XI Chemistry Worksheet

Time: 30 min **Ch#6 : Thermodynamics -02** **Full Marks: 20**

Instructions:

1. All questions are compulsory.

2. Please give the explanation for the answer where applicable.

Q1 -Explain the term system, surrounding and universe with example.

(2 Marks)

Q2 - Express the change in internal energy of a system when

(i) No heat is absorbed by the system from the surroundings, but work (w) is done on the system. What type of wall does the system have?

(ii) No work is done on the system, but q amount of heat is taken out from the system and given to the surroundings. What type of wall does the system have?

(iii) w amount of work is done by the system and q amount of heat is supplied to the system. What type of system would it be?

(3 Marks)

Q3 -Two moles of an ideal gas initially at 270C and one atmospheric pressure are compressed isothermally and reversibly till the final pressure of the gas is 10 atm. Calculate q, w an Δ U for the process.

(3 Marks)

Q4 - Define Exothermic and Endothermic reactions.

(2 Marks)

Q5 - Define the Enthalpy of neutralization of a reaction.

(1 Mark)

Q6 - Define the term Enthalpy of ionization.

(1 Mark)

Q7 - Give the first law of thermodynamics.

(1 Mark)

Q8 -Give the first law of thermodynamics. Derive a mathematical expression for the first law of thermodynamics.

(5 Marks)

Q9 - Give the Hess's Law of constant heat?

(2 Marks)