

Astronomy 210, Spring 2012: Quiz 5

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

1. [4.0 points.] Hydrogen fusion in the sun takes place only in the core, because of:
(A) high temperatures and pressures.
(B) convection currents.
(C) the Doppler effect.
(D) degenerate matter.
2. [4.0 points.] Which type of main-sequence star has the fastest fusion rate?
(A) Massive.
(B) Medium-mass.
(C) Low-mass.
(D) (There is a tie.)
3. [4.0 points.] Dust particles in a reflection nebula appear to be bluer than the star that illuminates them because these dust particles:
(A) are cooler than the star that illuminates them.
(B) absorb all red light, and let blue photons pass through.
(C) absorb ultraviolet light, and emit blue photons.
(D) scatter blue light more than they scatter red light.
4. [4.0 points.] _____ is/are evidence that supernova explosions trigger star formation.
(A) Interstellar reddening.
(B) Very dense, giant molecular clouds.
(C) Observations at nonvisible wavelengths.
(D) Young stars at shockwave edges.
5. [4.0 points] As a massive main-sequence star becomes a supergiant, its size will _____ and its temperature will _____.
(A) decrease; decrease.
(B) decrease; increase.
(C) increase; decrease.
(D) increase; increase.
6. [4.0 points.] A star cluster containing supergiants would also have:
(A) medium-mass main sequence stars.
(B) white dwarfs.
(C) red dwarfs.
(D) type Ia supernovae.
7. [4.0 points.] A giant will form a planetary nebula by:
(A) expelling its outer layers.
(B) imploding, then exploding.
(C) forming an accretion disk.
(D) breaking down degenerate matter.

Questions (8)-(10) are continued on the back of this page.

12.03.18

4-digit PIN: _____
Name (last, first): _____
Quiz 5