

Answer keys to selected questions of Lab #6

- 1) Light has to be "broken up" spatially to see spectra; naked eye cannot do that.
- 2) prism, grating, water droplets, etc.
- 3) chemical composition of the object; temperature
- 6)
 1. fewer
 2. more electron in neon than hydrogen
 3. fewer electrons in smaller atoms, so fewer opportunities for transitions, meaning fewer lines since each line corresponds to one transition
- 8) emission. excited electrons are at higher energy states and want to drop to lower ones as soon as possible; they do this by emitting energy in the form of photons. Emitting energy -> emission lines.
- 16) People perceive colors differently; wavelength is more precise & objective.