

Text: FIELDS & WAVES IN COMMUNICATION ELECTRONICS
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- I. REVIEW OF
 1. Maxwell's Equations
 2. Quasi-Statics
 3. Poyntings Theorem and Energy Stored

- II. WAVE EQUATION
 1. Uniform Plane Waves
 2. Reflection and Refraction
 3. Wave Reflection from Good Conductors

- III. GUIDED WAVES
 1. TEM, TE and TM Waves
 2. (a) TEM Transmission Lines (Coaxial Cable and Strip Transmission Line)
(b) Transient Phenomena
(c) Sinusoidal Steady State Solutions
(d) $\omega - \beta$ Diagrams
(e) Group Velocity
 3. Wave Guides
 - (a) Rectangular (TE_{10})
 - (b) Circular Guide (TE_{01})

- IV. RESONANT STRUCTURES
 1. Rectangular
 2. Right Circular Cylinder

- V. ANISOTROPIC MEDIA
 1. Plasmas, Crystals and Electrooptical Effects
 2. Ferrites

- VI. RADIATION AND ANTENNAS