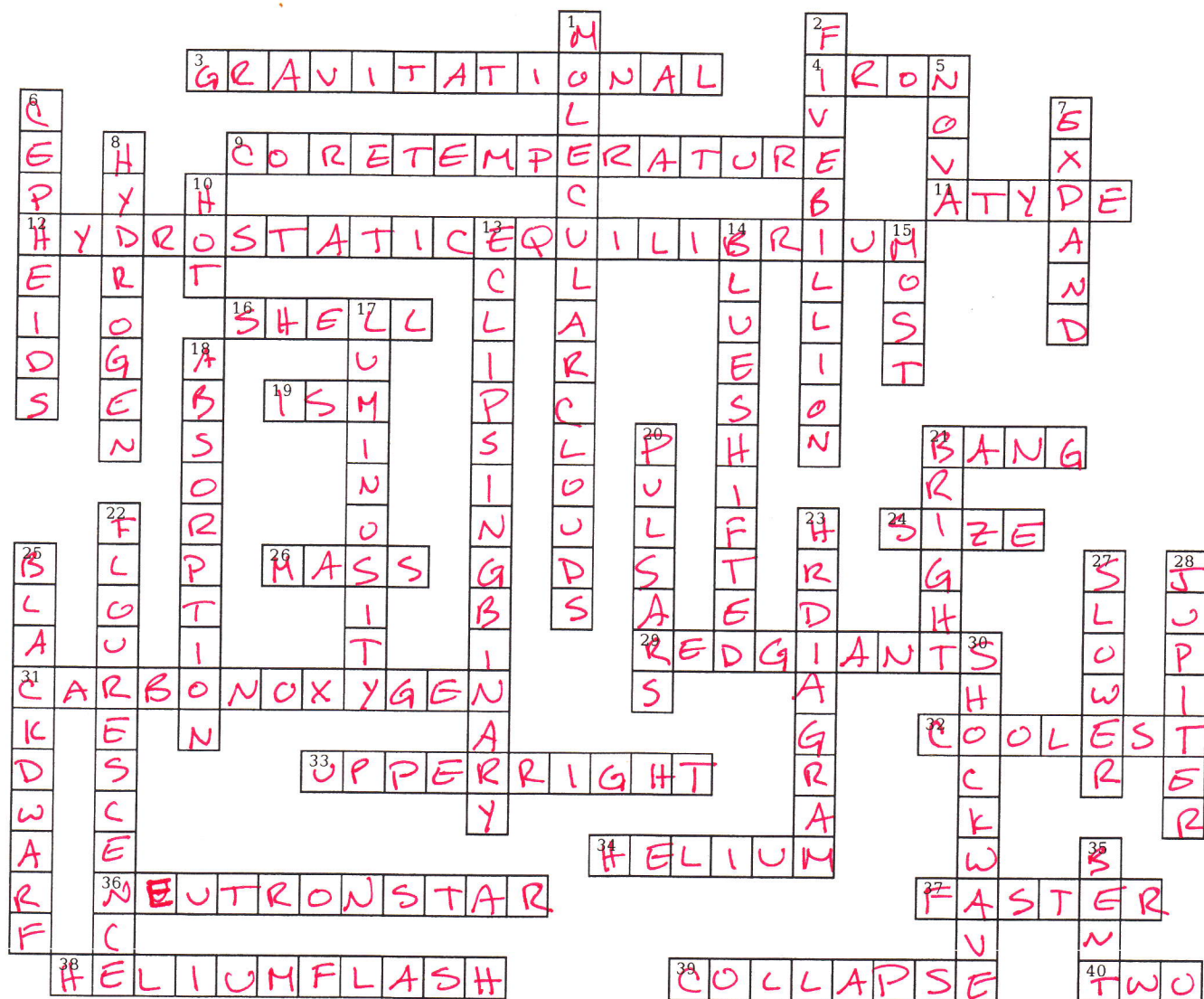


# Exam II Review



**ACROSS**

- 3 A protostar is heated by \_\_\_\_\_ energy for the first 100 million years.
- 4 High mass stars have \_\_\_\_\_ cores at the end of their lives.
- 9 A protostar arrives on the main sequence when its \_\_\_\_\_ is hot enough to fuse hydrogen.
- 11 \_\_\_\_\_ stars have strong hydrogen lines.
- 12 Every time an energy source in the core of a star runs out, this becomes

**DOWN**

- 1 Dense interstellar regions are called \_\_\_\_\_.
- 2 Our sun is approximately \_\_\_\_\_ years old.
- 5 A \_\_\_\_\_ is a type of eruptive variable that involves two stars.
- 6 \_\_\_\_\_ are used as distance indicators to other galaxies.
- 7 The envelope of a star will \_\_\_\_\_ every time a fusion fuel runs out in the core.

- unbalanced.
- 16 Hydrogen fusion in a \_\_\_\_\_ around the core causes the envelope of the star to expand.
  - 19 The material between the stars is known as the \_\_\_\_\_. (acronym)
  - 21 Massive stars die with a \_\_\_\_\_, not a whimper.
  - 24 Why white dwarfs dimmer than red giants even though they are hotter?
  - 26 Stars have different evolutionary tracks based on their \_\_\_\_\_.
  - 29 Between red giants and white dwarfs, which are more luminous?
  - 31 A low mass star, like the Sun, will become a \_\_\_\_\_ white dwarf.
  - 32 M type stars have the \_\_\_\_\_ surface temperature.
  - 33 Red giants are in the \_\_\_\_\_ of the H-R diagram.
  - 34 When hydrogen fusion runs out, the core of a star is made of \_\_\_\_\_.
  - 36 A \_\_\_\_\_ is a result of a type II supernova
  - 37 Massive stars evolve \_\_\_\_\_ due to higher temperatures in the core.
  - 38 When the temperature in the core is hot enough, core He will ignite in what is called the \_\_\_\_\_.
  - 39 When core hydrogen runs out, the star will begin to \_\_\_\_\_ due to gravity
  - 40 Type I supernova involve \_\_\_\_\_ stars.
  - 8 Hydrostatic Equilibrium is maintained in stars when on the main sequence by \_\_\_\_\_ fusion.
  - 10 White dwarfs are very \_\_\_\_\_
  - 13 A system in which two stars block each other's light is an \_\_\_\_\_ system.
  - 14 Light that is \_\_\_\_\_ is from a source that is coming towards you.
  - 15 Stars spend \_\_\_\_\_ of their lives on the Main Sequence.
  - 17 The vertical axis of an H-R diagram may be labels as absolute magnitude or \_\_\_\_\_.
  - 18 Spectral classifications were developed by Annie Canon based on H \_\_\_\_\_ line strengths.
  - 20 \_\_\_\_\_ rotate at rates on the order of seconds.
  - 21 A red giant is very \_\_\_\_\_.
  - 22 Planetary nebulae create a emission line spectrum by this process.
  - 23 The \_\_\_\_\_ graphically displays the relationship between luminosity and temperature for stars.
  - 25 A white dwarf becomes a \_\_\_\_\_ and not a brown dwarf.
  - 27 Time runs \_\_\_\_\_ in strong gravitational fields.
  - 28 In order to form a star the object must have 100 times the mass of \_\_\_\_\_.
  - 30 A \_\_\_\_\_ is needed to cause a molecular cloud to begin to collapse and form a star.
  - 35 According to general relativity, light is \_\_\_\_\_ by gravity.

Note: For a fee, you can use Crossword Weaver to print a nice copy of this puzzle (one that doesn't look like a web page). You can check it out for free by downloading the demo from [www.CrosswordWeaver.com](http://www.CrosswordWeaver.com).