Astronomy
Quiz 22

1. Low mass stars (the size of the Sun) eventually go through a red giant phase, after which
   a) the star emits a large gas envelope known as a planetary nebula
   b) the star explodes producing a supernova
   c) the star explodes producing a nova
   d) the star shrinks to become a neutron star
   e) the star shrinks to become a black hole
      a) the star emits a large gas envelope known as a planetary nebula

2. For stars with a mass greater that about 10 solar masses, we find that
   a) the star emits a large gas envelope known as a planetary nebula
   b) the star explodes producing a supernova
   c) the star explodes producing a nova
   d) the star shrinks to become a neutron star or a black hole
   e) both (b) and (d)

3. Once a star has shed its outer layers the core typically collapses. The final stage of that star depends upon the mass of the remaining core. If the mass of the core is greater than about 3 solar masses, the final stage of the star is a
   a) white dwarf
   b) neutron star
   c) black hole

4. Pulsars are believed to be
   a) pulsating black holes.
   b) variable stars lying within the instability strip on an HR diagram.
   c) extremely short period RR Lyra variable stars.
   d) rapidly spinning neutron stars.
   e) distant galaxies sometimes known as quasars.
      d) rapidly spinning neutron stars

5. Which variable stars have the longer period?
   a) Cepheid variables
   b) RR Lyra variables
      a) Cepheid variables

6. When early astronomers first observed other galaxies, they believed they were looking at planetary nebulae.
   a) True
   b) False
      a) True