

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
2	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
3	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deuterium C. protium D. tritium
4	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium
5	According to Rutherford atomic model, the positive charge in an atom	A. is concentrated at its centre B. is in the form of positive electron C. is spread uniformly through its volume D. none of these
6	1 amu is equal to	A. $1.66 \times 10^{-24}$ kg B. $1.66 \times 10^{-19}$ kg C. $1.66 \times 10^{-34}$ kg D. $1.66 \times 10^{-27}$ kg
7	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these
8	Which of the following material has smaller has life	A. uranium B. polonium C. radium D. radian
9	When certain nucleus emits $\alpha\beta$ -particles, is mass number:	A. Remain same B. Increases by one C. Decreases by one D. Decreases by four E. None of these
10	If 'V' is the relativistic speed and 'C' is the speed of light then according to Einstien the factor $V/C$ must always be	A. Equal to 1 B. Less than 1 C. Greater than 1 D. Infinity
11	How many isotopes of helium are present?	A. 1 B. 2 C. 3 D. 4
12	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
13	$\beta$ -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;</span> $\alpha$ -particles B. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">&gt;</span> $\beta$ -particles C. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">&gt;</span> $\gamma$ -particles D. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">&gt;</span> protons

size: small; > $\gamma$ -particles</span>  
D. none of these

14 The nucleus/nuclei of hydrogen is/are:  
A. Proton  
B. Deuteron  
C. Triton  
D. All of these  
E. None of these

15 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

16 In wilson cloud chamber, the air becomes saturated with:  
A. Alcohol vapours  
B. Water  
C. Helium gas  
D. Nitrogen gas  
E. None of these

17 Electrons are  
A. positive charged  
B. negatively charged  
C. massless  
D. neutral

18  $\gamma$ -rays behave like a particle because they explain the  
A. Compton effect  
B. Photoelectric effect  
C. Pair-production  
D. all the above

19 In radio-active decay, the original element which disintegrate to another element is called  
A. element  
B. daughter element  
C. parent element  
D. none of these

20 A pair of quark and antiquark makes a:  
A. Meson  
B. Baryon  
C. Proton  
D. Neutron  
E. None of these