ECAT Physics Online Test

Sr	Questions	Answers Choice
1	The value of electrical constant of proportionality k is	A. 9 x 10⁹Nm²C⁻² B. 9 x 10⁻⁹Nm²C⁻² C. 9 x 10¹⁰Nm²C² D. 9.85 x 10⁻¹²N⁻¹C⁻²
2	The SI unit of permitivity is	A. Nm²C² B. N⁻¹m⁻²C² C. NmC² D. Nm²C⁻¹
3	If the two charges in Coulomb's law have double distance between them, then electric force	A. Becomes two-fold B. Becomes four-fold C. Remains the same D. None of these
4	Which of the following diode is used for the detection of light	A. photo diode B. light emitting diode C. photo voltaic cell D. all of them
5	In which of the following diodes when an electron combines with a hole during the forward biasing, photon of visible light is emitted.	A. photo diode B. light emitting diode C. photo voltaic cell D. all of them
6	In which of the following components, pn-junction is used	A. light emitting diode B. photo diode C. photo voltaic cell D. all of these
7	The circuit which is used to smooth the output voltage of the full-wave rectification is known as	A. transformer B. rectifier C. filter D. none of these
8	The bridge circuit of full wave rectification uses	A. one diode B. two diode C. three diode D. four diode
9	In half wave rectification	A. both halves of the input voltage is used B. only one half of the input voltage is used C. either of these D. none of these
10	During the negative half-cycle of the half-wave rectification, the diode	A. does not conduct B. conducts C. either of these D. none of these
11	During the positive half-cycle in the half-wave rectification,the diode	A. does not conduct B. conducts C. either of these D. neither of these
12	The output voltage of half wave rectification is in the form of	A. a smooth curve B. a smooth wave C. pulses D. all of the above
13	Conversion of alternating current into direct current is called	A. amplification B. rectification C. conduction D. polarization
14	A diode characteristic curve is a plot between	A. current and time B. voltage and time C. voltage and current D. forward voltage and reversed voltage

15	When the pn-junction is connected reversed biased, its resistance is of the order of	A. few ohms B. few kilo-ohms C. few mega-ohms D. few mili-ohms
16	When the pn-junction is in reversed biased, current flows through the junction due to the	A. majority carriers B. minority carriers C. either of them D. none of them
17	When the pn-junction is forward biased. the current flows through it is of the order of	A. mili-amperes B. amperes C. nano-amperes D. micro-amperes
18	When the p-n junction is forward biased its resistance is of the order of	A. few mega ohms B. few kilo ohms C. few ohms D. few milli ohms
19	The value of the potential difference across the depletion region for the case of germanium is	A. 0.3 V B. 0.5 V C. 0.7 V D. 0.9 V
20	A p-n junction is formed when a crystal of silicon is growth in such a way that its one half is doped with trivalent impurity and the other half with a impurity from	A. 2nd group B. fourth group C. fifth group D. sixth group
21	Average value of A.C voltage during one cycle is	A. 1 B. Zero C. Maximum D. Variable
22	A changing magnetic flux creates around itself	A. An electromotive force B. An electric field (changing electric flux) C. Magnetic field D. None of the above
23	When electrons in the transmitting antenna vibrate 94000 time per second, they produce radiowaves having frequency	A. 9.4 kHz B. 940 kHz C. 94 kHz D. None of these
24	In free space, the speed of electromagnetic waves is	A. 3 x 10⁸ms⁻¹ B. 3 x 10⁶ms⁻¹ C. 4 x 10⁷ms⁻¹ D. 3 x 10⁹ms⁻¹
25	Transmitting antenna emits	A. Magnetic waves B. Electric waves C. Electromagnetic waves D. Sound waves
26	Electromagnetic waves transmit energy equal to	A. 1/2 mv² B. m_oc² C. hf/c D. hf
27	Which one of the following Electro-magnetic wave have the highest frequency and shortest wave-length	A. X-rays B. Ultraviolet rays C. y-rays D. Cosmic rays
28	Chock consumes externally small	A. Charge B. Current C. Power D. Potential
29	Which one of the following waves belongs to electromagnetic spectrum	A. Radio and TV waves B. Radar waves C. Micro waves D. All of them
30	In frequency modulation (FM), the carrier waves amplitude	A. Remains constant B. Increase C. Decreases D. None of these