

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	Radioactivity	A. is exhibited more by semiconductors in general B. is exhibited more by the element when they are coupled C. with other radioactive elements by a covalent bond D. is an atomic property of radioactive elements
2	How many isotopes of helium are present?	A. 1 B. 2 C. 3 D. 4
3	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
4	A mass difference of 0.0012 u is equivalent to and energy of:	A. 0.5 MeV B. 1.13 MeV C. 5.13 MeV D. 1.13 keV E. 1.13 eV
5	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deuterium C. protium D. tritium
6	The time required for a radioactive material to decrease in active by one half is called	A. half time B. half life C. disintegration time D. mean life
7	An alpha particle has a charge of	A. +2e B. -2e C. -e D. +3e
8	When a nucleus emits an alpha particle, its atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
9	How much time, the α -particle more massive than an electron	A. 600 B. 7000 C. 5000 D. 15000
10	In his experiment on nuclear reactions, Rutherford bombarded α particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
11	The missing mass which is converted to energy in the formation of nucleus, is called	A. packing fraction B. mass defect C. binding energy D. none of these
12	The energy acquired by a mass of 1g moving with the speed of light is	A. 3×10^{8} J B. 9×10^{13} J C. 3×10^{13} J D. 9×10^{16} J
13	After alpha decay the atomic number of the atom	A. increase by four B. decreases by two C. increases by two D. decrease by four
14	The emission of radiations take place in elements, having charge number greater than	A. 109 B. 82 C. 69 D. 68

15	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
16	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
17	The penetration power of β -particle is	A. zero B. less than α -particle C. equal to α -particle D. greater than α -particle
18	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
19	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
20	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
