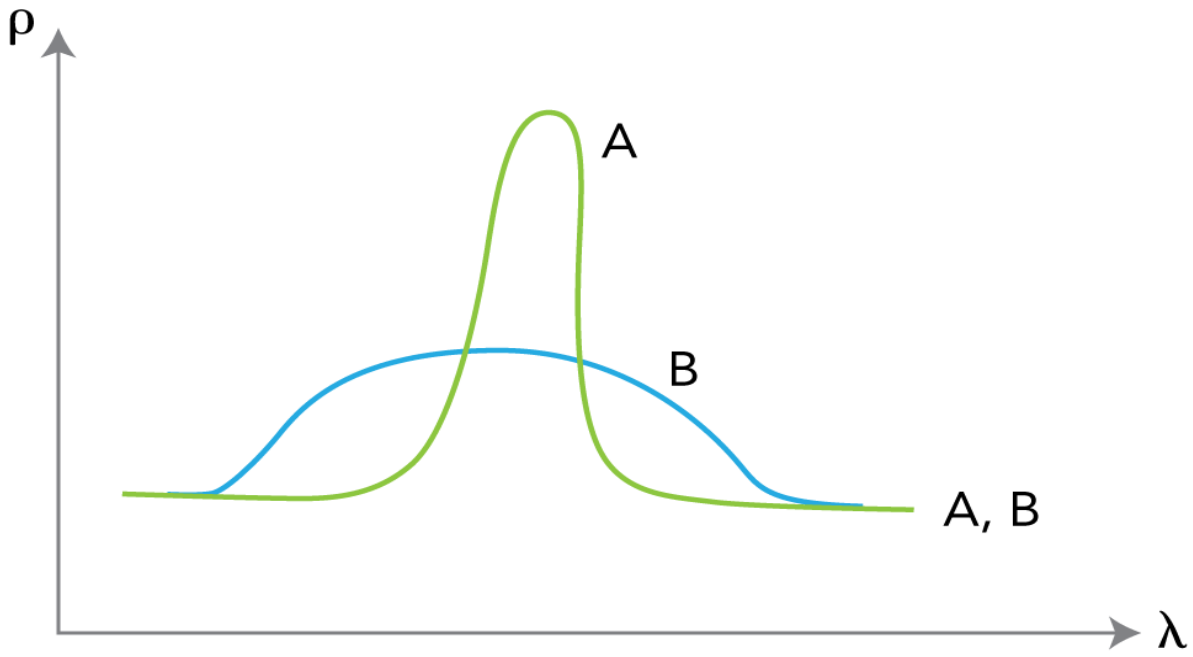
SUGGESTED SOLUTIONS (ODD)

CHAPTER 18

NOTE: Use three-digit precision for all calculations unless otherwise stated or implied.

18-2. Shown below are two spectra.



Without specific thresholds, and based solely on the spectra sketched as shown,

A. Which spectra comparison approach(es) (spectral angle, spectral distance, spectral feature location) will probably give a result that the two spectra are the same? WHY?

B. Which spectra comparison approach(es) (spectral angle, spectral distance, spectral feature location) might give a result that the two spectra are different? WHY?

SUGGESTED SOLUTION:

A) Spectral feature locator. Both spectra have peaks located at nearly the same λ.

B) Both spectral angle and spectral distance. The two spectra do not have the same shape, so there are large differences in the various bands.