

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
SI	Questions	
1	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
2	Pair production take place when energy ofγ-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
3	Referring to the above figure, the binding energy per nucleon increases upto mass number equal to:	A. 50 B. 100 C. 150 D. 200 E. 250
4	The range of β -particle in air is greater than that of α -particle by	A. 1000 times B. 100 times C. 15 times D. 10 times
5	The distance travelled by α -particle in a medium before coming to rest, is called	A. range of γ-particle B. range of neutrons C. range of particle D. none of these
6	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
7	1 amu is equal to.	A. 1.66 x 10 ⁻²⁴ kg B. 1.66 x 10 ⁻¹⁹ kg C. 1.66 x 10 ⁻²⁴ kg D. 1.66 x 10 ⁻²⁴ kg
8	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium
9	An alpha particle has a charge of	A. +2e B2e Ce D. +3e
10	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
11	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) E. Both (B) and (C)
12	The counter, which also provides the power to the G.M. tube is called:	A. Thin mica window B. thin glass window C. Airy window D. Wooden window E. None of these
13	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
14	The total charge of any nucleus is given as	A. Ze ² B. Z ² e C. Z/e

		D. ∠e
15	When certain nucleus emits an particle, its mass number:	A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these
16	Gamma rays consist of steam of	A. electron B. proton C. photons D. all of these
17	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
18	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
19	γ-rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
20	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