ECAT Physics Online Test

Sr	Questions	Answers Choice
1	For two resistance wires joined in parallel, the resultant resistance is 6/5 ohm. When one of the resistance wire breaks, the effective resistance becomes 2 ohm. The resistance of the broken wire is	A. 3/5 ohm B. 2 ohm C. 6/5 ohm D. 3 ohm
2	A body is dropped from a tower with zero velocity, reaches ground in 4s. The height of the tower is about	A. 80 m B. 20 m C. 160 m D. 40 m
3	When a mass 'm' is pulled slowly, the spring stretches by an amount x_o, then the work done will be	A. W=Kx_o B. W=1/2Kx_o C. W=1/2Kx²_o D. W=4Kx_o
4	Which of the following medium/media can transmit both transverse and longitudinal waves:	A. Solids B. Liquids C. Gases D. All of them
5	A ten ohm electric heater operates on a 110 V line. Calculate the rate at which it develops heat in watts	A. 1310 W B. 670 W C. 810 W D. 1210 W
6	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
7	An ordinary glass gradually softens into a 'paste -like' state before it becomes a very viscous liquid. It happens almost at:	A. 800^oC B. 500^oC C. 300^oC D. 100^oC E. None of these
8	A thermistor is a resistor which is:	A. Light Sensitive B. Heat Sensitive C. Sound Sensitive D. All of these E. None of these
9	Electric flux is:	A. Cross product of two vector<p class="MsoNormal"><o:p></o:p></p> B. <p class="MsoNormal">Dot product of two vectors<o:p></o:p></p> C. <p class="MsoNormal">A vector quantity<o:p></o:p></p> D. <p class="MsoNormal">A scalar quantity<o:p></o:p></p> E. <p class="MsoNormal">Both (B) and (D)<o:p></o:p></p>

10	When the shear stress and shear stain are involved, then their ratio is called	A. Young's modulus B. Bulk modulus C. Shear modulus D. all of them
11	Magnetic effect of current is used:	A. <p class="MsoNormal" style="text-align:justify">In electric motor<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">To detect current<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">To measure current<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">All of these<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">None of these<o:p></o:p></p>
12	A 50 volt battery is connected across 10 ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. 0.5Ω C. 1.1Ω D. 5.0Ω
13	The induced current in the loop can be Increased by	A. Using a stronger magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All above E. Both A and B
14	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
15	The number of translation degress of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
16	The length of a metallic rod is 5 meter at 100°C. The coefficient of cubical expansion of the metal will be	A. 2.0 x 10⁻⁵/°C B. 4.0x10⁻⁵/°C C. 6.0x10⁻⁵/°C D. 2.33x10⁻⁵/°C
		A. <p class="MsoNormal" style="text-align:justify"><span style="font-size:

17	Hold the solenoid in the right hand with fingers curling in the direction of current. The direction of the field will be given by:	align:justify">Thumb<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Curled fingers<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">Middle finger<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Arm of right hand<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">None of these<o:p></o:p></p>
18	Origin of the electric and the gravitational forces	A. Was known in 1911 A.D. B. Was known in 1811 A.D. C. Was known in 1711 A.D. D. is still unknown E. Was known in 1611 A.D.
19	When three identical bulbs of 60 watt, 200 volt rating are connected in series to a 200 volt supply, the power drawn by them will be	A. 180 watt B. 10 watt C. 20 watt D. 60 watt
20	The vibrations of factory floor caused by the running of heavy machinery is an example of	A. free vibration B. natural vibrations C. forced vibrations D. all of them