

## Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	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
2	An alpha particle has a charge of	A. $+2e$ B. $-2e$ C. $-e$ D. $+3e$
3	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
4	The number of all the protons and neutrons in a nucleus is known as	A. atomic number B. mass number C. charge number D. none of these
5	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
6	Charge on proton is	A. $1.59 \times 10^{-9} \text{ C}$ B. $1.59 \times 10^{-7} \text{ C}$ C. $-1.59 \times 10^{-19} \text{ C}$ D. $1.59 \times 10^{-19} \text{ C}$
7	The rate of decay of a radioactive substance	A. decrease exponentially with time B. decreases linearly with time C. increases linearly with time D. increases exponentially with time
8	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
9	The rate of decay of radioactive substance	A. is constant B. decrease exponentially with time C. varies inversely as time D. decreases linearly with time
10	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
11	Electrons are	A. positive charged B. negatively charged C. massless D. neutral
12	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
13	When a nucleus emits an alpha particle, its atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
14	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Beryllium E. Lithium
15		A. Increases by one B. Decreases by one

15	When certain nucleus emits $\alpha$ particle, its mass number:	C. Remain same D. Decreases by four E. None of these
16	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
17	Neutron was discovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
18	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
19	For Protium, the mass defect is:	A. Infinite B. Zero C. Very large D. A few grams E. None of these
20	Proton was discovered by Rutherford in	A. 1915 B. 1906 C. 1910 D. 1920