Midterm test - Introduction Astronomy 2017-18

December 11, 2017

1. Give definitions of
   - Bolometric correction (5p)
   - Spectroscopic parallax (5p)
   - P-L relation (5p)
   - Balmer limit (5p)
   - Kelvin lifetime (5p)

2. The sun's absolute magnitude is 4.8. Suppose we place the sun at a distance of 10 light years, behind two magnitudes of extinction – could we still see the sun with our naked eye? Give a calculation. (15p)

3. Explain why F stars do not show HeII lines. (10p)

4. Compute the surface temperature of the sun, using values from the supplied data sheet. (15p)

5. Explain how observations of binary stars can tell us their masses. (10p)

6. Describe the usefulness of the color-magnitude diagram in the study of star clusters. (15p)

Final score = 1 + total/10