

## Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	A particle having the mass of electron and charge of a proton is called a	A. photon B. <b>positron</b> C. antiproton D. antineutrino
2	The penetration power of $\beta$ -particle is	A. zero B. less than $\alpha$ -particle C. equal to $\alpha$ -particle D. <b>greater than <math>\alpha</math>-particle</b>
3	An alpha particle has a charge of	A. <b>+2e</b> B. -2e C. -e D. +3e
4	The number of all the protons and neutrons in a nucleus is known as	A. atomic number B. <b>mass number</b> C. charge number D. none of these
5	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. <b>All of these</b> E. None of these
6	Radiation detector are used to	A. measure intensity of radiation B. measure energy of radiation C. difference between different types of radiation D. <b>all the above</b>
7	Pair production take place when energy of $\gamma$ -rays photon is	A. equal to 1.02 Mev- B. <b>greater than 1.02 Mev</b> C. less than 1.02 Mev D. none of these
8	The energy acquired by a mass of 1g moving with the speed of light is	A. $3 \times 10^8$ J B. <b><math>9 \times 10^{13}</math> J</b> C. $3 \times 10^{13}$ J D. $9 \times 10^{16}$ J
9	Alfa , beta and gamma rays are emitted from a radio-active substance	A. <b>spontaneously</b> B. when it is heated C. when it is exposed to light D. When it interacts with the other particle
10	Beta particles are	A. hydrogen nuclei B. helium nuclei C. <b>electrons</b> D. photons
11	Gamma rays consist of steam of	A. electron B. proton C. <b>photons</b> D. all of these
12	Proton was discovered by Rutherford in	A. 1915 B. 1906 C. 1910 D. <b>1920</b>
13	Alfa particles are	A. hydrogen nuclei B. <b>helium nuclei</b> C. electrons D. photons

		D. photons
14	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 nuclei
15	Charge on neutron is	A. $1.6 \times 10^{-19}$ C B. zero C. $-1.6 \times 10^{-19}$ C D. $1.2 \times 10^{-19}$ C
16	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deuterium C. protium D. tritium
17	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
18	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
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 number of electron in an atoms	A. A - Z B. A + Z C. Z D. A