

## Physics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	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
2	The distance travelled by $\alpha$ -particle in a medium before coming to rest, is called	A. range of <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">γ-particle</span> B. range of neutrons C. range of particle D. none of these
3	Which of the following material has smaller has life	A. uranium B. polonium C. radium D. radian
4	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
5	The half life of uranium-238 is	A. 6.2 x 10 <sup>9</sup> years B. 4.5 x 10 <sup>9</sup> days C. 4.5 x 10 <sup>9</sup> years D. 1.3 x 10 <sup>6</sup> years
6	The half lie of radium-226 is	A. 238 years B. 4.5 x 10 <sup>9</sup> days C. 1620 years D. 332 years
7	The unit of decay constant is	A. sex B. sec <sup>2</sup> C. sec <sup>-1</sup> D. sec <sup>-2</sup>
8	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
9	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
10	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
11	The emission of radiations take place in elements, having charge number greater than	A. 109 B. 82 C. 69 D. 52
12	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
13	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
14	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives

A increase by four B. decrease by four C. increases by four D. decreases C. same  18 Phenomenon of radioactivity is due to disintegration of B. A nucleus B. neutron C. proton D. molecular D. decrease B. neutron D.	15	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
When radioactive nucleus emits aβ-particle, the proton-neutron ratio   C. same   C. same   D. none of these   D. none of the	16	After alpha decay the atomic number of the atom	B. decreases by two C. increases by two
Phenomenon of radioactivity is due to disintegration of C. proton D. molecule  A curie represents a very strong source of C. proton S. A. span style="color: rgb(34, 34, 34); font-family arial; same-serif serifical spans" B. span style="color: rgb(34, 34, 34); font-family arial; same-serif serifical spans" B. span style="color: rgb(34, 34, 34); font-family arial; same-serif font-size: small*-po-gratide-spans D. Serifical spans of these small*-po-gratide-spans of the spans of th	17	When radioactive nucleus emits a $\beta$ -particle, the proton-neutron ratio	B. increase C. same
34): fort-family: anal, sans-serif, fort-size: small; "Por-particle-rispan" B. espan style="color: right3, 34, 34, 34, 34, 34, 34, 34, 34, 34, 3	18	Phenomenon of radioactivity is due to disintegration of	B. neutron C. proton
The rate of decay of radioactive substance  C. varies inversely as time D. decreases inearly with time C. varies inversely as time D. decreases linearly with time A. 2.5 ev C0.85 ev D1.35 ev C0.85 ev D1.35 ev D1.35 ev D1.35 ev D1.36 ev D	19	A curie represents a very strong source of	34); font-family: arial, sans-serif; font-size: small;">α-particle B. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">β-particle</span> C. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">γ-particle</span>
The energy of the 4th orbit in hydrogen atom is  C0.85 ev D13.6 ev C0.85 ev D13.6 ev C0.85 ev D13.6 ev C0.85 ev D13.6 ev  Position and momentum of a particle cannot both be measured simultaneously with perfect accuracy. This is the statement of  A photoelectric effect D. uncertainty principle  A Maxwell B. Compton C. Einstein D. Davison and Germer  A particle-like properties B. wave-like properties C. neither particle nor vaeve like properties D. none of these D. none of these D. none of these D. none of these D. Naws-energy relation  A Einstein D. Max-energy relation  A Einstein D. Max well  Wave nature of particle was proposed by A particle-motion D. Max well  With the help of 50 K v electron microscope, a resolution of  A 0.5 to 1 m to possible D. 1 to 10 nm is possible C. 0.5 to 1 mm is possible D. 1 to 10 nm is possible C. 0.5 to 1 mm is possible D. 1 to 10 nm is possible D. none of these  A packetes is accelerated theruse a catestiel difference of 60 ute de Receille unuelenant is B. 1.7.4 x 10-sup>-20-4/sup>-m B. 1.7.4 x 10-sup>-20-4/sup>-m B. 1.7.4 x 10-sup>-10-f/sup>-cn	20	The rate of decay of radioactive substance	B. decrease exponentially with time C. varies inversely as time
Position and momentum of a particle cannot both be measured simultaneously with perfect accuracy. This is the statement of  23 de-Broglies hypthesis was experimentally verified by  24 G.P. Thomson observer experimentally that electrons and neutrons possess  25 Davision and Germer performed experiment to verify  26 Wave nature of particle was proposed by  27 Momentum is a parameter associated with  28 With the help of 50 K v electron microscope, a resolution of  29 Which of the following phenomenon proves the particle nature of light  A Maxwell B. Compton C. Compton of C. Compton of C. Compton effect D. uncertainty principle A Maxwell B. Compton C. Einstein B. A particle-like properties C. neither particle nor wave like properties D. none of these  A de-Broglie hypothesis B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation  A Einstein B. Plank C. De-Broglie D. Max well  A wave motion B. particle motion D. none of these  A 0.5 to 1 m to possible D. 1 to 10 m is possible	21	The energy of the 4th orbit in hydrogen atom is	B 3.5 ev C0.85 ev
