ECAT Physics Online Test

Sr	Questions	Answers Choice
1	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc
2	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
3	Three resistors of resistance 2,3 and 6 ohms are connected in parallel, their equivalent resistance is	A. 11.0 ohm B. 1.0 ohm C. 7.0 ohm D. 3.0 ohm
4	The energy acquired by a mass of 1g moving with the speed of light is	A. 3 x 10⁸J B. 9 x 10¹³J C. 3 x 10¹³J D. 9 x 10¹⁶J
5	When resistance of a current carrying wire increases due to rise in temperature, the drift velocity of electrons:	A. Decreases<o:p></o:p> B. Increases<o:p> </o:p> C. Remains the constant<o:p></o:p> D. Either of these<o:p></o:p> E. None of these<o:p></o:p>
6	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
7	Bernoulli's equation is based upon law of conversation	A. Mass B. Momentum C. Energy D. None of these
8	A train cover 90 km in half an hour. the time taken by it to travel 15 km will be:	A. 20 minutes B. 48 minutes C. 10 minutes D. 5 minutes
9	The smooth or steady streamline flow is known as	A. laminar flow B. turbulent flow C. both of them D. none of them
		A. <span style="font-size:12.0pt;line-height:107%;font-family:"Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Near the outer surface of a hollow charged metal sphere<o:p></o:p> B. <span style="font-

10	A field free region is found:	size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font- family:"Times New Roman";mso-fareast- theme-font: minor-fareast">In the interior of solid metal uncharged sphere<o:p></o:p> C. <span style="font- size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font- family:"Times New Roman";mso-fareast- theme-font: minor-fareast">In the interior of solid metal charged sphere<o:p></o:p> D. <span style="font- size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font- family:"Times New Roman";mso-fareast- theme-font: minor-fareast">Both (A) and (B)<o:p> </o:p> E. <span style="font- size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font- family:"Times New Roman";mso-fareast- theme-font: minor-fareast">Both (A) and (C)<o:p> </o:p>
11	Transmitting antenna emits	A. Magnetic waves B. Electric waves C. Electromagnetic waves D. Sound waves
12	A hollow insulated conduction sphere is given a positive charge of 10μC. What will be the electric field at the centre of the sphere if its radius is 2 meters?	A. Zero B. 5<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text- align: center; background-color: rgb(255, 255, 248);">μC m⁻² C. 20<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text- align: center; background-color: rgb(255, 255, 248);">μC m⁻² D. 8<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text- align: center; background-color: rgb(255, 255, 248);">μC m⁻²
13	If speed of electron is 5 x 10^5m/s. How long does it take one electron to transverse 1 m?	A. 1 x 10⁶ B. 2 x 10⁶ C. 2 x 10⁵ D. 1 x 10⁵
14	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
15	In the expression of force experienced by electron, the direction of both v and B are	A. parallel B. zero C. perpendicular D. none of them
16	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
17	A dirty carpet is to be cleaned by heating. This is an accordance with____ law of motion:	A. First B. Second C. Third D. None of these
18	A body of mass 5 kg is acted upon by a constant force of 20 n for 7 seconds. The total change in momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
19	SI unit of current describes the flow of charge at the rate of	A. One ampere per second B. One coulomb per second C. One electron per second D. 6.25 x 10¹⁸electrons per second E. Both B and D
		A. <span style="font-size:12.0pt; line-height:107%;font- family:"Times New Roman","serif"">Thermistor<o:p> </o:p> B. <span style="font-size:12.0pt; line-height:107%;font-

20	The device which can convert heat energy into electrical energy is called:	Thermometer<o:p></o:p> C. Thermostat<o:p></o:p> D. Thermocouple<o:p></o:p> E. Both (C) and (D)<o:p></o:p>