Answer on Question #77555, Chemistry / General Chemistry

Which type of particle can be emitted by an unstable nucleus?
none of the above
He
e
e
all of the above

Solution

An unstable nucleus tries to achieve a balanced state (to become a stable nucleus) via radioactive dacay. Any of three different types of particles may be emitted:

1. Alpha particles, which consist of two neutrons and two protons, and are nuclei of ^4_2He
2. Electrons (e^-) or positrons (e^+), also called beta rays. Positron is an antiparticle of electron and have the same mass as electron but is positively charged.
3. Gamma rays, which are high energy photons.

The answer to the question is: all of the above,i.e. He, e^- and e^+

Note: it seems like the signs of e are missed in the question: there should be e^- and e^+.

Answer: all of the above