

Astronomy 210 Fall 2011: 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.] Fusion requires high temperatures in order for nuclei to move quickly enough to:
(A) overcome gravity.
(B) overcome repulsion.
(C) break heavy elements apart.
(D) create convection currents.
2. [4.0 points.] Massive main-sequence stars have shorter lifetimes than medium-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.] There are no main-sequence stars less than 0.08 solar masses because these stars would:
(A) be nearby, and be very common.
(B) not be hot enough.
(C) not have enough heavy elements.
(D) have too much convection.
4. [4.0 points.] A nebula is observed to have regions of pink, blue, and dark brown colors. What is the composition of the pink regions?
(A) Hydrogen gas.
(B) Helium gas.
(C) Very small dust particles.
(D) Dense clumps of large dust particles.
5. [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.
6. [4.0 points.] The energy source in the core of a giant is:
(A) hydrogen fusion.
(B) gravitational contraction.
(C) fusion of elements heavier than hydrogen.
(D) radioactive decay.
(E) (Does not produce energy.)
7. [4.0 points.] A star cluster containing white dwarfs would also have:
(A) medium-mass main sequence stars.
(B) massive protostars.
(C) red dwarfs.
(D) supergiants.

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

11.10.15

Name (last, first):

4-digit PIN:

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