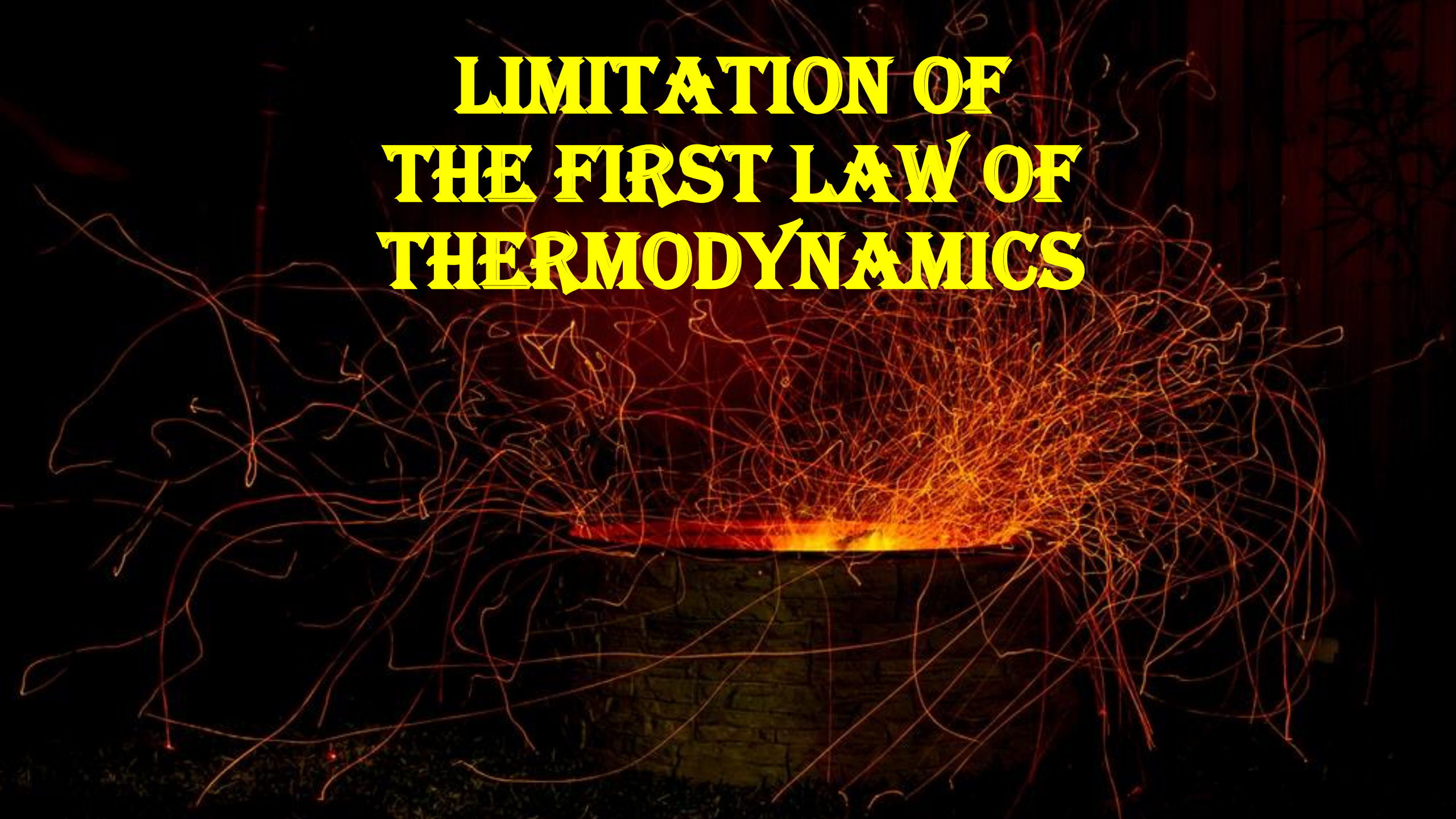


॥ नमस्ते ॥

# LIMITATION OF THE FIRST LAW OF THERMODYNAMICS



# FIRST LAW OF THERMODYNAMICS

$$\Delta Q = \Delta U + \Delta W$$



**ENERGY SUPPLIED = CHANGE IN INTERNAL ENERGY + WORK DONE**

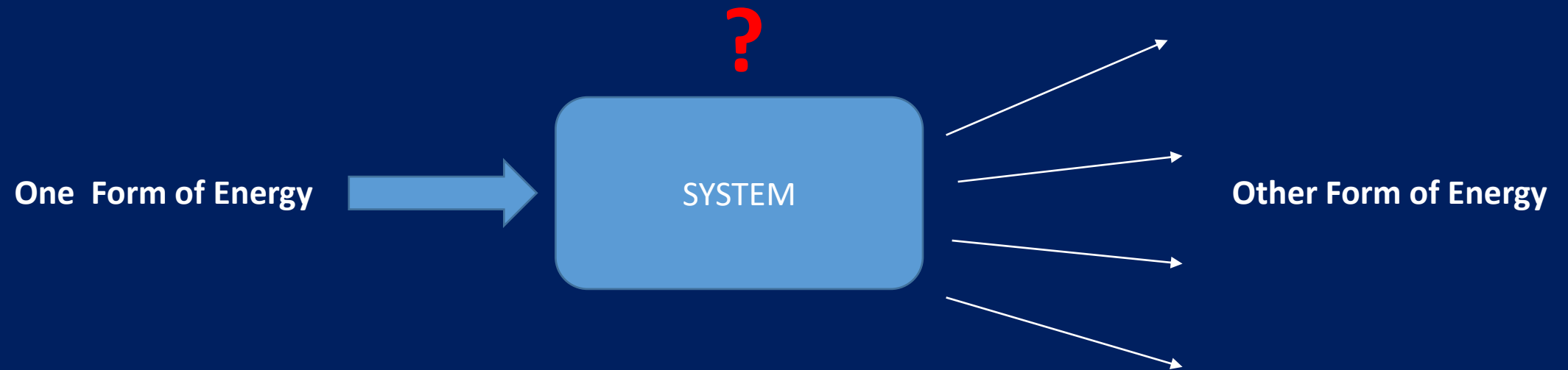
**The energy supplied to the system partly increases the internal energy of the system and the rest in work on the environment**

# LIMITATION OF THE FIRST LAW

- The first law deals with the amounts of energy of various forms transferred between the system and its surroundings and with changes in the energy stored in the system.
- It treats work and heat interactions as equivalent forms of energy in transit and does *not* indicate the possibility of a spontaneous process proceeding in a certain direction.
- It is the second law which assigns a quality to different forms of energy, and also indicates the direction of any spontaneous process.

