Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	The energy acquired by a mass of 1g moving with the speed of light is	A. 3 x 10⁸J B. 9 x 10¹³J C. 3 x 10¹³J D. 9 x 10¹⁶J
2	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
3	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
4	In radioactive decay, the new element which is formed due to the disintegration of original element is called	A. element B. daughter element C. parent element D. none of these
5	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
6	The amount of energy equivalent to 1 a.m.u is	A. 9.315 Mev B. 93.15 Mev C. 931.5 Mev D. 2.22 Mev
7	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
8	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
9	γ-rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
10	Radioactivity	A. is exhibited more by semiconductors in general B. in exhibited more by the element when they are coupled C. with other radioactive elements by a covalent bond D. is an atomic property of radioactive elements
11	A mass spectrograph sort out	A. molecules B. atoms C. elements D. isotopes
12	The missing mass which is converted to energy in the formation of nucleus, is called	A. packing fraction B. mass defect C. binding energy D. none of these
13	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
14	The half life of uranium-238 is	A. 6.2 x 10⁹years B. 4.5 x 10⁹days C. 4.5 x 10⁹years

		D. 1.3 x 10⁶years
15	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
16	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
17	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
18	β-particles are easily deflected by collisions than heavy	A. α-particles B. β-particles C. γ-particles D. none of these
19	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
20	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only