

Al-Mustaqbal University College
Department of Medical Physics
The Fourth Stage
First Course



Radiation Protection

LECTURE ELEVEN

Radiation-Protection Glossary

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2022-2023

LECTURE ELEVEN: Radiation-Protection Glossary

Element : material whose atoms all have the same number of protons.

u: atomic mass unit.

Proton : atomic particle, mass 1 u , charge +1 unit.

Electron: atomic particle, mass 1/1840 u , charge -1 unit.

Neutron: close combination of proton and electron, mass 1 u, electrically neutral.

Atom: central nucleus of protons and neutrons, around which electrons occupy orbits.

Atomic number (Z): number of protons.

Mass number (A) : number of protons plus number of neutrons.

Radioactive decay: transformation of an unstable atomic nucleus into a more stable one, - rays.

Alpha (α) radiation: helium nuclei, two protons and two neutrons, mass 4 units, charge + 2 units.

Beta (β) radiation: high-speed electrons which originate in the nucleus, mass 1/1840 u, charge -1 (electron).

Gamma (γ) radiation: electromagnetic radiation, very short wavelength, mass 0, charge 0.

Electron volt : energy gained by an electron in passing through an electric potential of 1 volt.