

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

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	The half life of uranium-238 is	A. 6.2×10^9 years B. 4.5×10^9 days C. 4.5×10^9 years D. 1.3×10^6 years
3	The amount of energy equivalent to 1 a.m.u is	A. 9.315 Mev B. 93.15 Mev C. 931.5 Mev D. 2.22 Mev
4	When thorium nucleus emits a β -particle, the daughter nucleus is called:	A. Protactinium B. Actinium C. Uranium D. Radium E. Redon
5	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
6	The range of particle depends upon the factor	A. charge, mass and energy of particle B. density of medium C. ionization potential of the atoms D. all the above
7	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
8	A particle having the mass of electron and charge of a proton is called a	A. photon B. position C. antiproton D. antineutrino
9	Neutrons are	A. positive charge B. negatively charged C. massless D. neutral
10	Charge on neutron is	A. 1.6×10^{-19} C B. zero C. -1.6×10^{-19} C D. 1.2×10^{-19} C
11	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
12	Neutron was suggested to be in the nucleus by:	A. Rutherford in 1920 B. Bohr in 1913 C. Dirac in 1928 D. Anderson in 1932 E. None of these
13	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
14	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

15 Fraction of the decaying atoms per unit time is called

A. decay atom
B. decay element
C. decay constant
D. decay

16 The unit of decay constant is:

A. Second
B. Metre
C. Hour
D. Year
E. Second⁻¹

17 Which are not the elementary particles?

A. Photons
B. Leptons
C. Hadrons
D. Quarks
E. None of these

18 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

19 For an atom having atomic number 'Z' and atomic weight 'A', the number of neutrons in the nucleous is

A. A - Z
B. A
C. Z
D. A + Z

20 The time required for a radioactive material to decrease in active by one half is called

A. half time
B. half life
C. disintegration time
D. mean life
