

Name: _____

Student No: _____

Electrical and Computer Engineering Department
University of Puerto Rico - Mayaguez, P.R.
Electronics II - Spring 1999 - Fourth Exam (B) - Prof. Manuel Toledo

1. Design a class A power amplifier capable of delivering 30 watts to a 10Ω load. Specify the voltage and current requirements for the power supply. Also find the power the transistor and current source should be able to dissipate in order to handle output signals of various amplitudes, and the source's current. Draw an schematic diagram of the circuit. (30 pts)

2. Design a 680kHz Wein-bridge oscillator. Use an ideal op-amp as your active element. (30 pts)

3. Design a third order low-pass Butterworth filter with cutoff frequency of 5 kHz. How much will 25 kHz signals be attenuated by this filter? (30 pts)