Name: (Writer) _____ Date_____

ASTRONOMY 101A (Fall Semester 2002)

SPECTRA AND SPECTROSCOPY

1. What is the gas inside the tube in the gas discharge box at the front of the room?

2. Which light sources that you looked at today had continuous spectra? Explain.

3. Which light sources that you looked at today had emission spectra? Explain.

4. Which light sources that you looked at today had absorption spectra? Explain.

5. Spectra are useful to astronomers because:
   a) almost all the information we get about astronomical objects comes from their light.
   b) there is no limit on the "distance range" of spectroscopy, it only depends on how much light from the object we can gather with our telescope.
   c) each element/isotope/molecule has its own spectral signature, therefore by examining the light from (or passing through) a material, we can precisely determine the chemical makeup of an object, even if we can't sample it directly.
   d) All of the above
   e) None of the above