

# Electrical Engineering N2 Course Notes

Electrical Engineering N2 Course Notes Electrical Engineering N2 Course Notes This document serves as a comprehensive guide to the N2 Electrical Engineering course It is designed to be a valuable resource for students preparing for the National N2 Trade Test The notes cover all the essential topics and concepts required for the examination presented in a clear and concise manner This document is structured into various sections each focusing on a specific area within Electrical Engineering N2

1 Basic Electrical Principles 11 Electricity and Magnetism Electrostatics Charges Coulombs Law Electric Fields Potential Difference Magnetism Magnetic Fields Magnetic Flux Faradays Law of Induction Electromagnetism Relationship between electricity and magnetism electromagnetic induction Lenzs Law 12 DC Circuits Ohms Law Relationship between voltage current and resistance Kirchhoffs Laws Kirchhoffs Current Law KCL and Kirchhoffs Voltage Law KVL Series and Parallel Circuits Analysis of series and parallel circuits voltage and current division Power in DC Circuits Calculating power dissipation and efficiency 13 AC Circuits Alternating Current Sinusoidal waveforms frequency period peak and RMS values Impedance and Reactance Resistance inductive reactance capacitive reactance and impedance Phase Relationships Phase angles between voltage and current in inductive and capacitive circuits Power in AC Circuits True power reactive power apparent power and power factor

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