

## ECAT Pre General Science Physics Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	The range of particle depends upon the factor	A. charge, mass and energy of particle B. density of medium C. ionization potential of the atoms D. all the above
2	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
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	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
5	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
6	A mass difference of 0.0012 u is equivalent to and energy of:	A. 0.5 Me V B. 1.13 MeV C. 5.13 MeV D. 1.13 keV E. 1.13 eV
7	The range of $\beta$ -particle in air is greater than that of $\alpha$ -particle by	A. 1000 times B. 100 times C. 15 times D. 10 times
8	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
9	Neutron was discovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
10	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only
11	Mass of proton is of order of	A. $10^{-31}$ gm B. $10^{-27}$ kg C. $10^{-24}$ gm D. $10^{-27}$ kg
12	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these
13	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
14	Nuclei that have the same charge number but different mass number are called	A. isotones B. isomers

		C. isotopes D. isobars
15	Mass of neutron is	A. $1.67 \times 10^{-31}$ kg B. $1.67 \times 10^{-27}$ kg C. $9.1 \times 10^{-31}$ kg D. $1.67 \times 10^{-19}$ kg
16	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
17	The energy is found from Einstein's mass energy relation is called	A. binding energy of electron B. binding energy of proton C. binding energy of neutron D. binding energy of nucleus
18	The diameter of an atom is of the order	A. $10^{-125}$ m B. $10^{-11}$ m C. $10^{-10}$ m D. $10^{-9}$ m
19	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
20	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