EE347 HW3 Nick Porter

Text Questions:

3-13: What is a TCUL transformer?

A TCUL is a tap changing under load transformer. It has multiple taps with small percentages of the full-load voltage spacing between them to provide slightly more or less voltage in order to offset the variations in voltages down the line. These can be used to maintain constant voltage while loads and impedances are shifting.

3-19: Why does one hear a hum when standing near a large power transformer?

The hum is created by the magnetomotive force on the core, causing it to expand and contract slightly during magnetization cycles.

3-2(a,c,d):

3-21(b,c):