

### **Answer on Question #43571-Physics-Electric Circuits**

What is the function of earth wire in electrical instrument? Explain why it is necessary to earth the metallic electric appliances?

#### **Answer**

We can receive an electric shock on touching a running appliance. This is caused by the leakage of current from the appliance. Earthing provides a safety measure against the electric shock, caused by the leakage of current. That's why a third wire (Earth wire) is used in domestic wiring.

Sometimes, the insulation of a live wire burns due to excessive heating. A naked live wire may lead to an electrical shock. To protect the appliance against an electrical shock, its metallic case is connected with the Earth wire.