

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Code & Name : **23EET103 Electric Circuits and Electron Devices**

Course Faculty : Dr.M.Sudha

### Puzzles / In Class Activities

Topics Covered: Unit I (Voltage, Current, Power, Energy)

#### Puzzle 1

A battery is connected to a lamp. The lamp does not glow when both terminals touch the same wire. What is missing in the circuit?

**Answer:** Voltage difference

#### Puzzle 2

Two points in a circuit are connected by a thick copper wire. A voltmeter across these points reads zero. Why is the voltage zero?

**Answer:** Both points are at the same potential

#### Puzzle 3

A switch is closed and charges start moving in the wire. The same switch is opened and movement stops. What causes this change?

**Answer:** Break in current path

#### Puzzle 4

Two bulbs are connected to the same voltage source. One bulb glows brighter than the other. Which bulb consumes more power?

**Answer:** Brighter bulb

#### Puzzle 5

A 60 W bulb is ON for 5 hours. Another 120 W bulb is ON for 2 hours. Which consumes more energy?

**Answer:** Both consume equal energy

#### Puzzle 6

A mobile charger is plugged in overnight. The phone is fully charged after 2 hours. Why does energy still get wasted?

**Answer:** Standby power loss