1. a) Draw an HR diagram (labelling both axes) for a star cluster whose stars all formed 10 Gyr ago. Label the main sequence, the red giant branch, the horizontal branch, and the asymptotic giant branch.

b) Describe the properties of the stars of the cluster that are on the main sequence.

c) Show where the white dwarfs are. Which stars are likely to supernova soon? Which ones are likely to form planetary nebula soon?