

ECAT Pre General Science Physics Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
2	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
3	The nucleus of uranium -235 differs from a nucleus of a uranium -238 in that the later contains	A. 3 more neutrons B. 3 more electrons C. 3 more protons D. 3 more ions
4	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
5	After alpha decay the atomic number of the atom	A. increase by four B. decreases by two C. increases by two D. decrease by four
6	For Protium, the mass defect is:	A. Infinite B. Zero C. Very large D. A few grams E. None of these
7	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
8	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
9	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
10	Charge on neutron is	A. $1.6 \times 10^{-19} \text{C}$ B. zero C. $-1.6 \times 10^{-19} \text{C}$ D. $1.2 \times 10^{-19} \text{C}$
11	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
12	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
13	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
14	If 'V' is the relativistic speed and 'C' is the speed of light then according to Einstien the factor V/C must always be	A. Equal to 1 B. Less than 1 C. Greater than 1 D. Infinity

15	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
16	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
17	Alfa , 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
18	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
19	Mass of proton is	A. 1.67×10^{-27} kg B. 1.67×10^{-31} kg C. 1.66×10^{-34} kg D. 1.67×10^{-17} kg
20	The emission of radiations take place in elements, having charge number greater than	A. 109 B. 82 C. 69 D. 52