Examine the following hypothetical spectra and answer the questions below. You may need to mark the positions of the lines on the edge of a separate sheet of paper.

The observed spectra for three different stars is given below:

Star I

Star II

Star III

REMEMBER! If an element is present in star, normally ALL lines for that element will be seen, and the relative spacing of the spectral lines remains fixed.

1. What elements are in Star I? One letter for each element present is sufficient.

2. What elements are in star II?

3. Does either star I or Star II contain elements other than those shown above? (explain your answer)

4. What two elements make up star III?

5. What can be said about the motion of star III? (explain your answer)