ECAT Physics Online Test

Sr	Questions	Answers Choice
1	In the region surrounding a current carrying wire:	A. A magnetic field is setup <o:p></o:p> B. The lines of force are elliptical<o:p></o:p> C. Direction of lines of forces depends upon direction of current<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. All of these
2	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
3	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$and R_2be their resistance respectively then	A. R₁= 2R₂ B. R₂= 2R₁ C. R₂=4R₁ D. R₁= 4R₂
4	A conducting wire is drawn to double its length. Final resistivity of the material will be	A. Double of the original one B. Half of the original one C. One fourth of the original one D. Same as original one
5	Synthetic materials fall into the category of	A. crystalline solids B. amorphous C. polymeric solids D. all of them
6	Mass of neutron is	A. 1.67 x 10⁻³¹kg B. 1.67 x 10⁻²⁷kg C. 9.1 x 10⁻³¹kg D. 1.67 x 10⁻19kg
7	Graphs which are used to illustrate the variation of velocity of an object with time are called	A. distance time graphs B. speed time graphs C. velocity time graphs D. acceleration time graphs
8	Crystalline solids are in the form of:	A. Metals B. Ionic Compounds C. Ceramics D. Both (A) and (B) E. All of these
9	The impedance of RLC series resonance circuit at resonant frequency is	A. Greater than R B. Equal to R C. Less than R D. None of these
10	Truth of kinetic energy is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B

		C. Both A and B D. None of these
11	A p-n junction is formed when a crystal of silicon is growth in such a way that its one half is doped with trivalent impurity and the other half with a impurity from	A. 2nd group B. fourth group C. fifth group D. sixth group
12	Avo-meter is used of measure the	A. current, voltage B. voltage, resistance C. resistance, current D. current, voltage and resistance
13	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
14	A bar 1.0 m in length and located along x-axix moves with a speed of 0.75 c with respect to a stationary observer. The length of the bar as measured by the stationary observer is	A. 1.66 m B. 1.0 m C. 0.66 m D. 2.66 m
15	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these
16	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
17	The bob of a simple pendulum is suspended by	A. string B. heavy inextensible string C. light extensible string D. light inextensible string
18	The r.m.s. value of alternating current is equal to its maximum value at angle of	A. 60° B. 45° C. 30° D. 90°
19	The interior of a hollow charged metal sphere is a region which:	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 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></p>
20	The only significant motion possessed by the mono-atomic gas represented is:	A. Translatory B. Rotatory C. Vibratory D. None of these