

Physics ECAT Pre Engineering Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Which one of the following has larger value of relative permitivity E _r at room temperature?	A. Vaccum B. Air C. Glass D. Water
2	The resistivity of a substance depends upon the	A. length B. mass C. area D. temperature
3	The thermistors are usually made of	A. Metals with low temperature coefficient of resistivity B. Metals with high temperature coefficient of resistivity C. Metal oxides with high temperature coefficient of resistivity D. Semi conducting materials having low temperature coefficient of resistivity
4	A 10 F capacitor is charged to a potential difference of 50 V and is connected to another uncharged capacitor in parallel. Now the common potential difference becomes 20 volt. The capacitance of second capacitor is	A. 10 µ F B. 20 µ F C. 30 µ F D. 15 µ F
5	Resistor is a device which convert electric energy to	A. Heat energy B. Chemical energy C. Elastic energy D. All of the above
6	The relation between charge 'Q' and current 'I' is given by	A. Q = I/t B. Q = It C. Q = I ² t D. Q = I ² /t
7	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. 288 x 10 ³ J B. 288 x 10 ⁸ J C. 288 x 10 ⁵ J D. 288 x 10 ⁶ J
8	The capacitance of a parallel plate capacitor depends upon	A. Area of the plates B. Separation between the plates C. Medium between the plates D. All of the above
9	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	A. 3R Ω B. 2R/4 D C. R/3 D C. R/3

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10	Cause of heat production in a current carrying conductor is	A. Collisions of free electrons with one another B. High drift speed of free electrons C. Collisions of free electrons with atoms or ions of conductor D. High resistance value
11	The potential difference across each resistance in series combination is	A. same B. different C. zero D. none of these
12	At ordinary temperature, an increase in temperature increases the conductivity of	A. Conductor B. Semiconductor C. Insulator D. Alloy
13	One joule is equal to	A. 1.6 x 10 ¹⁹ eV B. 6.25 x 10 ¹⁸ eV C. 1.6 x 18 ¹⁸ eV D. 6.25 x 10 ¹⁹ eV
14	Two point charge +3μC and +8μC repel each other with a force of 40 N. If a charge of -5μC is added to each of them, then the force between then will become	A10 N B. +10 N C. +20 N D20 N
15	The force of repulsion between two point charges is F, when these are at a distance 0.1 m apart. Now the point charges are replaced by sphere of radii 5 cm each having the same charge as that of the respective point charges. The distance between their centre is again kept 0.1 m; then the force of repulsion will	A. Increase B. Decrease C. Remain F D. Become 10F/9
16	Three resistance 500,500 and 50 ohms are connected in series across 555 volts mains. The current flowing through them will be	A. 0.52 A B. 1 mA C. 0.7 mA D. 1.4 A
17	One moving a charge of 20 coulombs by 2 cm, 2 J of work is done, then the potential difference between the points is	A. 0.1 V B. 8 V C. 2 V D. 0.5 V
18	One coulomb per second is equal to	A. One volt B. One ampere C. One hom D. One henry
19	A closed surface contains two equal and opposite charges. The net electric flux from the surface will be	A. Negative B. Positive C. Infinite D. Zero

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