ECAT Physics Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	In his experiment on nuclear reactions, Rutherford bombardedα particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
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	Neon gas have three isotopes whose atomic numbers are	A. 20, 24 , 23 B. 20, 21 , 22 C. 20, 19 , 21 D. none of these
4	The emission of radiations take place in elements, having charge number greater than	A. 109 B. 82 C. 69 D. 52
5	Radioactivity is	A. self disruptive activity B. spontaneous activity C. exhibited by all elements under proper conditions D. both 'a' and 'b'
6	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
7	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
8	When a nucleus emits an alpha particle, it atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
9	Radioactivity was discovered by	A. Rutherford B. Henri Becqureal C. Maxwell D. James Chadwick
10	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
11	The nucleous of uranium -235 differs from a nucleous 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
12	Pair production take place when energy ofγ-rays photon is	A. equal to 1.02 Mev- B. greater than 1.02 Mev C. less than 1.02 Mev D. none of these
13	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium
14	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance

	The half life of radioactive substances depends upon	C. state of substance D. temperature of substance
15	1 amu is equal to	A. 1.66 x 10⁻²⁴kg B. 1.66 x 10⁻¹⁹kg C. 1.66 x 10⁻³⁴kg D. 1.66 x 10⁻²⁷kg
16	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deterium C. protium D. tritium
17	Rutherford performed an experiment on nuclear reactions in:	A. 1718 A.D B. 1818 A.D C. 1918 A.D D. 2001 A.D. E. 1701 A.D.
18	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
19	Charge on neutron is	A. 1.6 x 10⁻¹⁹C B. zero C. -1.6 x 10⁻¹⁹C D. 1.2 x 10⁻¹⁹C
20	γ-rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves