Resistivity , ohm's law, combination of resistances

Q .1 The potential difference between the terminals of an electric iron is 250 and the current is 5.0A. what is the resistance of electric iron?

Q .2 A copper wire of length 2m and area of cross section $1.7 \times 10^{-6} m^2$ has a resistance of 2×10^{-2} ohms. Calculate the resistivity of copper.

Q .3 A 6Ω resistance wire is doubled up by folding. Calculate the new resistance of the wire.

Q .4 How does the resistance of a wire change when

a) Its length is tripled b) its diameter is tripled

Q.5 why nichrome alloy is used for making the heating elements of electrical appliances?

Q .6 If an electron revolves in the path of a circle of radius of 0.5×10^{15}m at a frequency of 5×10^{15} cycles/second, then find the electric current in the circle.

Q .7The resistors of resistances 2Ω, 4Ω and 5Ω are connected in parallel. What is the total resistance of the combination?

Q .8 A wire is broken into four equal parts. What will be the resistance of each part in comparison to the resistance of the wire?

Q .9 If a piece of a resistance whose resistance is 4Ω is doubled in its diameter. What will be its new resistance?

Q .10 Compare the resistance of the two wires of same material. Their lengths are in ratio 2:3 and their diameter in ratio 1:2.

Q .11 The speed of an electron in an orbit of radius 7m is $300 ms^{-1}$. Find the strength of current.

Q .12 A potential difference of 3.2V is applied across a conductor of resistance of 1KΩ. Find the number of electrons flowing through the conductor in 5 minutes.

Q .13 If current supplied to a variable resistor is constant, draw a graph between voltage and resistance.

Q .14 If the length of a wire is doubled and its area of cross section is decreased to half. What will be its new resistance?

Q .15 In how many equal parts a wire having resistance of 100Ω be cut, so that we may obtain resistance of 1Ω by connecting them in parallel?

Q .16 If a copper wire is stretched to make its 0.1% longer, what is the percentage change in the resistance?

Q .17 Resistances of 2Ω and 3Ω are connected in series. If the potential difference across the 2Ω resistor is 3V, what will be the potential difference across 3Ω?