ECAT Physics Online Test

Sr	Questions	Answers Choice
1	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
2	The current that flows through the coil of a motor causes	A. Its shaft to revolve B. Its brushes to rotate C. Motor to move D. Its shaft to rotate E. None of these
3	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
4	A typical rocket consumes about	A. 100 kg s^{-1} of fuel B. 1000 kg s^{-1} of fuel C. 10000 kg s^{-1} of fuel D. 100000 kg s^{-1} of fuel
5	The magnetic field inside a solenoid can be increased by:	A. Increasing n B. Decreasing I C. Increasing I D. By using iron core within solenoid E. All correct except (B)
6	First law of thermodynamics is consequence of conservation of	A. Work B. Energy C. Heat D. All of these
7	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
8	The percentage of available heat energy converted into work by a petrol engine is roughly	A. 35 % B. 40 % C. 35 to 40 % D. 25 %
9	The SI unit of permitivity is	A. Nm^2C^2 B. $N^{-1}m^{-2}C^2$ C. NmC^2 D. Nm^2C^{-1}
10	A tube tapers from 20 cm diameter to 2 cm, the velocity at first cross-section is 50 ms^{-1} then velocity at second cross-section is	A. 5000 cms^{-1} B. 500 cms^{-1} C. 50 cms^{-1} D. 0.5 cm/s
11	An LED emits light when it is:	A. Forward biased B. Reverse biased C. Operated without battery D. Operated with heat source E. None of these
12	The portion of the water above its mean level forms a:	A. Crest B. Trough C. Both A and B D. None of these
	A piece of fuse wire melts when a current of 15 ampere flows through it. With this current, If	A. Zero B. $10 \, \Omega$ C. 1

13	A piece of fuse wire melts when a current of 15 ampere flows through it. With this current. If it dissipates 22.5 W, the resistance of fuse wire will be	34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">Ω D. 0.10Ω
14	An object thrown in arbitrary direction in space with an initial velocity and moving freely under gravity will follow	A. a circular path B. a straight line C. a hyperbola D. a parabola
15	If the length of the conductor is double and its cross sectional area is halved, its conductance will	A. Increase four fold B. Become one-fourth C. Become one-half D. Remains unchanged
16	The SI unit of magnetic induction is	A. Gauses B. Tesla C. Weber D. Weber^2
17	Recent studies of ferromagnetism have shown that there exists in ferromagnetic substances small regions called	A. tiny regions B. domains C. vectors D. none of them
18	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
19	The unit of resistance is	A. volt B. ampere C. ohm D. coat
20	The equation of continuity $A_1V_1 = A_2V_2$ is for the flow of	A. an ideal fluid B. an incompressible fluid C. a non visconcous fluid D. all of the above