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24 G.P. Thomson observer experimentally that electrons and neutrons possess  C. neither particle nor wave like properties D. none of these  25 Davision and Germer performed experiment to verify  A. de-Brogile hypothesis B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation  A. Einstein B. Plank C. De-Brogile D. Max well  A. wave motion B. particle motion C. neither wave nor particle motion D. none of these  With the help of 50 K v electron microscope, a resolution of  A. 0.5 to 1 m to possible D. 1 to 10 m is possible C. 0.5 to 1 mm is possible D. 1 to 10 m is possible D. 1 to 10 m is possible D. 1 in 10 m is possible	23	de-Broglies hypthesis was experimentally verified by	B. Compton C. Einstein
Davision and Germer performed experiment to verify  B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation  A. Einstein B. Plank C. De-Brogile D. Max well  A. wave motion B. particle motion C. neither wave nor particle motion D. none of these  With the help of 50 K v electron microscope, a resolution of  Which of the following phenomenon proves the particle nature of light  A. d. 1.66 x 10 A. interference B. diffraction C. photoelectric effect D. none of these  A. 1.66 x 10 An electron is possible resolvered through a netestial difference of 50 k, its de Proville unvalenable is B. 1.74 x 10 An electron is possible variety of support to the particle unvalenable is B. 1.74 x 10 An electron is possible variety of relativity C. Newton's law of gravitation D. Mass-energy relation A. Einstein B. Plank C. De-Brogile D. Max well A. 0.5 to 1 m to possible D. 1 to 10 nm is possible D. none of these A. 1.66 x 10 An electron is possible variety of feet to the provide unvalenable is B. 1.74 x 10	24	G.P. Thomson observer experimentally that electrons and neutrons possess	B. wave-like properties C. neither particle nor wave like properties
Wave nature of particle was proposed by  B. Plank C. De-Brogile D. Max well  A. wave motion B. particle motion C. neither wave nor particle motion D. none of these  With the help of 50 K v electron microscope, a resolution of  A. 0.5 to 1 m to possible B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible D. 1 to 10 nm is possible A. interference B. diffraction C. photoelectric effect D. none of these  A. 1.66 x 10 <sup>-29 An electron is accelerated through a potential difference of 50 v. its do Brogilo unvelocate is B. 1.74 x 10<sup>-29 An electron is accelerated through a potential difference of 50 v. its do Brogilo unvelocate is B. 1.74 x 10<sup>-10</sup></sup></sup>	25	Davision and Germer performed experiment to verify	B. theory of relativity     C. Newton's law of gravitation
Momentum is a parameter associated with  B. particle motion C. neither wave nor particle motion D. none of these  A. 0.5 to 1 m to possible B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible A. interference B. diffraction C. photoelectric effect D. none of these  A. 1.66 x 10 <sup>-29 An electron is accelerated through a potential difference of 50 v, its do Provide Management is B. 1.74 x 10<sup>-10</sup></sup>	26	Wave nature of particle was proposed by	B. Plank C. De-Brogile
With the help of 50 K v electron microscope, a resolution of  B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible D. 1 to 10 nm is possible A. interference B. diffraction C. photoelectric effect D. none of these  A. 1.66 x 10 An electron is accelerated through a potential difference of 50 v, its do Proville unvelopeth is B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible A. interference B. diffraction C. photoelectric effect D. none of these  A. 1.66 x 10 Sup>-29	27	Momentum is a parameter associated with	<ul><li>B. particle motion</li><li>C. neither wave nor particle motion</li></ul>
Which of the following phenomenon proves the particle nature of light  B. diffraction C. photoelectric effect D. none of these  A. 1.66 x 10 <sup>-29</sup> m B. 1.74 x 10 <sup>-10</sup> cm	28	With the help of 50 K v electron microscope, a resolution of	B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible
30 An electron is accelerated through a potential difference of 50v, its de Broeile unvelongth is B. 1.74 x 10 <sup>-10</sup> cm	29	Which of the following phenomenon proves the particle nature of light	B. diffraction C. photoelectric effect
D. 1.74 x 10 <sup>-10</sup> m	30	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	B. 1.74 x 10 <sup>-10</sup> cm C. 17.4 x 10 <sup>-6</sup> m