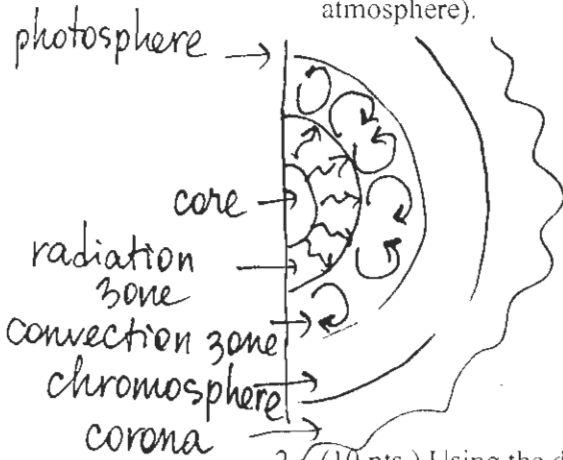


Name Answer Key

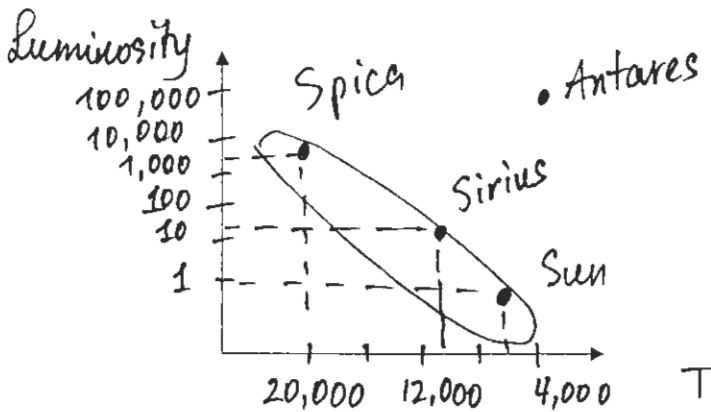
1. (10 pts.) Sketch and describe the Sun's structure (from the core to the atmosphere).



core → H is burned, fused into He  
 rad. zone → radiation is sent outward  
 convect. zone → hot gas rises, cools down and sinks back  
 photosphere → visible "surface"  
 chromosphere → inner atmosphere  
 corona → outer atmosphere

2. (10 pts.) Using the data below plot the H-R diagram (approximately). Label the stars on the diagram. Which ones belong to the main sequence?

Star	Temperature (K)	Luminosity (solar units)
Sun	6,000	1
Sirius	10,000	25
Spica	20,000	3,000
Antares	4,000	50,000



Main sequence:  
 Sun, Spica, Sirius

3. Bonus question (5 pts.)

Explain the difference between a star's luminosity and brightness.

Luminosity is a function of radius and <sup>temper.</sup> ~~temp.~~ of the star - amount of radiation a star emits every second

Brightness depends not only on luminosity, but also on the position of the observer (distance from the star to the observer) - amount of radiation an observer receives.