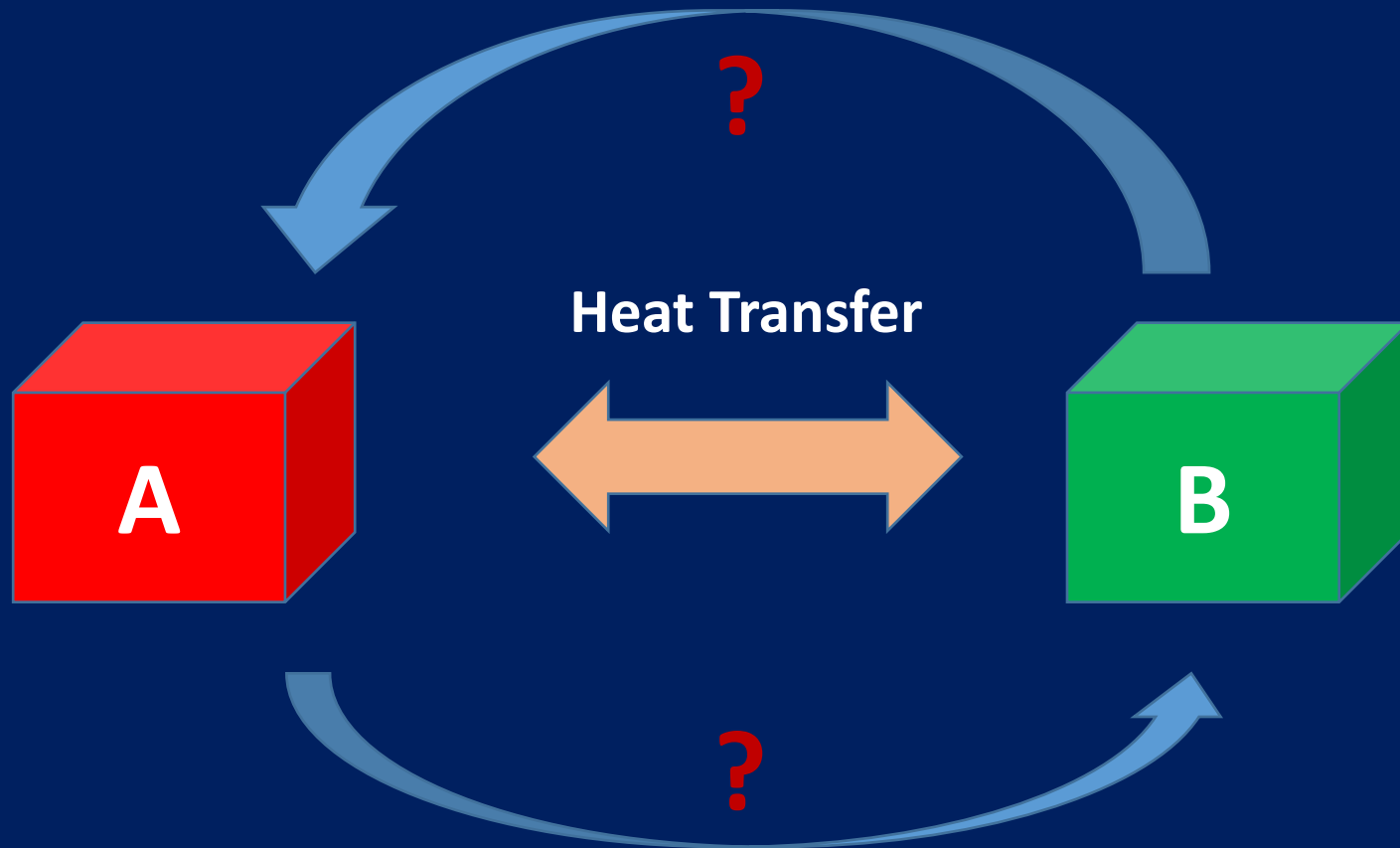
# LIMITATION OF THE FIRST LAW

## 1. NO information about initiation of energy conversion



# LIMITATION OF THE FIRST LAW

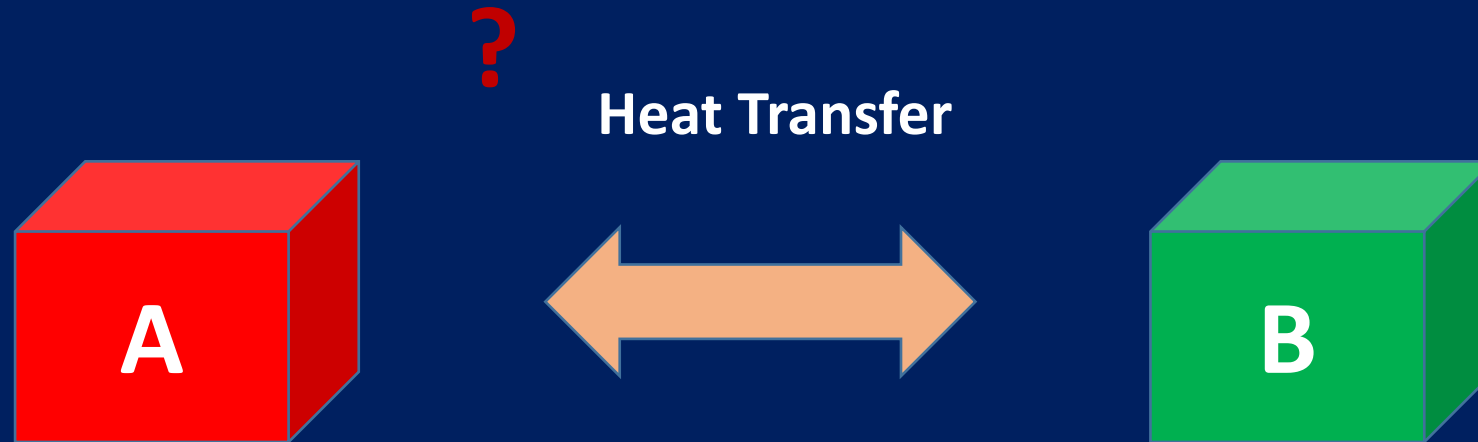
2. NO information about the direction of energy flow.





# LIMITATION OF THE FIRST LAW

3. NO information about quantity of the energy transferred



Heat lost by one = Heat Gained by other



How Much ?



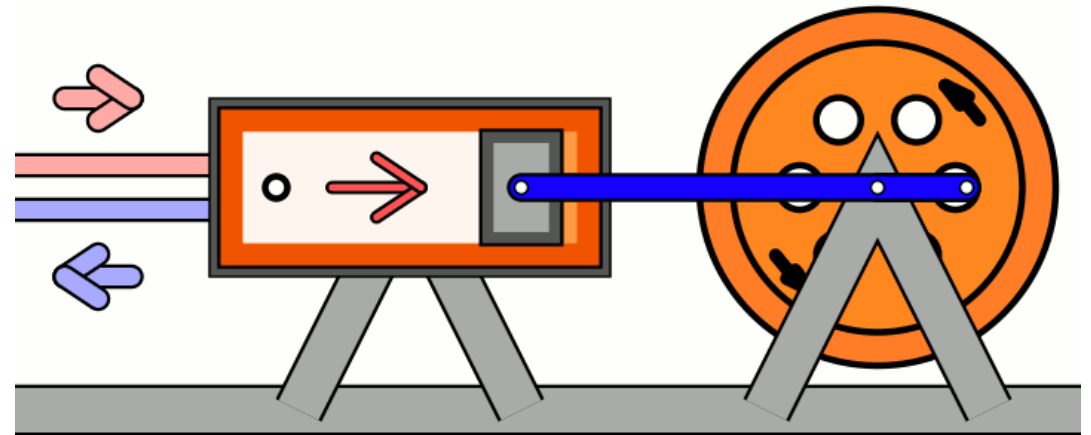
How Much ?

# LIMITATION OF THE FIRST LAW

4. Incomplete information about conversion of the thermal energy into mechanical energy.



How Much?





# RECAP

- **First Law of thermodynamics gives no clue about-**

1. Initial of energy transformation
2. Direction of heat flow
3. Quantity of energy transformation
4. Amount of thermal to mechanical conversion

QUESTIONS?

The word "QUESTIONS?" is rendered in a large, bold, sans-serif font. Each letter is filled with a different color from a rainbow spectrum: Q (blue), U (pink), E (yellow), S (green), T (orange), I (purple), O (blue), N (pink), and S (green). A smaller, white, sans-serif text "Questions?" is overlaid on the 'E' and 'S' of the main word.



# Today's Amazing Fact???????

Did You  
Know?

In Most of the Cases, A person's height is determined by the their father and their weight is determined by their



# धन्यवाद

Prepared By  
Mr.Pankaj Salunkhe