**Nuclear Chemistry**

Particles

**Alpha particle **: two neutrons and two protons bound together and emitted from the nucleus during radioactive decay.

Atomic number decreases by two, mass number decreases by 4

**

**Beta particle **: an electron emitted from the nucleus of a particle during some types of radioactive decay.

Emission –

**

absorption –

**

**positron** – a particle that has the same mass as an electron, but has a positive charge – emitted from the nucleus during some types of radioactive decay.

**

**Gamma rays **: high energy electromagnetic waves emitted from a nucleus as it undergoes nuclear changes – from an excited state to a ground energy state.

Emission –

**

half life – the time required for half of the atoms of a radioactive nuclide to decay.