ECAT Physics Online Test

Sr	Questions	Answers Choice
1	A lift is moving up with acceleration equal to 1/5 of that due to gravity. The apparent weight of a 60 kg man standing in lift is	A. 60 kg wt B. 72 kg wt C. 48 kg wt D. Zero
2	If an amount of heat enters the system it could	A. decrease the internal energy B. not change the internal energy C. increase the internal energy D. none of them
3	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
4	S.I. unit of planks constant is	A. $J\text{-}s^{-1}$ B. $J.s$ C. $J.s^{-2}$ D. $J.s^{2}$
5	Alfa , beta and gamma rays are emitted from a radio-active substance	A. spontaneously B. when it is heated C. when it is exposed to light D. When it interacts with the other particle
6	To turn the transistor OFF, the base current is set:	A. At maximum value B. At zero C. Either (A) or (B) D. All are correct E. None of correct
7	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
8	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. $1.46 \ m \ sec^{-1}$ B. $2.44 \ m \ sec^{-1}$ C. $3.42 \ m \ sec^{-1}$ D. $4.43 \ m \ sec^{-1}$
9	Improper biasing of a transistor circuit produces	A. Heavy loading of emitter current B. Distortion in the output signal C. Excessive heat at collector terminal D. Faulty location of load line
10	If the amplitude of sound is doubled and the frequency reduced to one-fourth, the intensity of sound at the same point will be	A. Increasing by a factor of 2 B. Decreasing by a factor of 2 C. Decreasing by a factor of 4 D. Unchanged
11	Intensity of light determines the:	A. Energy of each photon B. Number of photons C. Speed of photons D. Size of photons E. None of these
12	The number if neutrons in the nucleus of $_{92}U^{235}$ are	A. Infinite B. 92 C. 235 D. 143
13	Position was discovered by Carl Anderson in	A. 1920 B. 1925 C. 1928 D. 1932
14	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them

15	When the atomic particle are moving with velocities approaching that of light:	A. Newton's laws become valid B. Relativistic effects become prominent C. Botha(A) and (B) are valid D. Neither (A)nor (B) E. There mass becomes zero.
16	Two metal rods A and B have their initial lengths in the ratio 2 : 3 and coefficients of linear expansion in the ratio 4 : 3. When they are heated through same temperature difference the ratio of their linear expansion is	A. 1 : 2 B. 2 : 3 C. 3 : 4 D. 8 : 9
17	The wave form of alternating voltage is the graph between:	A. Voltage across X-axis and time across y-axis B. Current and time C. Voltage along y-axis and time along x-axis D. Voltage and current E. Either (B) or (D)
18	The law of electromagnetic induction is related to:	A. Coulomb B. Ampere C. Faraday D. Lenz E. None of these
19	During the free fall motion of an object, when its weight becomes equal to the drag force, then it will move with	A. maximum speed B. zero speed C. maximum speed D. none of them
20	Some charge is being given to a conductor. Then its potential	A. Is maximum at surface B. Is maximum at centre C. Is remain same throughout the conductor D. Is maximum somewhere between surface and centre