

ECAT Physics Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
2	Pair production take place when energy of γ -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
3	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
4	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
5	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Beryllium E. Lithium
6	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
7	The unit of decay constant is:	A. Second B. Metre C. Hour D. Year E. Second^{-1}
8	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
9	Marie Curie and Pierre Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium C. polonium and radium D. none of these
10	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
11	The energy acquired by a mass of 1g moving with the speed of light is	A. $3 \times 10^8 \text{ J}$ B. $9 \times 10^{13} \text{ J}$ C. $3 \times 10^{13} \text{ J}$ D. $9 \times 10^{16} \text{ J}$
12	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
13	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
14	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. None of these

		D. Total life E. None of these
15	Radiation detector are used to	A. measure intensity of radiation B. measure energy of radiation C. difference between different types of radiation D. all the above
16	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
17	The unit of decay constant is	A. sex B. sec^2 C. sec^{-1} D. sec^{-2}
18	1 amu is equal to	A. $1.66 \times 10^{-24} \text{ kg}$ B. $1.66 \times 10^{-19} \text{ kg}$ C. $1.66 \times 10^{-34} \text{ kg}$ D. $1.66 \times 10^{-27} \text{ kg}$
19	β -particles are easily deflected by collisions than heavy	A. α -particles B. β -particles C. γ -particles D. none of these
20	The reciprocal of decay constant λ of a radioactive material is:	A. Frequency B. Half life C. Year D. Mean life E. None of these