

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	Referring to the above figure, we can say that of all the elements, the most stable element is	A. Phosphours B. Iron C. uranium D. Lithium E. Bismuth
2	γ -rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
3	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
4	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
5	Mass of neutron is	A. 1.67×10^{-31} kg B. 1.67×10^{-27} kg C. 9.1×10^{-31} kg D. 1.67×10^{-19} kg
6	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
7	When radioactive nucleus emits a β -particle, the proton-neutron ratio	A. decrease B. increase C. same D. none of these
8	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
9	Gamma rays consist of steam of	A. electron B. proton C. photons D. all of these
10	Mass of proton is of order of	A. 10^{-31} gm B. 10^{-27} kg C. 10^{-24} gm D. 10^{+27} kg
11	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. 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	The unit of decay constant is	A. sex B. sec^{-2} C. sec^{-1} D. sec^{-2}
14	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
15	How many isotones of helium are present?	A. 1 B. 2 -

15	How many isotopes of Helium are present.	C. 3 D. 4
16	When a charged particle passes through matter, it produces ionization, this effect is used in	A. fission reaction B. reactor C. radiation detector D. fusion reaction
17	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
18	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
19	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
20	β -particles are easily deflected by collisions than heavy	A. α -particles B. β -particles C. γ -particles D. none of these