ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	A. Greater than the speed at which they pass from left to right<o:p></o:p> B. Less than the speed at which they pass from left to right<o:p></o:p> C. The same speed at which they pass from left to right<o:p></o:p> D. Any of above<o:p></o:p> E. None of them<o:p></o:p>
2	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	A. Greater than the speed at which they pass from left to right<o:p></o:p> B. Less than the speed at which they pass from left to right<o:p></o:p> C. The same speed at which they pass from left to right<o:p></o:p> D. Any of above<o:p></o:p> E. None of them<o:p></o:p>
3	The free electrons in metals:	A. Are in random motion and their speed depends upon temperature<o:p></o:p> B. Move in particular direction<o:p></o:p> C. Move with speed of light<o:p></o:p> D. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

		Roman","serif"">Move such that their speed does not depend on their temperature<o:p></o:p> E. None of these<o:p></o:p>
4	In a metal, the valence electrons are:	A. Attach to individual atoms<o:p></o:p> B. Not attached to individual atoms<o:p></o:p> C. Free to move within the metal<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
5	The positive charge moving in one direction is equivalent in all external affects to a:	A. Negative charge is moving in the same direction<o:p></o:p> B. Positive charge is moving in the opposite direction<o:p></o:p> C. Negative charge moving in the opposite direction<o:p></o:p> D. Positive charges moving in the same direction<o:p></o:p> E. None of these<o:p></o:p>
6	The current of 1 ampere is passing through a conductor. The charge passing through it in half a minute is:	A. One coulomb<o:p></o:p> B. 0.5 coulomb<o:p></o:p> C. 30 coulomb<o:p></o:p> D. 2 coulombs<o:p></o:p> E. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

		Roman","serif"">None of these<o:p></o:p>
7	The conventional current is the name given to current due to flow of:	A. Positrons B. Positive charges<o:p></o:p> C. Negative charges<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. None of these<o:p></o:p>
8	In gases, the charge carries are:	A. Electrons<o:p></o:p> B. Positive ions<o:p></o:p> C. Negative ions<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
9	The charge carries in the electrolyte are:	A. Positive ions<o:p></o:p> B. Negative ions<o:p></o:p> C. Either (A) or (B)<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Neither (A) nor (B)<o:p></o:p>
		A. Protons<o:p></o:p> B. Electrons<o:p></o:p> C.

10	In case of metallic conductors, the change carries are:	<span style= font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Antiprotons<o:p></o:p> D. Positrons<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
11	The current that flows through the coil of a motor causes:	A. Its shaft to revolve<o:p></o:p> B. Its brushes to rotate<o:p></o:p> C. Motor to move<o:p></o:p> D. Its shafts to rotate<o:p></o:p> E. None of these<o:p></o:p>
12	Most practical application of electricity involve	A. Charges at the rest<o:p></o:p> B. Charges in the motion<o:p></o:p> C. Electrons at rest<o:p></o:p> D. Atoms in motion<o:p></o:p> E. Molecules in motion<o:p></o:p>
13	An eV is unit of:	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">Potential<o:p></o:p> B. <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">Energy<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">Work<o:p></o:p> D. <span style="font-family:"Times New Roman", serif; font-size:

		12pt;">Power E. Both (B) and(C)<o:p></o:p>
14	The earth's potential and potential at infinity are taken:	A. Equal<o:p></o:p> B. <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">Zero<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">First is greater than the second<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">Second is greater than the first<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 (B)<o:p></o:p>
15	Another mean of electric potential energy per unit charge is given by:	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">Electric intensity<o:p></o:p> B. <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">Potential gradient<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">Electric Flux<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">Potential difference<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">None of these<o:p></o:p>
		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">Both the potential and potential difference is scalars<o:p></o:p> B. <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">Potential is a

16	Tick the correct statement:	scalar but potential difference is a vector<o:p></o:p> C. Both are vectors <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"><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">Potential is vector but potential difference is scalar<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">None of these<o:p></o:p>
17	The surface destiny of charge is defined is:	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">Charge per volume<o:p></o:p> B. <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">Mass per volume<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">Charge per area<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">Mass per area<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 (B) and (C)<o:p></o:p>
18	Gaussian surface is always:	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">Rectangular<o:p></o:p> B. <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">Spherical<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">Cylindrical<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">Box

		shape<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">Any of these<o:p></o:p>
19	A field free region is found:	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-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>
20	While finding the electric intensity at a point between two oppositely charged parallel plates, the Gaussian surface is taken in the form of a hollow:	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">Circle<o:p></o:p> B. <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">Rectangle<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">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">Box<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">Cylinder<o:p></o:p>
		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">Contain some

21	The interior of a hollow charged metal sphere is a region which:	magnitude of electric field<o:p></o:p> B. <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">Is full of electric field lines<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">Is field-free region<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">Either (A) or (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">None of these<o:p></o:p>
22	The flux through a closed surface depends upon:	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">Shape of geometry of the closed surface<o:p></o:p> B. <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">Charge enclosed<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">Nature of the medium<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 (B) and (C)<o:p></o:p>
23	Flux through a closed surface of any shape and flux through the surface of a sphere drawn around a charge are:	A. Different<o:p></o:p> B. Same<o:p></o:p> C. Such that it is greater in the first case<o:p></o:p> D. Such that it is greater in the second case<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">None of these<o:p></o:p>
24	Certain charge +q is placed at the center of a sphere. At each of the sphere,The directions of electric intensity and vector area are:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Same<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Different<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Opposite to each other<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">At 60º with each other<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Both (B) and (C)<o:p></o:p>
25	The electric flux through any surface depends upon:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Intensity of electric field<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Area of the surface<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Angle between intensity and area<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">All of these<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">None of these<o:p></o:p>
26	When certain area A is held parallel to the field lines, then:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">No lines cross this area<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Maximum lines pass through this area<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">The number of lines are between zero and maximum<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Both (A) and (B) correct<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">None of these<o:p></o:p>
		A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Flux in that

		Roman","serif"">Flux in that region<o:p></o:p> B. Intensity of the field<o:p></o:p> C. Charge<o:p></o:p> D. Area of the region<o:p></o:p> E. None of these<o:p></o:p>
27	The number of field lines passing through unit area held perpendicular to the field lines represent:	
28	Electric flux is:	A. Cross product of two vector <o:p></o:p> B. Dot product of two vectors<o:p></o:p> C. A vector quantity<o:p></o:p> D. A scalar quantity<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
29	An inkjet printer uses in its operation:	A. Neutrons only<o:p></o:p> B. Mesons only<o:p></o:p> C. Positrons and photons<o:p></o:p> D. An electric charge<o:p></o:p> E. None of these<o:p></o:p>
		A. <span style="font-size:12.0pt;line-height:107%; font-family:"Times New Roman","serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-ansi-language:EN-US;mso-fareast-language: EN-US;mso-bidi-language:AR-SA">Toner B. Drum<o:p>

30	An important part of inkjet printer is:	</o:p> C. Deflection plates<o:p></o:p> D. Heated roles<o:p></o:p> E. None of these<o:p></o:p>