

ECAT Physics Online Test

Sr	Questions	Answers Choice
1	A signal appears after amplification, at the output terminal with a phase shift of 180 $^\circ$, if it is applied at	A. inverting input B. non-inverting input C. any one of the input terminal D. none of them
2	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
3	When a body is performing S.H.M., its acceleration is	A. inversely proportional to the displacement B. directly proportional to the applied force C. directly proportional to the amplitude D. directly proportional to the displacement but in opposite direction
4	The earth's potential and potential at infinity are taken:	A. Equal<o:p></o:p> B. Zero<o:p></o:p> C. First is greater than the second<o:p></o:p> D. Second is greater than the first<o:p></o:p> E. Second is greater than the first<o:p></o:p> E. Second is greater than the first<o:p></o:p>
5	In all natural processes where heat flows from one system to another, there is always a net	A. decrease in entropy B. increase in entropy C. decrease or increase in entropy D. none of them
		A. <span style="font-size:12.0pt;line- height:107%;font-family: "Times</span

A. Rectangular<o:p>

6	Gaussian surface is always:	<pre> <pre> <pre> <pre>B. <span< pre=""> 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> <pre>C. <span< pre=""> 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< p=""> style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-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< p=""> style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman","serif";mso-fareast-font-family:"Times New Roman","serif";mso-fareast-font-family:"Times New Roman","serif";mso-fareast-font-family:"Times New Roman","serif";mso-fareast-theme-font: minor-fareast">Any of these<o:p> /o:p></o:p></span<></span<></span<></pre></span<></pre></pre></pre></pre>
7	Which of the following is/are example/s if mechanical waves i.e. waves generated in:	A. Rope B. Coil of spring C. Water D. All of them
8	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
9	A weakly damped system has fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
10	A boat of mass 40 kg is at rest, A dog of mass 4 kg moves in the boat with a velocity of 10 m/s. What is the velocity of boat?	A. 4 m/s B. 2 m/s C. 8 m/s D. 1 m/s
11	No spark plug is needed in	A. petrol engine B. diesel engine C. both of them D. none of them
12	The relation between the charge Q of a parallel plate capacitor and the P.D between its plates is	A. Q=V/C B. Q=C/V C. Q=1/2CV D. Q=CV
13	The current is measured in	A. volts B. watt C. ampere D. ohm
14	The wave form of alternating voltage is the graph between:	A. Voltage across X-axis and time across y-axis B. Current and time C. Voltage along y-axis and time along x-axis D. Voltage and current E. Either (B) or (D)
15	Generally a temperature scale is established by using certain physical properties of a material which varies	A. nonlinearly with temperature B. linearly with temperature C. either of them D. none of them
16	In case of a parallel plate capacitor if the plate separation is doubled and plate area is halved, the capacitance becomes	A. Four-fold B. One-half C. One-fourth

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		D. ∠ero
17	The SI unit of magnetic induction is	A. Weber B. Weber/meter C. Henry D. Tesla
18	The bands below the valence band are	A. completely filled and play active part in conduction process B. completely filled and plays no part in conduction process C. completely filled and play active part in conduction process D. not completely filled and play no part in conduction process
19	Each atom in a metal crystal vibrates about a fixed point with an amplitude that:	A. Decrease the rise in temprature B. Is not affected by rise in temprature C. Increase with rise in temprature D. Both (B) and (C) E. None of these
20	The mass of fluid passing through any cross-section per unit time is called	A. electric flux B. magnetic flux C. mass flux D. none of them