

Radiation : Review-45

1) Give the uses for these radioisotopes.

a) carbon-14

b) cobalt-60

c) americium-241

2) Which of the three types of radiations emitted by a radioactive nucleus can be stopped by a piece of paper?

3) Which type of electromagnetic radiation is more dangerous; short wavelength or long wavelength?

4) Who discovered radioactivity?

5) The isotope ${}_{84}^{210}\text{Po}$ emits an alpha particle. What isotope does it become?

6)a) What is D.N.A.? b) Explain what radiation can do to D.N.A..

7)a) Explain what fission is., b) Explain what fusion is.

Answers: 1)a) It is used to find the age of wood or anything that has carbon in it., b) It is used to kill cancer cells., c) It is used in smoke detectors., 2) alpha particles, 3) short, 4) Becquerel, 5) lead-206, 6)a) It is a molecule in a cell that tells the cell what to do. It is like a computer program., b) Radiation can damage the program. This can lead to mutations., 7)a) This is the breaking apart of large nuclei that releases a lot of energy., b) This is the fusion of two or more nuclei that results in the release of a large amount of energy.