|  |
| --- |
| ISLAMIC UNIVERSITY OF TECHNOLOGYOrganization of Islamic CooperationBoard Bazar, Gazipur |

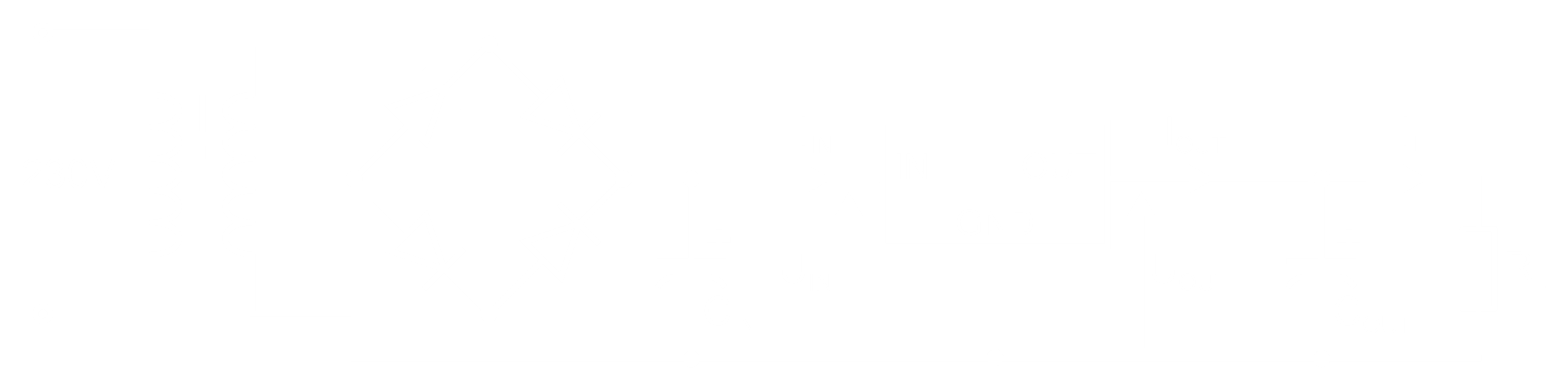
# Assignment

# EEE 4383

# Md. Rezaul Hoque Khan

**Regulated Power Supply**

A regulated power supply is an embedded circuit that converts unregulated AC into a constant DC with the help of a rectifier. It is used to provide a stable voltage or current to a circuit or device that has limits on what sort of power supply it can operate in. The output of a regulated power supply can be AC, but it is almost always DC.



Regulated power supplies are used in:

* Mobile phone power adapters
* Appliances
* Amplifiers
* Oscillators

**Stabilizers**

A voltage stabilizer has the ability to stabilize AC voltage, which is usually fluctuating. It is a type of voltage regulator, which is a larger category of regulators that are used to provide a steady voltage to appliances.

Many appliances require the power supply voltage to be within certain limits to function efficiently. However, the power supply may provide a very low voltage or a very high one, due to some fault. This can damage the appliances. In order to prevent this, voltage stabilizers are used.

Whenever the power supply voltage is too low or too high, the voltage stabilizer will bring it back to the stable voltage. Of course, there is a limit to how far the stabilizer will work. If the voltage from the power supply becomes extremely low or extremely high, the voltage stabilizer simply switches off, thus protecting the appliance from damage.

**UPS**

An uninterruptible power supply (UPS) is an appliance that provides emergency backup power to a load when the main power supply fails. It works almost instantly, and uses electrical energy stored in a battery. However, it can only run for a very short time on battery, typically a few minutes. This is generally enough time to get a secondary power source started or to properly shut down any equipment.

A UPS is typically used to protect hardware equipment that could be damaged due to a sudden power disruption. UPS units range in size, with the smallest being enough to power the average personal computer, and the largest being able to power an entire building.

