

ECAT Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
2	The photoelectric effect, the maximum energy of photoelectrons depends on the	A. particular metal surface B. frequency of incident light C. both of them D. none of them
3	The value of the plank's constant 'h' is given by	A. 1.6×10^{-19} J B. 1.67×10^{-27} Kg C. 6.63×10^{-34} Js D. 6.63×10^{-34} Js
4	de-Broglies hypthesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
5	0.1 kg mass will be equivalent to the energy	A. 9×10^{15} J B. 5×10^8 J C. 6×10^{16} J D. 9×10^{-16} J
6	Absolute motion cannot be detected	A. in its own frame of references B. in a different frame of references C. both in its frame and different frame of references D. none of these
7	The general theory of relativity treats problems involving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
8	An inertial frame of reference is a frame of reference which is	A. at rest B. moving with uniform velocity C. either at rest or moving with uniform velocity D. none of these
9	the symbol to be used in relativity problems denotes:	A. Dilated time B. Proper time C. Life time D. Half time E. None of these
10	The mass 'm' of a body moving at 0.8 c (whose rest mass is m_0) becomes	A. 2 m_0 B. 1.67 m_0 C. 0.67 m_0 D. 2.67 m_0
11	Compton derived an expression to find compton shift by applying to the process, the law of conservation of:	A. Energy only B. Momentum only C. Mass only D. Charge only E. Both (A) and (B)
12	The existence of positron was predicted by Dirac in	A. 1920 B. 1925 C. 1930 D. 1928
13	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	A. 1916 B. 1919 C. 1921 D. 1923

A. 1600×10^3 C
B. 900×10^3 C

14	When platinum wire is heated, it appears cherry red at	<p>size: small;">°C</p> <p>C. 1100°C</p> <p>D. 1300°C</p>
15	Compton was awarded Nobel prize in physics in	<p>A. 1921</p> <p>B. 1923</p> <p>C. 1925</p> <p>D. 1927</p>
16	When a high energy photon interact with a metal, which of the following effect is most likely to be taken place	<p>A. pair production</p> <p>B. photoelectric effect</p> <p>C. Compton effect</p> <p>D. None of these</p>
17	According to the special theory of relativity, a moving clock	<p>A. runs faster</p> <p>B. runs slower</p> <p>C. neither runs faster nor slower</p> <p>D. all of these</p>
18	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	<p>A. 1.66×10^{-29} m</p> <p>B. 1.74×10^{-10} cm</p> <p>C. 17.4×10^{-6} m</p> <p>D. 1.74×10^{-10} m</p>
19	If A represents linear momentum and c, the velocity of light, then unit of pc in international system of units is:	<p>A. Newton</p> <p>B. Joule</p> <p>C. Joule-Sec</p> <p>D. Joule-s^{-1}</p> <p>E. Watt</p>
20	Photoelectrons are emitted when ultraviolet light falls on:	<p>A. Casium</p> <p>B. Silver</p> <p>C. Potassium</p> <p>D. Any of these</p> <p>E. None of these</p>