

## NAT I Computer Science Physics

Sr	Questions	Answers Choice
1	A piece of fuse wire melts when a current of 15 ampere flows through it. With this current, if it dissipates 22.5 W. the resistance of fuse wire will be	A. Zero B. $10\Omega$ C. $1\Omega$ D. $0.1\Omega$
2	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
3	If 2.2 kilowatt power is transmitted through a 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
4	A 50-volt battery is connected across 10-ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. $0.5\Omega$ C. $1.1\Omega$ D. $5.0\Omega$
5	A (100 W, 200 V) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
6	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$ and $R_2$ be their resistance respectively then	A. $R_1 = 2R_2$ B. $R_1 = 4R_2$ C. $R_1 = 2R_2$ D. $R_1 = 4R_2$
7	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
8	The excess (equal in number) of electrons that must be placed on each of two small spheres spaced 3 cm apart, with force of repulsion between the spheres to be $10^{-19}$ N is	A. 25 B. 225 C. 625 D. 1250
9	Two point charges A and B separated by a distance R attract each other with a force of $12 \times 10^{-3}$ N. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
10	A charge Q is divided into two parts q and Q - q and separated by a distance R. the force of repulsion between them will be maximum when:	A. $q = Q/4$ B. $q = Q/2$ C. $q = Q$ D. None of these