

## ECAT Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
2	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
3	When a high energy photon interact with a metal, which of the following effect is most likely to be taken place	A. pair production B. photoelectric effect C. Compton effect D. None of these
4	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
5	Practically the quantity $v/c$ is always:	A. less than one B. Equal to one C. Greater then one D. all of these E. None of these
6	According to the de-Brogile relation, an object of large mass and ordinary speed has	A. very small wavelength B. very large wavelength C. very small frequency D. all of these
7	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
8	The year when A.H. compton was awarded Nobel Prize is:	A. 1923 B. 1927 C. 1931 D. 1935 E. None of these
9	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
10	The location and speed anywhere on earth can now be determined using relativistic effects by NAVISTAR to an accuracy of	A. 2 cm/s B. 20 cm/s C. 200 cm/s D. 2000 cm/s
11	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
12	The stopping voltage for a certain metal is 100 volts, then the work function for the cathode plate is	A. 100 J B. $1.6 \times 10^{-17} \text{ J}$ C. 100 eV D. $1.6 \times 10^{-17} \text{ eV}$
13	According to the special theory of relativity, a moving clock	A. runs faster B. runs slower C. neither runs faster nor slower D. all of these
14	Position and momentum of a particle cannot both be measured simultaneously with perfect accuracy. This is the statement of	A. photoelectric effect B. pair production C. Compton effect D. uncertainty principle
15	Strictly speaking the earth is:	A. An accelerated frame of reference B. A non-inertial frame of reference C. An inertial frame of reference

15	Special relativity, the Michelson-Morley experiment, and the ether hypothesis.	D. <sup>A non-accelerated frame of reference</sup> E. Both (A) and (B)
16	The unit of work function is:	A. Joule B. Electron volt C. That of threshold frequency D. Both (A) and (B) E. None of these
17	Which one of the following physical quantities changes with relativistic speed	A. Length B. Mass C. Time D. All of the above
18	Photoelectric effect takes place with a photon of:	A. Very high energy B. Very low energy C. Low energy D. High energy E. None of these
19	G.P. Thomson observed experimentally that electrons and neutrons possess	A. particle-like properties B. wave-like properties C. neither particle nor wave like properties D. none of these
20	The analysis of the distribution of wavelengths of the radiation emitted from a hot body set the foundation of new mechanics, known as	A. classical mechanics B. Newtonian mechanics C. quantum mechanics D. statistical mechanics