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| Document C code: generation of modified sine wave gate drive and control of boost reference | 20 points | 10 points | 0 points |
| Scope waveforms of gate drive signals, document measured deadtimes | 10 points | 5 points | 0 points |
| Document measured HVDC vs programmed value | 10 points | 5 points | 0 points |
| Part 2: at low HVDC, measured inverter output voltages and differential load voltage waveforms. Meter readings and measured efficiency | 14 points | 7 points | 0 points |
| At HVDC = 150 V: measured inverter output voltages and differential load voltage waveforms. Meter readings and measured efficiency | 14 points | 7 points | 0 points |
| Part 3: measured rms voltage for 25W lightbulb | 10 points | 5 points | 0 points |
| Measured data: HVDC, duty cycle, rms output voltage. Compare with theoretical expression for Vrms vs D given in lecture. | 12 points | 6 points | 0 points |
| Measured data: scope photo of differential voltage across light bulb at 120 Vrms | 10 points | 5 points | 0 points |
| Extra Credit: True sine wave inverter. Document inductor design and measured inductance | 10 points | 5 points | 0 points |
| Extra credit: document C code. Scope photo showing Timer D output with sinusoidally varying duty cycle. | 20 points | 10 points | 0 points |
| Extra credit: Part 5. Document meter reading of rms load voltage (120 Vrms), scope photo of differential H-bridge output with high-frequency PWM, and scope photo of sinusoidal load voltage. | 10 points | 5 points | 0 points |
| Extra credit: Document measured load voltage switching ripple. Document "Kill-a-Watt" readings: voltage, current, power, and frequency. Comment on accuracy of these readings and how clean is the voltage waveform. | 10 points | 5 points | 0 points |