ECAT Physics Online Test

Sr	Questions	Answers Choice
1	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
2	An object undergoes S.H.M has maximum speed when its displacement from the mean position is	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
3	The bridge circuit of full wave rectification uses	A. one diode B. two diode C. three diode D. four diode
4	Magnetic effect of current is used:	A. In electric motor<o:p></o:p> B. To detect current<o:p></o:p> C. To measure current<o:p></o:p> D. All of these<o:p></o:p> E. None of these<o:p></o:p>
5	Alternating current can be transmitted:	A. To long distance B. At very high cost C. At very low cost D. Both (A) and (C) E. Both (A) and (B)
6	The velocity of a projectile is maximum	A. at the point of projection B. just before striking the ground C. at none of them D. at both of them
7	The closed loop gain of the non-inverting amplifier is given by	A. G = R₂/R₁ B. G = -R₂/R₁ C. G = 1 - R₂/R₁ D. G = 1 + T₂/R₁
8	Amperean path is a:	A. Closed path<o:p></o:p> B. Rectangular path<o:p></o:p> C. Circular path<o:p></o:p> D. <span style="font-size: 12pt; line-height: 107%; font-family: "Times

		New Roman", serif; ">Any of above<o:p></o:p> E. Broken path<o:p></o:p>
9	In a metal, the valence electrons are:	A. Attached to individual atoms B. Not attached to individual atoms C. Free to move within the metal D. Both A and B E. Both A and C
10	Crests and troughs are formed in:	A. Longitudinal waves B. Transverse waves C. Both of these D. None of these
11	The input resistance of the OP-AMP is the resistance between the	A. (-) input and output B. (+) input and output C. (-) and (+) inputs D. between any inputs
12	The waveform of alternating voltage is a:	A. Square B. Rectangular C. Saw-tooth D. Sinusoidal E. None of these
13	The concept of electric field theory was introduced by	A. Michael Faraday B. Newton C. Dalton D. Kepler E. Einstein
14	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
15	At higher frequency of the alternating current, the capacitive reactance X_C	A. Increases B. Decreases C. Remains the same D. Increases only when the voltage increases
16	An A.C. voltage is applied across the inductor. When the frequency of the voltage is increased, the current	A. Decreases B. Increases C. Does not change D. Momentarily goes to zero
17	Which one of the following is correct?	A. V_o= 1.414 V_{rms} B. I_{ams}= 1.414 I_o C. VO = 10.70 Vrms D. Both a and b
18	The SI unit of permitivity is	A. Nm²C² B. N⁻¹m⁻²C² C. NmC² D. Nm²C⁻¹
19	Binding energy per nucleus is	A. greater for heavy nucleus B. least for heavy nucleus C. greatest for light nuclei D. decreases for medium weight niclei
20	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All