Laser Induced Breakdown Spectroscopy Prelab

Recommended reading:
AirUCI Manual: Laser Induced Breakdown Spectroscopy

Prelab Questions:
1) What are the overall goals of this lab?

2) What safety factors are critically important to be aware of for this lab?

3) Briefly attempt to explain how a Nd:YAG laser operates in a few sentences.
4) What does the plasma consist of? Which of these species may undergo excitation and emission of radiation?

5) Plasma is perfectly visible by naked eye. Why do we need a spectrometer to look at the plasma? In other words, what additional information does the spectrometer provide?

6) What does the acronym “LASER” stand for?

7) How are the energy and power of a laser related? If two lasers had the same energy, but one had a 5 nanosecond pulse and the other a 5 picosecond pulse, which would have the higher power?