

P5.22 Design a power supply that relies on a Zener diode as a regulator and is capable of providing a DC current of up to 100 mA at 12 V, to a load. The power supply is to be connected to a 120 V_{AC} 60 Hz line. Decide whether to employ a half- or full-wave rectification. Among other things, find the turn ratio for the transformer you need to use and determine the power ratings for the Zener diode and any resistors you might want to use.