

## ECAT Pre General Science Physics Chapter 21 Nuclear Physics Online Test

Sr	Questions	Answers Choice
1	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
2	A pair of quark and antiquark makes a:	A. Meson B. Baryon C. Proton D. Neutron E. None of these
3	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these
4	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
5	Heavy water is made of one oxygen atom and two atoms of:	A. Protium B. Deuterium C. Tritium D. Any of these E. None of these
6	Examples of moderators used in a fission reactor is/are:	A. Water B. Heavy water C. Carbon D. Hydrocarbon E. All of these
7	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Beryllium E. Lithium
8	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
9	In his experiment on nuclear reactions, Rutherford bombarded particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
10	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.
11	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
12	In wilson cloud chamber, the air becomes saturated with:	A. Alcohol vapours B. Water C. Helium gas D. Nitrogen gas E. None of these
13	The unit of decay constant is:	A. Second B. Metre C. Hour D. None of these

		D. Year E. Second <sup>&lt;sup&gt;-1&lt;/sup&gt;</sup>
14	The reciprocal of decay constant $\lambda$ of a radioactive material is:	A. Frequency B. Half life C. Year D. Mean life E. None of these
15	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
16	When thorium nucleus emits $\alpha$ -particle, the daughter nucleus is called:	A. Protactinium B. Actinium C. Uranium D. Radium E. Redon
17	When certain nucleus emits $\alpha$ -particles, its mass number:	A. Remain same B. Increases by one C. Decreases by one D. Decreases by four E. None of these
18	When certain nucleus emits $\alpha$ particle, its mass number:	A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these
19	During the nuclear changes, the law/s of conservation that hold/s are that of:	A. Charge B. energy C. Momentum D. Mass E. All of these
20	The nucleus left after the emission of some radiation is called:	A. Parent nucleus B. Daughter nucleus C. Mother nucleus D. Any of these E. None of these
21	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
22	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
23	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
24	Referring to the above figure, the binding energy per nucleon increases upto mass number equal to:	A. 50 B. 100 C. 150 D. 200 E. 250
25	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
26	For Protium, the mass defect is:	A. Infinite B. Zero C. Very large D. A few grams E. None of these
27	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
		A. Protium B. Deuterium

28	The isotope/s of hydrogen is /are:	B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
29	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal
30	Nucleus of a hydrogen atom may contain:	A. One neutron only B. Two protons and one neutron C. Two protons and two neutrons D. Any of above E. One proton only