# Astronomy 01

Take Home Quiz
Due October 23, 2017

**Name:** _____ **ID: A**

By taking this test it is implied that you agree with Los Angeles Mission College's Code of Academic Honor and Integrity.
***This means you will not give or receive unpermitted aid during this quiz.***

## Take Home Quiz - Chapter 09 & 10

**Fill In the Blank**
*Complete each of the folloiwng statements. (5-Points Each)*

1. Mass can flow from one star in a binary system to its companion through the first _____ point.
2. The age of a star cluster can be determined from the _____ of the cluster.
3. A gas in which the pressure no longer depends on the temperature of the gas is said to be _____.
4. The maximum mass of a white dwarf is _____ solar masses.
5. Electrons moving in a strong magnetic field emit _____ radiation.

**Short Answer**
*Provide a short answer for the following question. (5-Points or More Each)*

6. What observations confirm the existence of protostars?

_____

_____

7. What evidence do we have that some stars lose mass?

_____

_____

8. Why can't lower main sequence stars become giant stars?

_____

_____

9. How does a gas cloud become hot enough to ignite nuclear reactions?

_____

_____

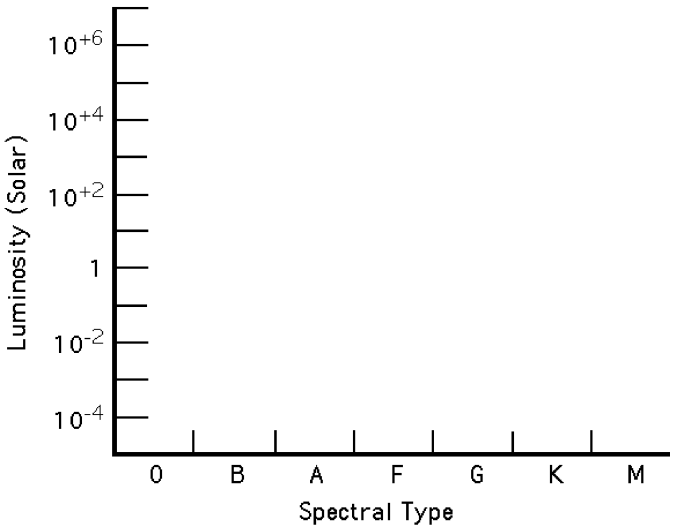
10. Explain what keeps the nuclear reaction in a star under control.

_____

_____

11. On the diagram below, draw the evolutionary track of a protostar to the sun, from the main sequence to a white dwarf..

    a. Label the major stages on this track.
    b. Show the time that star spends on each group.
    c. Show the loss or gain of any mass during this process.




12. What are the four laws of stellar structure discussed in class?

    a._____

    b._____

    c._____

    d._____

13. Name the three methods of energy transfer discussed in class.

    a._____

    b._____

    c._____

14. What observations indicate the presence of dust in the interstellar medium?

15. If the sun and stars are supported by gas pressure, what supports a white dwarf?

16. If white dwarfs have exhausted their fuel, why are they hot?

17. Explain how we can find the age of a star cluster.

18. Why do nuclear reactions in a star occur only near its center?