

## ECAT Pre General Science Physics Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	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 nuclei
2	Hydrogen atom with only one proton and one neutron in its nucleus, and one electron, is called	A. deuterium B. protium C. tritium D. none of these
3	The energy is found from Einstein's mass energy relation is called	A. binding energy of electron B. binding energy of proton C. binding energy of neutron D. binding energy of nucleus
4	Pair production take place when energy of $\gamma$ -rays photon is	A. equal to 1.02 Mev B. greater than 1.02 Mev C. less than 1.02 Mev D. none of these
5	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
6	Charge on neutron is	A. $1.6 \times 10^{-19}$ C B. zero C. $-1.6 \times 10^{-19}$ C D. $1.2 \times 10^{-19}$ C
7	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
8	Examples of moderators used in a fission reactor is/are:	A. Water B. Heavy water C. Carbon D. Hydrocarbon E. All of these
9	1 amu is equal to.	A. $1.66 \times 10^{-24}$ kg B. $1.66 \times 10^{-19}$ kg C. $1.66 \times 10^{-24}$ kg D. $1.66 \times 10^{-27}$ kg
10	When a nucleus emits an alpha particle, its atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
11	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
12	$\gamma$ -rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
13	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
14	Mass of proton is of order of	A. $10^{-31}$ gm B. $10^{-27}$ gm C. $10^{-24}$ gm D. $10^{-27}$ kg
		A. $3 \times 10^8$ J

15	The energy acquired by a mass of 1g moving with the speed of light is	B. $9 \times 10^{13}$ J C. $3 \times 10^{13}$ J D. $9 \times 10^{16}$ J
16	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
17	The half life of radium-226 is	A. 238 years B. $4.5 \times 10^9$ days C. 1620 years D. 332 years
18	A particle having the mass of electron and charge of a proton is called a	A. photon B. positron C. antiproton D. antineutrino
19	Radioactivity	A. is exhibited more by semiconductors in general B. in 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
20	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