

ECAT Physics Online Test

Sr	Questions	Answers Choice
1	Above the curie temperature, iron becomes	A. ferromagnetic B. paramagnetic C. diamagnetic D. any one of them
2	Ferromagnetic substances lose their magnetism when heated above a certain temperature, known as	A. critical temperature B. curie temperature C. high temperature D. fixed temperature
3	Current, voltage, resistance measuring circuit is connected with the galvanometer with the help of switch, known as	A. ON switch B. off switch C. function switch D. none of these
4	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
5	When a charged particle passes through matter, it produces ionization, this effect is used in	A. fission reaction B. reactor C. radiation detector D. fusion reaction
6	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
7	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
8	γ -rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
9	γ -rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
10	The penetration power of β -particle is	A. zero B. less than α -particle C. equal to α -particle D. greater than α -particle
11	The range of β -particle in air is greater than that of α -particle by	A. 1000 times B. 100 times C. 15 times D. 10 times
12	β -particles are easily deflected by collisions than heavy	A. α -particles B. γ -particles C. α -particles D. none of these

13	How much time, the α -particle more massive than an electron	A. 600 B. 7000 C. 5000 D. 15000
14	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
15	The distance travelled by α -particle in a medium before coming to rest, is called	A. range of α -particle B. range of neutrons C. range of particle D. none of these
16	Which of the following material has smaller half life	A. uranium B. polonium C. radium D. radian
17	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
18	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
19	The half life of radium-226 is	A. 238 years B. 4.5×10^9 days C. 1620 years D. 332 years
20	The unit of decay constant is	A. sex B. sec^2 C. sec^{-1} D. sec^{-2}
21	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
22	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
23	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
24	The emission of radiations take place in elements, having atomic number greater than	A. 109 B. 82 C. 69 D. 52
25	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
26	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
27	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
28	The rate of decay of a radioactive substance	A. decrease exponentially with time B. decreases linearly with time C. increases linearly with time D. increases exponentially with time
29	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

D. decrease by four

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When radioactive nucleus emits a β -particle, the proton-neutron ratio

A. decrease

B. increase

C. same

D. none of these