K₅ – Evaluate K₆ – Create