

## Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	Radioactivity	A. is exhibited more by semiconductors in general B. is exhibited more by the element when they are coupled <b>C. with other radioactive elements by a covalent bond</b> D. is an atomic property of radioactive elements
2	When certain nucleus emits an $\alpha$ particle, its mass number:	A. Increases by one B. Decreases by one C. Remains same <b>D. Decreases by four</b> E. None of these
3	The figure 1.007276 $\mu$ shows the mass of an:	A. Atom B. Positron C. Electron D. Neutron <b>E. Proton</b>
4	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 <b>E. One proton only</b>
5	Radiation detector are used to	A. measure intensity of radiation B. measure energy of radiation C. difference between different types of radiation <b>D. all the above</b>
6	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) <b>E. Both (B) and (C)</b>
7	Marie Curie and Pierre Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium <b>C. polonium and radium</b> D. none of these
8	A curie represents a very strong source of	A. $\alpha$ -particle B. $\beta$ -particle C. $\gamma$ -particle <b>D. none of these</b>
9	Referring to the above figure, the binding energy per nucleon increases up to mass number equal to:	<b>A. 50</b> B. 100 C. 150 D. 200 E. 250
10	When certain nucleus emits $\alpha\beta$ -particles, its mass number:	A. Remains same B. Increases by one C. Decreases by one <b>D. Decreases by four</b> E. None of these
11	During the nuclear changes, the law/s of conservation that hold/s are that of:	A. Charge B. energy C. Momentum D. Mass <b>E. All of these</b>
12		A. Meson B. Baryon <b>C. Dyon</b>

12	A pair of quark and antiquark makes a:	C. Proton D. Neutron E. None of these
13	Referring to the above figure, we can say that of all the elements, the most stable element is	A. Phosphorus B. Iron C. uranium D. Lithium E. Bismuth
14	1 amu is equal to.	A. $1.66 \times 10^{-24}$ kg B. $1.66 \times 10^{-19}$ kg C. $1.66 \times 10^{-24}$ kg D. $1.66 \times 10^{-27}$ kg
15	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
16	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
17	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
18	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
19	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
20	$\beta$ -particles are easily deflected by collisions than heavy	A. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">&gt;<math>\alpha</math>-particles</span> B. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">&gt;<math>\beta</math>-particles</span> C. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">&gt;<math>\gamma</math>-particles</span> D. none of these