Midterm Exam

EEE3307/EEE4312/TEE3307-Power Electronics and Energy Storage Technologies (3E)/ EME409-Power Electronics Applications and Designs (3E)
(20% of the total midterm marks will be added to the final score.)

1. Draw a circuit diagram for the boost converter, and explain how it operates
2. What is the meaning of the maximum power point tracking
3. What is the meaning of the power source
4. What are the conditions when the maximum power is being transferred (you need to derive an equation to show RS = RLoad)
5. Derive the equation for voltage gain of the boost converter using Duty cycle (D)
6. Using LTspice, draw and simulate a simple boost converter

Due date: 2024-06-24