

# Thermodynamics

**Thermodynamics** → is an extensive and far-reaching scientific discipline that deals with the inter conversion of heat and other forms of energy.

- This chapter introduces the second law of thermodynamics and the Gibbs free energy function.
- It's also discusses the relationship between Gibbs free energy and chemical equilibrium.

**Three laws of thermodynamics****First law**

→ depends on the law of conservation of energy, which state that  
Energy can be converted from one form to another, but it can't be created or destroyed.

**Third law**

→ is extension of the second

**Second law**

→ explains why chemical processes tend to favor one direction.

**Change in enthalpy ( $\Delta H$ )** → is the amount of heat given off or absorbed by a system during a constant-pressure process.

**Choose**

1)..... ..deals with inter conversion of heat and other forms of energy.

- A) kinetics  
B) thermodynamic  
C) polymer science  
D) environmental science

2) Thermo dynamics deals with the inter conversion of.....

- A) temperature  
B) heat  
C) water  
D) light

3) The first law of thermodynamics says that.....

- A) energy can be created  
B) energy can be destroyed  
C) energy can't be converted from one form to another  
D) none of them

4) Energy can't be created or destroyed this is the .....

- A) Third law  
B) Law of conservation  
C) Second law  
D) none of them

5) Chemical processes tend to favor..... Direction.

- A) two  
B) three  
C) one  
D) four

6) .....law explains why chemical processes tend to favor one direction.

- A) first  
B) third  
C) second  
D) none of them

7) Third law is an extension for ..... law.

- A) first  
B) second  
C) third  
D) all of the above

8) Is the amount of heat given off or absorbed by a system.....

- A) enthalpy  
B) Gibbs free energy  
C) entropy  
D) none of them