

Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	Neutron was suggested to be in the nucleus by:	<p>A. Rutherford in 1920 B. Bohar in 1913 C. Dirac in 1928 D. Anderson in 1932 E. None of these</p>
2	In 1932 Chadwick discovered	<p>A. proton B. neutron C. photon D. electron</p>
3	According to Rutherford atomic model, the positive charge in an atom	<p>A. is concentrated at its centre B. is in the form of positive electron at same distance from its centre C. is spread uniformly through its volume D. none of these</p>
4	The nucleus/nuclei of hydrogen is/are:	<p>A. Proton B. Deuteron C. Triton D. All of these E. None of these</p>
5	The rate of decay of a radioactive substance	<p>A. decrease exponentially with time B. decreases linearly with time C. increases linearly with time D. increases exponentially with time</p>
6	Rate of decay is actually described by.	<p>A. Half line B. Decay constant C. Mean life D. Total life E. None of these</p>
7	The figure 1.007276 μ shows the mass of an:	<p>A. Atom B. Positron C. Electron D. Neutron E. Proton</p>
8	How much time, the α -particle more massive than an electron	<p>A. 600 B. 7000 C. 5000 D. 15000</p>
9	When certain nucleus emits an α particle, its mass number:	<p>A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these</p>
10	The range of particle depends upon the factor	<p>A. charge, mass and energy of particle B. density of medium C. ionization potential of the atoms D. all the above</p>
11	Proton was discovered by Rutherford in	<p>A. 1915 B. 1906 C. 1910 D. 1920</p>
12	Radium was discovered by:	<p>A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)</p>
13	U-238 present in the natural uranium is about:	<p>A. 59% B. 0.007% C. 99% D. 39% E. 19%</p>

14 For an atom having atomic number Z and atomic weight A , the charge on the nucleus is
A. $A - Z$
B. $A + Z$
C. Z
D. A

15 The total charge of any nucleus is given as
A. Ze^{2-}
B. $Z^{2-}e$
C. Ze
D. Ze

16 After alpha decay the atomic number of the atom
A. increase by four
B. decreases by two
C. increases by two
D. decrease by four

17 Radioactivity was discovered by
A. Rutherford
B. Henri Becquerel
C. Maxwell
D. James Chadwick

18 Gamma rays consist of steam of
A. electron
B. proton
C. photons
D. all of these

19 Examples of moderators used in a fission reactor is/are:
A. Water
B. Heavy water
C. Carbon
D. Hydrocarbon
E. All of these

20 Charge on proton is
A. $1.59 \times 10^{-9} C$
B. $1.59 \times 10^{-7} C$
C. $-1.59 \times 10^{-19} C$
D. $1.59 \times 10^{-19} C$