

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	The time required for a radioactive material to decrease in active by one half is called	A. half time B. half life C. disintegration time D. mean life
2	If a nucleus emits an alpha particle, its mass number decreases by 4 while charge number decreased by	A. -4 B. 4 C. 2 D. 1
3	When certain nucleus emits α -particles, its mass number:	A. Remain same B. Increases by one C. Decreases by one D. Decreases by four E. None of these
4	The half lie of radium-226 is	A. 238 years B. 4.5×10^9 days C. 1620 years D. 332 years
5	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
6	Charge on neutron is	A. 1.6×10^{-19} C B. zero C. -1.6×10^{-19} C D. 1.2×10^{-19} C
7	γ -rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
8	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 niclei
9	In his experiment on nuclear reactions, Rutherford bombarded α particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
10	For an atom having atomic number Z and atomic weight A, the charge on the nucleus is	A. A - Z B. A + Z C. Z D. A
11	Maric Curie and Pierree Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium C. polonium and radium D. none of these
12	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
13	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
14	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these

15	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) E. Both (B) and (C)
16	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
17	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
18	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
19	A mass spectrograph sort out	A. molecules B. atoms C. elements D. isotopes
20	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