MDCAT Physics Chapter 15 Modern Physics Online Test

Sr	Questions	Answers Choice
1	Davisson and Germer received the Nobel prize for their work on:	A. Wave nature of particle B. Corpuscular nature of wave C. Dual nature of particle D. All of them
2	A.H Compton studied the scattering of X-rays by loosely bound electrons from a graph target in:	A. 1905 B. 1911 C. 19251 D. 1923
3	A human eye can detect the electromagnetic radiations of the type:	A. Infrared radiations B. For- infrared radiations C. X-rays radiations D. Red radiations
4	The minimum energy required by an electron to eject from metal surface is known as:	A. Photo energy B. Critical energy C. Threshold energy D. Work function
5	The maximum kinetic energy of emitted photoelectrons depends upon:	A. The intensity of incident light B. Frequency of the incident light C. Temperature of the surface D. All of above
6	In Compton effect, it was considered that X-rays consist of:	A. Electrons B. Positrons C. Photons D. All of these
7	In photoelectric effect, if we increase the frequency of the incident light then of the electrons increased	A. Number B. K.E C. P.E D. Frequency
8	The energy of photon of wavelength 1240 nm is:	A. 0.5 eV B. 1.0 eV C. 1.5 eV D. 2.0 eV
9	In photoelectric effect, electrons are emitted:	A. Slowly B. Intermittently C. Both (a) & (b) D. Instantly
10	The maximum energy of the photoelectrons depends upon:	A. Frequency of incident light B. Intensity of incident light C. Nature of metal D. Both (a) & (c)
11	Photo cells is a device which convert light into:	A. Wave nature B. Particle nature C. Particle wave nature D. Dual nature
12	A human eye can detect the electromagnetic radiations of the type:	A. Infrared radiations B. For- infrared radiations C. X-rays radiations D. Red radiations
13	The energy of photon of wavelength 620 nm is:	A. 0.5 eV B. 1.0 eV C. 1.5 eV D. 2.0 eV
14	J.J Thomson finds:	A. Particle nature of the electron B. Dual nature of electron C. Wave nature of electron D. Electromagnetic nature of electron
15	Compton Effect makes the use of the law of conservation of:	A. Energy B. Momentum C. Charge D. Both (a) & (b)

16	Photoelectric effect and Compton effect prove the:	A. Wave nature of light B. Particle nature of light C. Dual nature of light D. Dual nature of light
17	The unit Compton wavelength is same as:	A. Compton wavelength B. Compton frequency C. Compton shift D. Both (a) & (b)
18	The stopping potential for a certain metal is 10 volt, the max. Energy of emitted electron is:	A. 10 J B. 100 J C. 1.6 × 10-18 J D. 1.6 × 10-19 J
19	Diffraction pattern has also been observed for:	A. Proton B. Neutron C. Hydrogen atom D. All of them
20	The maximum kinetic energy of emitted photoelectrons depends upon:	A. The intensity of incident light B. Frequency of incident light C. Metal surface D. Both frequency of incident light and metal surface
21	In a photocell, certain metal emits electrons for :	A. Visible light B. Infrared light C. Ultraviolet light D. All of these
22	In order to perform experiment, Davisson and Germer used accelerating voltage of:	A. 54V B. 120V C. 220V D. 400V
23	There is a certain frequency below which no electrons are emitted from the metal surface, this frequency is known as:	A. Critical frequency B. Threshold frequency C. Maximum frequency D. Minimum frequency
24	The energy of photon of energy 1 eV is:	A. 1240 nm B. 1040 nm C. 1000 nm D. 620 nm
25	Interference and diffraction confirm:	A. Particle nature B. Wave nature C. Dual nature D. None of these
26	The dimensions of Planck's constant "h" are same as that of:	A. Momentum B. Angular momentum C. Work D. Torque
27	De-Broglie received the Nobel prize on his work on:	A. Wave nature of particle B. Corpuscular nature of wave C. Dual nature of particle D. All of them
28	In order to increase the K.E of ejected photo electrons, there should be an increase in:	A. Intensity of radiation B. Nonel C. Frequency of radiation D. Both (b) & (c)
29	A photo cell is based on:	A. Compton effect B. Pair production C. Photo cell D. All of these
30	Potassium cathode in photocell emits electrons for a light:	A. Visible B. Infrared C. Ultraviolet D. X-rays
31	In photoelectric effect, electrons are emitted with:	A. Same energy B. Different energies C. Both (a) & (b) D. Intermittent energies
32	The maximum energy of the photoelectrons can be determined by making the:	A. Anode positive B. Anode negative C. Cathode positive D. Both (b) & (c)
		A. Security and counting system B. Automatic door system

33	Photo cells are used for :	B. Automatic door system C. Automatic street lighting D. All of these
34	Which of the particles, electron, proton and neutron moving with same speed has longest wave length?	A. Electron B. Proton C. Neutron D. All have same
35	Rest mass energy of electron is:	A. 1.02 MeV B. 0.51 MeV C. 931 MeV D. 200 MeV
36	G.P Thomson revealed:	A. Particle nature of electron B. Dual nature of electron C. Wave nature of electron D. Electromagnetic nature of electron
37	De-Broglie received the Nobel prize in	A. 1929 B. 1937 C. 1928 D. 1924
38	In a photocell, sodium and potassium emit electrons for:	A. Visible light B. Infrared light C. Ultraviolet light D. All of these
39	The number of electrons emitted depend upon	A. Colour of target surface B. Shape of surface C. Frequency of incident light D. Intensity of incident light
40	Interference and diffraction of light confirms its:	A. Particle nature B. Dual nature C. Wave nature D. Electromagnetic nature
41	Joule-second is the unit of:	A. Energy B. Heat C. Planck's constant D. None of these
42	In a photocell, cesium coated oxidized silver emits electrons for :	A. Visible light B. Infrared light C. Ultraviolet light D. All of these
43	The reverse process of photo-electric effect is called:	A. Pair production B. Compton effect C. Annihilation of matter D. X-rays
44	Moving photons posses:	A. Energy B. Momentum C. Wavelength D. All of these
45	The unit of work function is	A. eV B. Volt C. Farad D. Herdz
46	The photoelectric effect was explained by:	A. Einstein B. Davison C. Hertz D. Planck
47	Davisson and Germer, in their experiment used:	A. Nickle crystal B. Lead crystal C. Graphite crystal D. Glass