

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

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Sr	Questions	Answers Choice
1	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deterium C. protium D. tritium
2	Radiation detector are used to	A. measure intensity of radiation B. measure energy of radiation C. difference between different types of radiation D. all the above
3	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
4	Neon gas have three isotopes whose atomic numbers are	A. 20, 24, 23 B. 20, 21, 22 C. 20, 19, 21 D. none of these
5	The range of particle depends upon the factor	A. charge, mass and energy of particle B. density of medium C. ionization potential of the atoms D. all the above
6	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
7	The diameter of an atom is of the order	A. 10 ⁻¹²⁵ m B. 10 ⁻¹¹ m C. 10 ⁻¹⁰ m D. 10 ⁻⁹ m
8	The figure 1.007276µ shows the mass of an:	A. Atom B. Positron C. Electron D. Neutron E. Proton
9	The energy acquired by a mass of 1g moving with the speed of light is	A. 3 x 10 ⁸ J B. 9 x 10 ¹³ J C. 3 x 10 ¹³ J D. 9 x 10 ¹⁶ J
10	Neutron was suggested to be in the nucleus by:	A. Rutherford in 1920 B. Bohar in 1913 C. Dirac in 1928 D. Anderson in 1932 E. None of these
11	The amount of energy equivalent to 1 a.m.u is	A. 9.315 Mev B. 93.15 Mev C. 931.5 Mev D. 2.22 Mev
12	Heavy water is made of one oxygen atom and two atoms of:	A. Protium B. Deuterium C. Tritium D. Any of these E. None of these
13	The penetration power of β -particle is	A. zero B. less than α-particle C. equal to α-particle

		D. greater than α-particle
14	Binding energy per nucleus is	A. greater for heavy nucleus B. least for heavy nucleus C. greatest for light nuclei D. decreases for medium weight niclei
15	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
16	Mass of neutron is	A. 1.67 x 10 ⁻³¹ kg B. 1.67 x 10 ⁻²⁷ kg C. 9.1 x 10 ⁻³¹ kg D. 1.67 x 10 ⁻ 19kg
17	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
18	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
19	An alpha particle has a charge of	A. +2e B2e Ce D. +3e
20	If 'V' is the relativistic speed and 'C' is the speed of light then according to Einstien the factor V/C must always be	A. Equal to 1 B. Less than 1 C. Greater than 1 D. Infinity