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ADVANCED ELECTRIC CIRCUITS
– SELECTED TOPICS –

Chapter 1. LINEAR ELECTRIC CIRCUITS IN NON-SINUSOIDAL (DISTORTED) PERIODIC STATE
1.1 Introduction
1.2 Periodic functions
1.3 Specific parameters
1.4 Powers in non-sinusoidal steady state
1.5 Ideal circuit elements in non-sinusoidal state
1.6 Solving single-phase electrical circuits in a periodic non sinusoidal steady state
1.7 Solved problems
1.8 Proposed problems

Chapter 2. LINEAR ELECTRIC CIRCUITS IN TRANSIENT STATE
2.1 Basic aspects – Kirchhoff's theorems for electric circuits in general variable state
2.2 Ideal circuit elements in variable state
2.3 Transient state characterization of the electric circuit
2.4 Elementary method for transient state analysis
2.5 Transient state computation based on Laplace transform
2.6 The algorithm of the operational method for solving transient state circuits
2.7 The study of the transient state by separation of the permanent state component
2.8 Transient state problems computation – direct method
2.9 Problems solved by the operational Laplace transform method
2.10 Transient state computation – proposed problems

Chapter 3. REFERENCES