

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	If a nucleus emits an alpha particle, its mass number decreases by 4 while charge number decreased by	A4 B. 4 C. 2 D. 1
2	A pair of quark and antiquark makes a:	A. Meson B. Baryon C. Proton D. Neutron E. None of these
3	Electrons are	A. positive charged B. negatively charged C. massless D. neutral
4	The chemical properties of all the isotopes of an elements are	A. same B. different C. slightly different D. none of these
5	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
6	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
7	According to Rutherford atomic model, the positive charge in an atom	A. is concentrated at its centre B. is in the form of positive electron at same distance from its centre C. is spread uniformly through its volume D. none of these
8	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
9	1 amu is equal to	A. 1.66 x 10 ⁻²⁴ kg B. 1.66 x 10 ⁻¹⁹ kg C. 1.66 x 10 ⁻³⁴ kg D. 1.66 x 10 ⁻²⁷ kg
10	Maric Curie and Pieree Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium C. polonium and radium D. none of these
11	Nuclei that have the same charge number but different mass number are called	A. isotones B. isomers C. isotopes D. isobars
12	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal
13	Radioactivity was discovered by	A. Rutherford B. Henri Becqureal C. Maxwell D. James Chadwick
14	The half life of uranium-238 is	A. 6.2 x 10 ⁹ years B. 4.5 x 10 ⁹ days C. 4.5 x 10 ⁹ years D. 1.3 x 10 ⁶ years

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15	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
16	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
17	Which of these is not a radiation detector	A. Wilson cloud chamberB. cyclotron accelerationC. Geiger Miller counterD. solid state detector
18	The number of protons inside a nucleus is called	A. mass number B. atomic weight C. atomic number D. none of these
19	The energy is found from Einstein's mass energy relation is called	A. binding energy of electronB. binding energy of protonC. binding energy of neutronD. binding energy of nucleus
20	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only