<u>Asi</u>	tronomy 210 Fall 2019: Quiz 6
	osed book, closed notes. Clearly circle (" O ") the one choice that you think is most definitely crect. Cross out (" \times ") only one choice that you think is definitely incorrect.
1.	 [4.0 points.] Fusion requires high temperatures such that nuclei can: (A) capture electrons. (B) overcome repulsion. (C) undergo convection. (D) break heavy elements apart.
2.	 [4.0 points.] Massive main-sequence stars are more luminous than low-mass main-sequence stars because massive main-sequence stars: (A) lack hydrostatic equilibrium. (B) have unstable heavy elements. (C) have more convection. (D) fuse hydrogen more rapidly.
3.	 [4.0 points.] The pink color of an emission nebula is caused by: (A) supernovae shockwaves. (B) scattered light from stars. (C) electrons moving to lower orbitals. (D) light blocked by dense clouds of gas and dust.
4.	 [4.0 points.] Young stars at shockwave edges is evidence that trigger star formation. (A) supernova explosions. (B) planetary nebulae. (C) x-ray pulsar beams. (D) gravitational waves.
5.	 [4.0 points.] A star cluster with supergiants would also have at the same time. (A) massive protostars. (B) medium-mass main sequence stars. (C) white dwarfs. (D) red dwarfs.
6.	[4.0 points.] In the final stages of fusion energy production, supergiants will fuse:(A) hydrogen.(B) helium

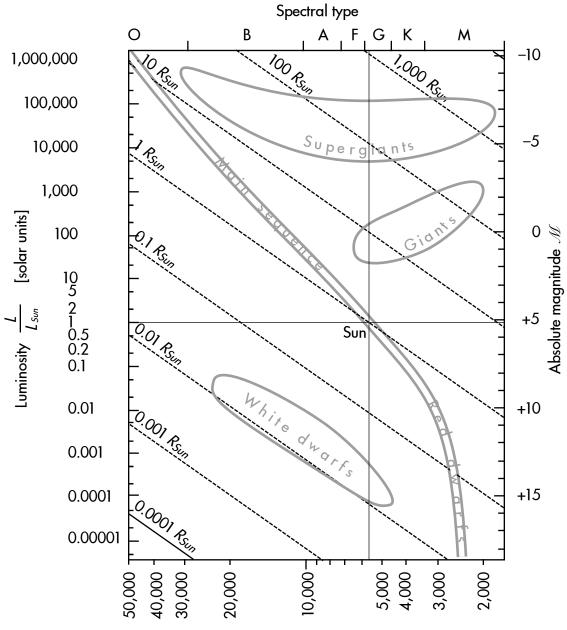
- (C) carbon, and heavier elements up to iron.
- (D) (None of the above choices.)
- **7**. [4.0 points.] A _____ main-sequence star will become a black hole.
 - (A) massive.
 - (B) medium-mass.(C) low-mass.

 - (D) (Two of the above choices.)
 - (E) (All of the above choices.)
 - (F) (None of the above choices.)

Closed book, closed notes. Clearly circle ("O") the one choice that you think is most definitely correct. Cross out (" \times ") only one choice that you think is definitely incorrect.

This quiz continues from questions (1)-(7) on the other side of this page.

- **8**. [4.0 points.] A type Ia supernova begins when a white dwarf:
 - (A) has too much radioactivity.
 - (B) generates strong stellar winds.
 - (C) removes energy from its core using fusion.
 - (D) accumulates enough hydrogen from a companion star.
- **9**. [4.0 points.] The energy source for a type II supernova is:
 - (A) gravitational contraction.
 - (B) the fusion of an entire white dwarf.
 - (C) the fusion of elements heavier than iron.
 - (D) the fusion of an outer layer of hydrogen around a white dwarf.
- **10**. [4.0 points.] A _____ with a companion star can have x-ray pulses.
 - (A) white dwarf.
 - (B) neutron star.
 - (C) black hole.
 - (D) (Two of the above choices.)
 - (E) (All of the above choices.)
 - (F) (None of the above choices.)



Surface temperature T [Kelvin]