

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	How many isotopes of helium are present?	A. 1 B. 2 C. 3 D. 4
2	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
3	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
4	The mass of the nucleus is always less than the total mass of the protons and neutron that make up the nucleus. The difference of the two masses is called	A. nuclear fission B. nuclear fusion C. mass defect D. radioactivity
5	The number of neutrons in the nucleus of ${}_{92}\text{U}^{235}$ are	A. Infinite B. 92 C. 235 D. 143
6	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
7	The reciprocal of decay constant λ of a radioactive material is:	A. Frequency B. Half life C. Year D. Mean life E. None of these
8	The nucleus left after the emission of some radiation is called:	A. Parent nucleus B. Daughter nucleus C. Mother nucleus D. Any of these E. None of these
9	Alpha, beta and gamma rays are emitted from a radio-active substance	A. spontaneously B. when it is heated C. when it is exposed to light D. When it interacts with the other particle
10	A particle having the mass of electron and charge of a proton is called a	A. photon B. positron C. antiproton D. antineutrino
11	In radioactive decay, the new element which is formed due to the disintegration of original element is called	A. element B. daughter element C. parent element D. none of these
12	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
13	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
14	Pair production take place when energy of γ -rays photon is	A. equal to 1.02 Mev B. greater than 1.02 Mev C. less than 1.02 Mev D. ..

		D. none of these
15	In wilson cloud chamber, the air becomes saturated with:	A. Alcohol vapours B. Water C. Helium gas D. Nitrogen gas E. None of these
16	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
17	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
18	Neutron was discovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
19	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
20	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons