

ECAT Pre General Science Physics Chapter 21 Nuclear Physics Online Test

Sr	Questions	Answers Choice
1	When radioactive nucleus emits α -particle, the proton-neutron ratio	A. decrease B. increase C. same D. none of these
2	Phenomenon of radioactivity is due to disintegration of	A. nucleus B. neutron C. proton D. molecule
3	A curie represents a very strong source of	A. α -particle B. β -particle C. γ -particle D. none of these
4	The rate of decay of radioactive substance	A. is constant B. decrease exponentially with time C. varies inversely as time D. decreases linearly with time
5	If a nucleus emits an alpha particle, its mass number decreases by 4 while charge number decreased by	A. -4 B. 4 C. 2 D. 1
6	An alpha particle has a charge of	A. +2e B. -2e C. -e D. +3e
7	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
8	When a nucleus emits an alpha particle, it atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
9	Radioactivity is	A. self disruptive activity B. spontaneous activity C. exhibited by all elements under proper conditions D. both 'a' and 'b'
10	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
11	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
12	Gamma rays consist of steam of	A. electron B. proton C. photons D. all of these
13	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
14	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons

		<p>C. electrons</p> <p>D. photons</p>
15	Maric Curie and Pierree Curie discovered two new radioactive elements, which are called	<p>A. polonium uranium</p> <p>B. uranium and radium</p> <p>C. polonium and radium</p> <p>D. none of these</p>
16	Radioactivity was discovered by	<p>A. Rutherford</p> <p>B. Henri Becquereal</p> <p>C. Maxwell</p> <p>D. James Chadwick</p>
17	Radioactivity	<p>A. is exhibited more by semiconductors in general</p> <p>B. in exhibited more by the element when they are coupled</p> <p>C. with other radioactive elements by a covalent bond</p> <p>D. is an atomic property of radioactive elements</p>
18	Binding energy per nucleus is	<p>A. greater for heavy nucleus</p> <p>B. least for heavy nucleus</p> <p>C. greatest for light nuclei</p> <p>D. decreases for medium weight niclei</p>
19	The amount of energy equivalent to 1 a.m.u is	<p>A. 9.315 Mev</p> <p>B. 93.15 Mev</p> <p>C. 931.5 Mev</p> <p>D. 2.22 Mev</p>
20	The energy is found from Einstein's mass energy relation is called	<p>A. binding energy of electron</p> <p>B. binding energy of proton</p> <p>C. binding energy of neutron</p> <p>D. binding energy of nucleus</p>
21	The missing mass which is converted to energy in the formation of nucleus, is called	<p>A. packing fraction</p> <p>B. mass defect</p> <p>C. binding energy</p> <p>D. none of these</p>
22	The energy acquired by a mass of 1g moving with the speed of light is	<p>A. 3×10^{18} J</p> <p>B. 9×10^{13} J</p> <p>C. 3×10^{13} J</p> <p>D. 9×10^{16} J</p>
23	If 'V' is the relativistic speed and 'C' is the speed of light then according to Einstien the factor V/C must always be	<p>A. Equal to 1</p> <p>B. Less than 1</p> <p>C. Greater than 1</p> <p>D. Infinity</p>
24	1 amu is equal to.	<p>A. 1.66×10^{-24} kg</p> <p>B. 1.66×10^{-19} kg</p> <p>C. 1.66×10^{-24} kg</p> <p>D. 1.66×10^{-27} kg</p>
25	The mass of the nucleus is always less than the total man of the protons and neutron that make up the nucleus. The difference of the two masses is called	<p>A. nuclear fission</p> <p>B. nuclear fusion</p> <p>C. man defect</p> <p>D. radioactivity</p>
26	Neon gas have three isotopes whose atomic numbers are	<p>A. 20, 24 , 23</p> <p>B. 20, 21 , 22</p> <p>C. 20, 19 , 21</p> <p>D. none of these</p>
27	The most abundant isotope of neon is	<p>A. neon-20</p> <p>B. neon-21</p> <p>C. neon-22</p> <p>D. neon-23</p>
28	A mass spectrograph sort out	<p>A. molecules</p> <p>B. atoms</p> <p>C. elements</p> <p>D. isotopes</p>
29	The chemical properties of an element depends upon the number of	<p>A. electron</p> <p>B. position</p> <p>C. photons</p> <p>D. neutrons</p>
30	The chemical properties of all the isotopes of an elements are	<p>A. same</p> <p>B. different</p> <p>C. slightly different</p> <p>D. none of these</p>